

American River Pump Station Project

EXECUTIVE SUMMARY

Final Environmental Impact Statement/ Environmental Impact Report

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

June 2002

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American River Pump Station Project

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Environmental Impact Statement/
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Placer County Water Agency

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American River Pump Station Project
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Introduction

The Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the American River Pump Station Project describes the potential adverse and beneficial environmental effects of the three project alternatives: No Action/No Project, Mid-Channel Diversion, and Upstream Diversion. The Mid-Channel Diversion Alternative is the Proposed Project and includes: (1) construction and operation of a year-round pumping facility for the Placer County Water Agency (PCWA) which would divert water from the North Fork American River in the vicinity of the Auburn Dam construction site near Auburn, California; (2) closure of the Auburn Dam bypass tunnel; and (3) restoration of the three-quarter mile reach of the river that was dewatered and otherwise impacted by Auburn Dam construction activities.

Potential environmental effects resulting from construction, operation, and maintenance of the alternatives are described in the Final EIS/EIR, and summarized in this Executive Summary, in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The U.S. Department of the Interior (Interior), Bureau of Reclamation (Reclamation) is the lead agency under NEPA and PCWA is the lead agency under CEQA.

Revisions and Corrections to the Draft EIS/EIR

All comments received on the Draft EIS/EIR, and the responses thereto, are presented in Appendix C, Responses to Comments on the Draft EIS/EIR (Volumes 1 and 2) of the Final EIS/EIR. Volume 1, List of Commenters and Master Responses, provides Master Responses that have been prepared for comments on the Draft EIS/EIR which raised the same or similar issues related to certain topics. Volume 2, Individual Comment Letters and Responses, includes the written comments (verbatim) and transcripts of oral comments on the Draft EIS/EIR, paired alongside corresponding responses to significant environmental issues raised during the public comment period. Each comment letter is labeled to correspond with an index list entitled "List of Comments Received on the Draft EIS/EIR," which is located in Section 2.0 of Volume 1. If a comment resulted in a correction or modification to the text that was originally presented in the Draft EIS/EIR, the text has been revised and the changes presented in the Final EIS/EIR. The changes incorporated into the Final EIS/EIR do not alter the conclusions presented in the Draft EIS/EIR.

The Draft EIS/EIR (September 2001) has been modified to reflect revisions and corrections made in response to public and agency comments received during the public review and comment period. These changes to the document do not alter the impact conclusions that were presented in the Draft EIS/EIR. **Table S-1** presents a summary of these revisions. These changes to the report are presented in the Final EIS/EIR to clarify project design, construction and operation features,

incorporate additional detail regarding proposed project features or mitigation measures and to correct typographical errors found during preparation of the final documents. The revisions and corrections included in the Final EIS/EIR have also been incorporated into the material presented in this Executive Summary, as appropriate to the level of detail in each section.

Table S-1
Revisions and Corrections Made to the Draft EIS/EIR

List of Acronyms

- ❑ Updated and corrected list of acronyms to include all acronyms used in Final EIS/EIR and supporting documentation

Chapter 1.0 - Introduction

- ❑ Updated discussion of Public Review of Draft EIS/EIR to reflect extended public review comment period
- ❑ Added List of Revisions and Corrections to the Draft EIS/EIR
- ❑ Added section regarding Final EIS/EIR Process

Chapter 2.0 - Description of Alternatives

- ❑ Expanded discussion regarding selection of alternatives explaining infeasibility of land conservation easements
- ❑ Updated Table 2-2 to correct summary of major features of the alternatives
- ❑ Added new figure depicting major features of the No Action/No Project Alternative
- ❑ Provided cost estimate breakdown for the Proposed Project pump station, bypass tunnel closure, and river channel excavation and public river access features
- ❑ Revised reference to fish screen to reflect change to California Department of Fish and Game (CDFG)-approved design, not Coanda-based design
- ❑ Removed references to use of a standby diesel generator which is no longer proposed
- ❑ Revised description of Public River Access Features to indicate modifications of riverside parking area to include only a turnaround and 3 handicap-accessible spaces, not 20 spaces
- ❑ Revised references to total number of public river access parking area spaces from 70 to 53
- ❑ Provided revised Public River Access Features graphic to show parking area changes
- ❑ Updated description of No Action/No Project Alternative, Proposed Project, and Upstream Diversion Alternative operation and maintenance to explain proposed double-pump operations using the Auburn Ravine Tunnel pump station to avoid potential impacts to Auburn Ravine fish and terrestrial resources
- ❑ Revised discussion of Ralston Afterbay reoperation to clarify nature of activity
- ❑ Made corrections to Table 2-8, Summary of Alternatives Considered and Eliminated from Further Analysis to explain infeasibility of land conservation easements and other suggested alternatives
- ❑ Updated Table 2-9, Anticipated Permits and Approvals for the Proposed Project to reflect project permitting needs based upon coordination with regulatory agencies since release of Draft EIS/EIR

Chapter 3.0 - Affected Environment and Environmental Consequences

General Revisions and Corrections

- ❑ Updated references to Northridge Water District (NWD) to reflect recent name change to Sacramento Suburban Water District (SSWD)
- ❑ Updated references to Citizen's Utilities Water Company to reflect recent name change to California-American Water Company (CAWC)
- ❑ Corrected discussion of SSWD (formerly NWD) water supply sources
- ❑ Updated discussion of Auburn Recreation District proposed American River campground area
- ❑ Provided additional explanation regarding placement of model output table and graphic results in Appendix H to the Draft EIS/EIR (also provided in resource sections containing diversion-related analyses)

Table S-1 (Continued)
Revisions and Corrections Made to the Draft EIS/EIR

Water Supply and Hydrology

- Updated information pertaining to PCWA's Water Conservation Program

Fish Resources and Aquatic Habitat

- Revised description and evaluation of Auburn Ravine fish resources
- Deleted references to National Marine Fisheries Service (NMFS) critical habitat designations for Central Valley steelhead and spring-run chinook salmon due to recent withdrawal of such designations by NMFS
- Updated discussion of backwater effects at Tamaroo Bar
- Updated and revised mitigation measures to reflect individual agency responsibilities and in response to changes related to (1) project construction no longer requires use of cofferdam, therefore related measures would not be needed; and (2) updated method to evaluate fish screen performance based on further consultation with CDFG fish screen experts

Terrestrial Resources

- Provided additional information regarding non-listed species at the project site, per request of U.S. Fish and Wildlife Service (USFWS) Draft Coordination Act Report recommendations
- Added account of potential areas of habitat affected by the Proposed Project, per request of USFWS Draft Coordination Act Report recommendations
- Incorporated findings of recent Red-Legged Frog Habitat Assessment and Site Survey performed at request of USFWS as part of federal Endangered Species Act (ESA) consultation
- Updated and revised mitigation measures to reflect individual agency responsibilities

Recreation

- Included additional detail regarding existing project area recreation uses as supplied by the California Department of Parks and Recreation (CDPR)
- Revised description and analyses related to modification of the Public River Access Features incorporated into the Proposed Project by the lead agencies and CDPR
- Developed revised recreation trail map for project area
- Updated discussion of recreation trail access impact during construction due to changed approach in mitigation
- Revised discussion of Auburn-to-Cool Trail impact and responsibilities for mitigation of impact under Proposed Project
- Incorporated additional information related to backwater effects at Tamaroo Bar rapid
- Provided further clarification of the Middle Fork American River whitewater boating impact under all alternatives
- Updated and revised mitigation measures to identify individual agency responsibilities and in response to changes in project features

Visual Resources

- Updated impact discussion in response to changes in Public River Access Features
- Revised mitigation measures to identify individual agency responsibilities and to reflect change in construction materials of pump station housing

Cultural Resources

- Updated discussion of cultural resources laws and regulations applicable to the project to reflect priority of federal laws
- Updated mitigation measures to identify individual agency responsibilities and in response to recent efforts related to Programmatic Agreement with the State Historic Preservation Office (SHPO)

Table S-1 (Continued)
Revisions and Corrections Made to the Draft EIS/EIR

Power Supply

- ❑ Corrected errors in text in response to comments

Land Use

- ❑ Incorporated discussion of growth issues and description of lead agencies responsibilities

Geology and Soils

- ❑ Updated discussion of mitigation measures to incorporate recommended measures under Public Health and Worker Safety program

Transportation and Circulation

- ❑ Incorporated information from supplemental Traffic Study and additional coordination with City of Auburn Public Works Department to evaluate potential impacts at Maidu Drive/Burlin Way intersection
- ❑ Updated discussion of mitigation measures to identify individual agency responsibilities and incorporate recommendations for Construction Traffic Management Plan and payment of mitigation fees to City of Auburn

Air Quality

- ❑ Updated analysis of public river access-related traffic based on new emission evaluation information from Placer County and El Dorado County air pollution control districts
- ❑ Added information describing particulate matter less than 2.5 microns in size ($PM_{2.5}$), as requested by U.S. Environmental Protection Agency (EPA)
- ❑ Provided discussion of project alternatives' compliance with federal general conformity requirements, as requested by U.S. EPA
- ❑ Incorporated additional information and explanation of analysis approach of sensitive receptors related to El Dorado County and the community of Cool, as requested by El Dorado County Air Pollution Control District (APCD) and others
- ❑ Removed references to diesel generator as one is no longer included in project alternative activities
- ❑ Updated and revised discussion of mitigation measures to identify individual agency responsibilities

Noise

- ❑ Updated discussion of public river access traffic-related noise sources
- ❑ Revised mitigation measures to identify individual agency responsibilities

Public Health and Worker Safety

- ❑ Added new information relative to Fire Management
- ❑ Incorporated geology and soils mitigation measures relative to slope stability, worker safety during construction and public safety during use of project area under Proposed Project
- ❑ Revised mitigation measures to identify individual agency responsibilities

Other Impact Considerations

- ❑ Corrected information presented under Essential Fish Habitat (EFH) to more specifically identify discussion relative to fall-run chinook salmon
- ❑ Expanded discussion of Short-term Uses of the Environment Versus Long-Term Productivity
- ❑ Added discussion of Climate Change, per request of U.S. EPA
- ❑ Revised ESA Compliance section to reflect (1) NMFS retraction of steelhead and spring-run chinook salmon critical habitat designations; (2) correction of inadvertent reference to incidental take; (3) update to summary of consultation to date; (4) addition of PCWA's proposed Auburn Ravine monitoring program as a conservation measure; and (5) incorporation of corrections to conclusion and determination

Table S-1 (Continued) Revisions and Corrections Made to the Draft EIS/EIR
Chapter 4.0 - Consultation and Coordination ❑ Updated discussions of resource agency ESA consultations and other coordination ***Chapter 5.0 - List of Preparers*** ❑ Added additional names and updated area of participation to reflect efforts undertaken to complete the Final EIS/EIR and related activities
Chapter 6.0 - References ❑ Incorporated additional references cited and personal communications held during preparation of the Final EIS/EIR

Project Location

The location of the proposed pump station and related facilities is on the North Fork American River within the Auburn Dam Project construction area, east of the City of Auburn. The project area involves lands within Placer and El Dorado counties, which are bounded by the American River. Reclamation owns and manages these lands within the Auburn Dam Project area. CDPR, through an agreement with Reclamation, is responsible for the oversight and management of the lands as part of the Auburn State Recreation Area (Auburn SRA). Increased water supply diversions from the North Fork American River under the selected alternative would influence future operation of several Central Valley Project (CVP) components, including Folsom, Shasta, and Trinity reservoirs and the Sacramento-San Joaquin River Delta (Delta). Changes in CVP operations have the potential to influence State Water Project (SWP) operations at Oroville Reservoir. These water bodies are included in the regional study area for the project. PCWA would deliver the American River water within its Service Area Zones 1 and 5 and possibly to a portion of CAWC located within Placer County.

Figure S-1 illustrates the regional setting extending from the upper Sacramento River and upper American River, south to the Delta. **Figure S-2** depicts the project study area relative to cities, counties, transportation corridors, and waterways of the region. **Figure S-3** shows the local project area and site. **Figure S-4** depicts the PCWA service area that would receive American River water for municipal and industrial (M&I) and agricultural uses.

Project Purpose

The purpose of the project is threefold: (1) to provide facilities to allow PCWA to convey its Middle Fork Project (MFP) water entitlement to the Auburn Ravine Tunnel to meet demands within its service area; (2) to eliminate the safety issue associated with the Auburn Dam construction bypass tunnel; and (3) to allow for all pre-construction beneficial uses of water in

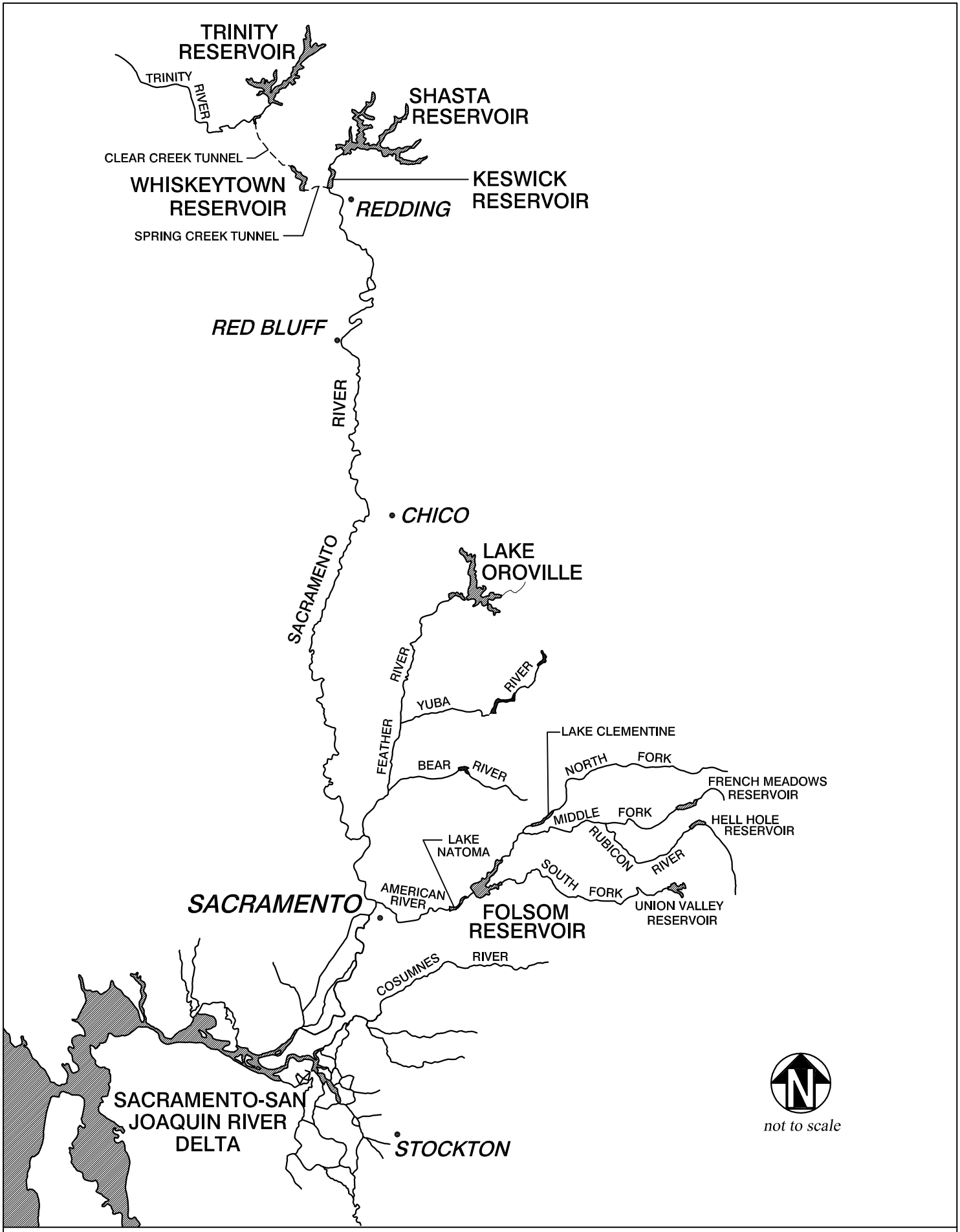


Figure S-1 Regional Setting

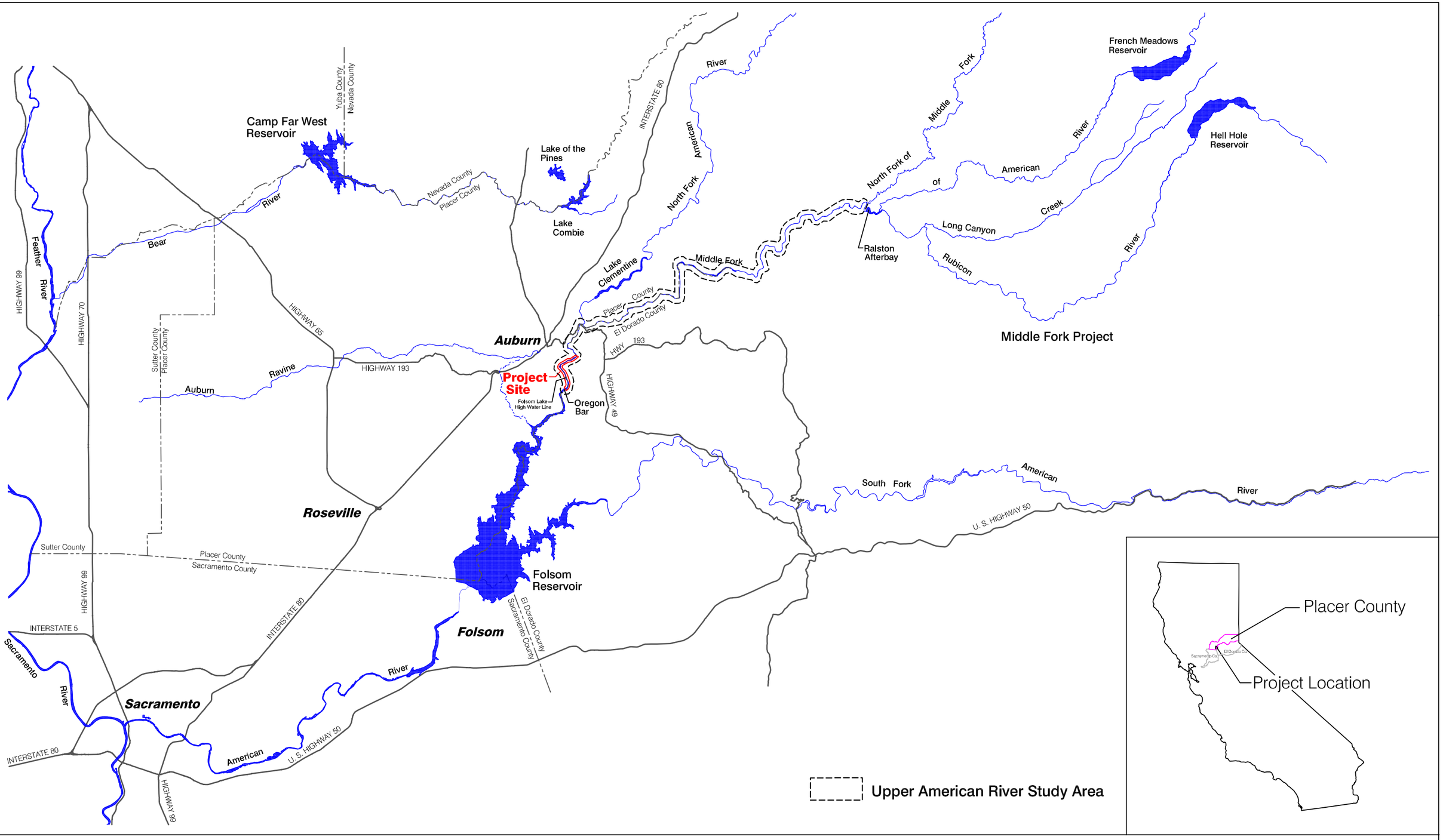


Figure S-2 Project Area Setting

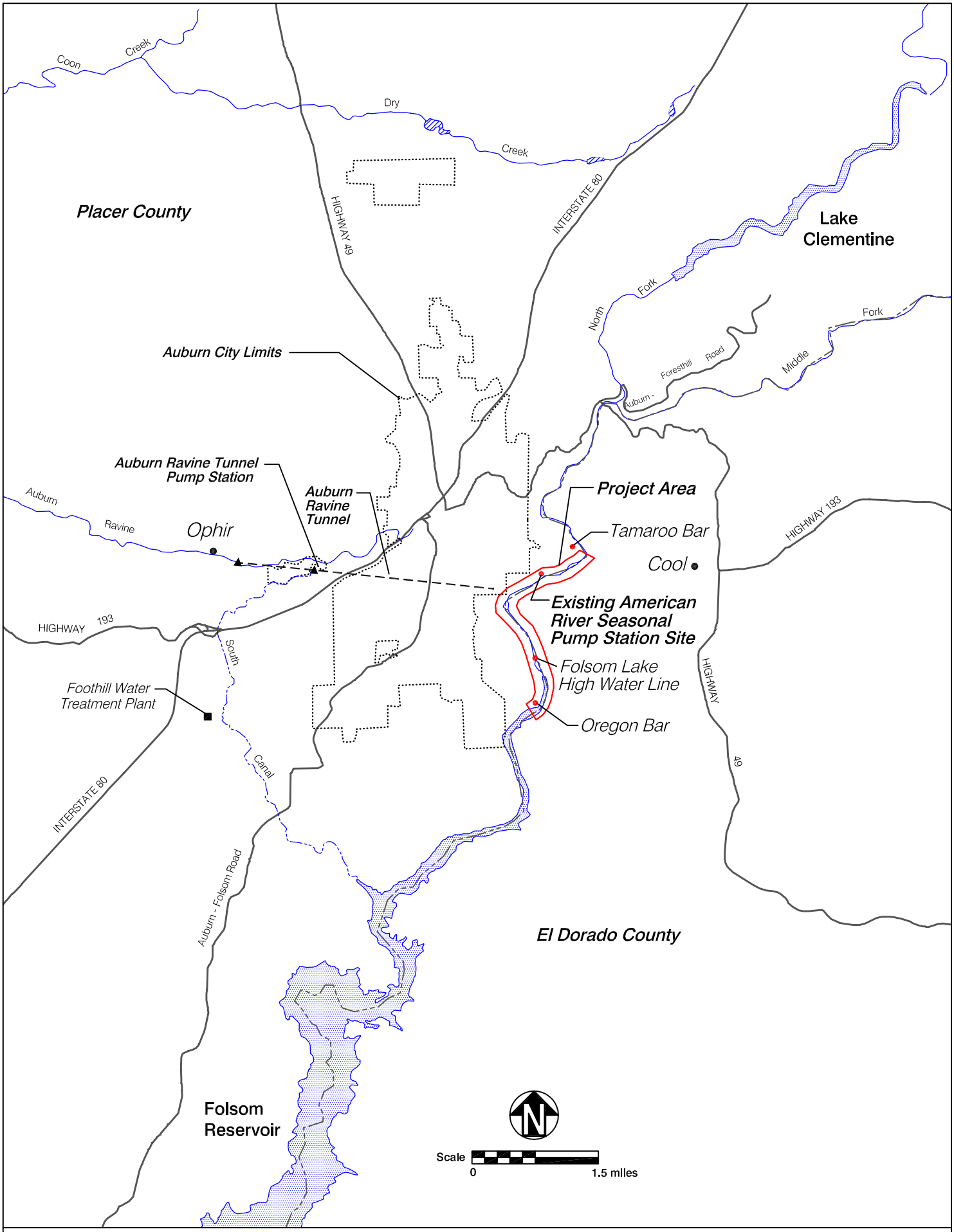


Figure S-3 Project Area

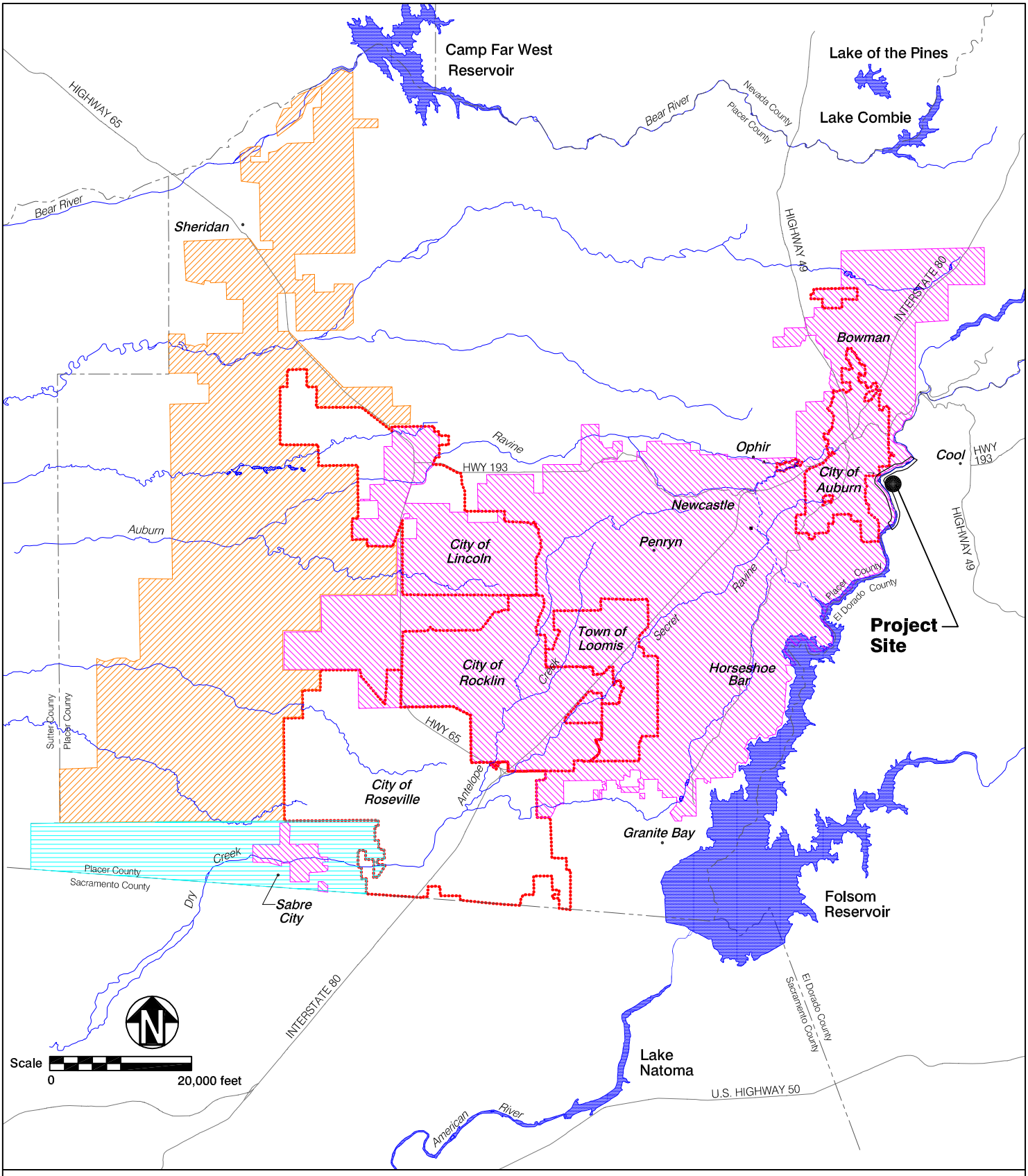


Figure S-4 PCWA's Water Service Area to be Served by the American River Pump Station Project

what is now the dewatered river channel, including recreation, navigation, and other instream beneficial uses. Each of these elements is discussed in the Final EIS/EIR, Chapter 1.0, Section 1.3, Project Needs and Objectives.

Project History

In 1965, Congress authorized the construction of Auburn Dam on the North Fork American River near the City of Auburn. Construction began in 1967 and included a cofferdam, a tunnel through a ridge to bypass the river around the construction area (referred to as the bypass tunnel), excavation for the Auburn Dam foundation (also referred to as the keyway), and removal of a permanent pump station owned by PCWA. Because of concerns over seismic safety, heightened by the 5.7 magnitude (Richter scale) Oroville earthquake of August 1, 1975, construction of Auburn Dam was suspended in 1977.

PCWA Original Pump Station

Prior to the initiation of construction of Auburn Dam, PCWA built a 50 cubic feet per second (cfs) pump station on the North Fork American River to convey PCWA water supplies from its MFP to the Auburn Ravine Tunnel for delivery to PCWA's service area. However, before PCWA's operations began, the pump station was removed by Reclamation to facilitate construction of Auburn Dam. Pursuant to a Land Purchase Agreement with PCWA, described below, Reclamation has since installed a seasonal pump station annually as needed by PCWA to meet water supply demands.

Land Purchase Agreement

Before suspending Auburn Dam construction, Reclamation sought a Land Purchase Agreement with PCWA to acquire canyon lands needed for the Auburn Dam Project. PCWA entered into a Land Purchase Agreement in 1972 with Reclamation under the threat of condemnation. As part of the Land Purchase Agreement, PCWA's 50 cfs pump station was removed to facilitate construction of Auburn Dam subject to Reclamation's provision of an interim pumping facility or alternative water supply until Auburn Dam was completed. As the Auburn Dam Project was designed at that time, water from the reservoir was to flow by gravity into the Auburn Ravine Tunnel to provide PCWA its water entitlements, thereby eliminating the need for a pump station at the American River location. As stipulated in the Land Purchase Agreement:

[Article 11] A *"...the United States will provide a temporary pumping facility in the event the Vendor [PCWA] demonstrates a need for water, to be delivered into the existing tunnel intake structure at the intake portal of the Auburn Ravine Tunnel, or at its option, the United States may provide water from an alternative source, provided delivery is made at a point suitable for its intended use."*

The Land Purchase Agreement obligated Reclamation to deliver up to 25,000 acre-feet annually (AFA) at a rate of up to 50 cfs.

Pursuant to the Land Purchase Agreement, the United States, through Reclamation, has delivered water through the installation and removal of a seasonal pump station on an as-needed basis. The first time PCWA required access to its MFP water rights to meet system demands was during the drought of 1977. In response to PCWA's request for water under the Land Purchase Agreement, Reclamation constructed a pump station capable of delivering approximately 50 cfs using pumps salvaged from PCWA's original pump station. Due to the location of the installation, the pumps have to be removed before winter each year to prevent damage due to inundation from high river flows.

Beginning in 1990, PCWA has required access to its MFP water supply annually to meet its system demands under a variety of operating conditions. Reclamation has responded with the seasonal installation and removal of PCWA's original pumps at the same location as the 1977 installation. However, the seasonal pumps do not fully meet PCWA's water supply requirements, are not reliable, and have become increasingly expensive to install and maintain.

Reclamation can deliver the MFP water supply to PCWA only from approximately April to November. Late-fall, winter, and spring MFP water supplies are not accessible due to the potential for high river flows that can inundate the seasonal pump station. Further, because of limitations on the pumping capacity of the existing facilities (50 cfs) and the timing of seasonal diversions as compared to the pattern of demands, the maximum annual diversion for the seasonal pump station is approximately 19,300 acre-feet (AF). The seasonal pump station no longer permits Reclamation to provide PCWA with a reliable water supply when and where required to meet PCWA's system demands in accordance with the Land Purchase Agreement.

Reclamation Management of Auburn Dam Project Site

Auburn Dam remains an authorized federal project and is considered by some to be feasible. In 1992 and 1996, there were unsuccessful Congressional initiatives to modify and restart the Auburn Dam Project.

Since suspension of Auburn Dam construction in 1977, Reclamation has been managing the Auburn Dam site on an interim basis. Existing site conditions present Reclamation with several resource management issues and opportunities, including public safety, access, and recreation management[1]. In 1994, Reclamation undertook a study to address these issues, together with the installation of a year-round pump station for PCWA. The results were published in a report entitled *Preliminary Concept Plan, Restoration and Management of the Auburn Dam Site* (1996 Concept Plan).

Reclamation's 1996 Concept Plan identified several interests and options related to improving public safety, access, and recreation at the Auburn Dam construction site. The options identified included closure of the bypass tunnel, restoration of the river through the dewatered channel, and recreation access at the site. Upon completion of the 1996 Concept Plan, Reclamation initiated a concerted engineering and environmental planning effort to implement a project based on the findings of the report.

[1] CDPR, through an agreement with Reclamation, provides management of the Auburn SRA activities including the project area.

Early in the planning effort, members of the public and certain interest groups supported inclusion of the 1996 Concept Plan site restoration and river bypass tunnel closure measures. In late 1997, Reclamation undertook a Value Planning Study to further evaluate the options for a year-round pump station, restoration of the Auburn Dam construction site, and tunnel safety consistent with the 1996 Concept Report. However, following publication of the results of the 1997 study, it appeared that critical Congressional support for the project would not be forthcoming if the project included blocking the Auburn Dam construction bypass tunnel or restoring the river channel, because the Auburn Dam remains a federally authorized project. Therefore, during 1998 and into 1999, Reclamation and PCWA concentrated on designing a pump station that would not require the bypass tunnel to be closed or the channel restored.

State of California Interest

In September 1999, the California State Attorney General's Office sent the Secretary of the Interior a letter indicating that, in the Attorney General's view, the Auburn Dam construction bypass tunnel diversion was in violation of the 1992 Central Valley Project Improvement Act (CVPIA), the Reclamation Act of 1902, and California's Public Trust Doctrine. In support of these contentions, the Attorney General's office noted that the river has been diverted with no present or foreseeable beneficial use, to the detriment of the values of the natural resources of the North Fork American River. The claimed legal obligations outlined in the letter provided the impetus and guidance that determined how the American River Pump Station Project evolved. From that point forward, the design included tunnel closure, restoring the river to its channel and allowing pre-dam construction beneficial uses of the river as primary elements of the Proposed Project (Mid-Channel Diversion Alternative).

Closure of the bypass tunnel would remove the existing hazard to river use; CDPR and Reclamation would no longer have need to prohibit public use of this section of the river. Once restored, the river would be expected to be characterized within the Class I to Class III whitewater categories (easy to moderately difficult rating). Because the river conditions created by restoring the river channel through the project area would be appealing to boaters with a wide range of skills, the State of California Resources Agency expressed concern regarding potential public health and safety issues related to such uses. Specific concerns included the current lack of suitable take-out points along the river between the confluence of the North Fork and Middle Fork (upstream) and Rattlesnake Bar at Folsom Reservoir (downstream), a nine-mile stretch. Under certain flow conditions, the upstream extent of Folsom Reservoir creates a two- to five-mile stretch of flat water that would be difficult to paddle, particularly for less experienced boaters. PCWA has arranged with Pacific Gas and Electric Company (PG&E) to make water releases from the Oxbow Powerhouse/Ralston Afterbay that support whitewater boating activities in the Middle Fork American River during summer months. Morning releases reach the North/Middle Fork confluence area by mid- to late afternoon. Without adequate locations to exit the river, boaters could become stranded late in the day or be left without a reasonably accessible river take-out.

Reclamation and the California Resources Agency entered into a Memorandum of Agreement (MOA) (Appendix A of the Draft EIS/EIR) to address these concerns. Reclamation and PCWA coordinated with representatives from the State Attorney General's Office, CDPR and CDFG to develop a pump station project alternative that would incorporate the additional project objectives

related to closing the bypass tunnel and returning river flow to the North Fork American River channel through the project site.

Project Needs and Objectives

PG&E's Drum-Spaulding Project on the Yuba/Bear River and PCWA's MFP on the American River are two sources of water currently available to PCWA to serve areas in western Placer County. PCWA has a contract with PG&E for 100,400 AFA of Drum-Spaulding Project water, at a maximum delivery rate of 244 cfs, to serve Zone 1, encompassing the communities of Auburn, Loomis, Rocklin, Lincoln, Newcastle, Penryn, and parts of Roseville. PCWA also holds existing appropriative rights to divert 120,000 AFA from the MFP under Water Right Permits numbers 13856 and 13858, as authorized by the State Water Resources Control Board (SWRCB). PCWA uses Drum-Spaulding Project water supplies first to meet service area demands. PCWA then uses MFP supplies from the American River to satisfy demands not met by the Drum-Spaulding Project water supplies, or as needed to provide back-up supplies when the Drum-Spaulding project is not operating.

A third PCWA water entitlement is through a water service contract most recently amended in February 2002 with Reclamation. The February 2002 amendment to the contract modified the original maximum water allotment of 117,000 AFA and limits the amount of water available to PCWA to 35,000 AFA prior to completion of Auburn Dam.

The project evaluated in the Final EIS/EIR involves only PCWA's proposed increased diversion of its existing American River MFP water entitlement at the pump station site near Auburn. Separate environmental documentation will be required to evaluate the effects of PCWA's diversion of water under its CVP water service contract with Reclamation.

Auburn Dam Bypass Tunnel Safety

As part of the original Auburn Dam construction work, a cofferdam and bypass tunnel were constructed. The cofferdam was breached by high flows in 1986, depositing millions of cubic yards of debris in the downstream channel. The bypass tunnel remains open and passes the entire flow of the American River at normal flow rates. Due in part to the sediment deposition from the eroded cofferdam, it is common for the downstream end of the tunnel to be submerged while the upper end is open. Although the river portion of the construction site is officially closed to the public, it is known that some people enter the area, and could be seriously injured or killed if they enter the bypass tunnel. Both Reclamation and the State of California believe this safety issue needs to be corrected.

River Restoration

Reclamation and the State of California wish to restore the dewatered reach of the river channel, and to manage the site in a safe and environmentally sound way. Their objectives include restoring the river to a condition that would provide the same biological, hydrologic, and recreation functions, including public use, as it did prior to Auburn Dam construction.

Public River Access

As stated in the MOA between Reclamation and the State of California, the parties believe that an increase in recreational navigation and use of the river in the project area would be a reasonably foreseeable result of the Proposed Project's closure of the bypass tunnel and rewatering of the North Fork American River, and further believe that an appropriate regulated public access to the river to address public health and safety, resource protection, and emergency purposes would be warranted. The MOA stipulates that the public access features would be rustic with minimal site improvements as needed only to serve the stated access and management objectives. The proposed public river access features were developed by CDPR, with input from the lead agencies and CDFG.

Consistent with the terms of the MOA, CDPR provided a preliminary concept for the public river access features to be developed as part of the American River Pump Station Project (Proposed Project). The preliminary features described in the Draft EIS/EIR included a gated entrance and staffed booth, access roadway improvements, parking areas, pedestrian/equestrian trail improvements and sanitation facilities (trash containers and restrooms). The preliminary design was modified during preparation of the Final EIS/EIR. Although most features remain as described in the Draft EIS/EIR, CDPR and the lead agencies have reduced the total number of parking spaces that would be provided at the site by modifying the riverside parking lot to consist of a vehicle turnaround area with only three handicap accessible parking spaces, instead of 20 spaces. Minor improvements would be made to the parking area adjacent to the entrance gate, and CDPR would develop shaded fuel breaks alongside trails and roads. These features are described in detail in the Final EIS/EIR.

These features remain consistent with the Auburn SRA Interim Resources Management Plan, and would involve minimal construction or modifications at the site and would be of "rustic" design. Additionally, these facilities would be totally within the existing Auburn SRA and would not constitute or lead to expansion of the existing boundaries.

CDPR would remain responsible for the management of recreation activities within the Auburn SRA. Reclamation and CDPR would update or modify their management agreement regarding these responsibilities.

Land Purchase Agreement

An overall objective specific to Reclamation is to completely satisfy its obligations to PCWA under the Land Purchase Agreement. This would include alleviating Reclamation of any and all obligations for water delivery, management, operation and maintenance activities of the intake, pumps, and pump station site following completion of construction and start-up of the Proposed Project. PCWA proposes to enter into a contract accepting ownership of such new facilities , and operate them for water supply purposes, thereby relieving Reclamation of its obligation under the Land Purchase Contract.

Expandable Conveyance Facility

Demand projections for PCWA water supplies into the future show a need for an additional 35,000 AFA, above the capacity of the proposed year-round alternatives, by 2030. To maintain an option to meet this projected demand by diverting water from the American River at Auburn, PCWA has identified the objective of designing the project so that it could be expanded from 100 cfs to 200 cfs when, and if, needed in the future. Consistent with its negotiations within the Water Forum[2], PCWA is currently engaged in various engineering studies and contract negotiations designed to advance the option of diverting water from the Sacramento River to meet a portion of its projected future demands as an alternative to the expansion of the American River pump station. However, since a Sacramento River diversion alternative is not currently consistent with PCWA's water rights or CVP entitlements, preserving the opportunity to expand this project (which would be consistent with PCWA's existing water rights) with minimal local environmental disruption is considered prudent planning. Any future expansion (from 35,500 AFA to about 70,500 AFA) would require prerequisite environmental regulatory review and approvals before PCWA could modify the facilities and operate at that level.

An additional future water demand consideration for the project involves the Georgetown Divide Public Utility District (GDPUD). Public Law (P.L.) 101-514 authorizes and directs Reclamation to enter into a long-term water service contract with the El Dorado County Water Agency (EDCWA) for up to 15,000 AFA, of which between 5,000 to 7,500 AFA may be subcontracted to GDPUD. Planning efforts have been initiated and public notices have been issued for the water service contract with EDCWA (*Federal Register* Notice dated June 14, 1998). Although GDPUD will not need additional water supplies for many years, it has requested that PCWA design its intake and pump station so its capacity could be expanded by up to 25 cfs to accommodate GDPUD's future needs.

Project Alternatives

The three alternatives considered in detail in the EIS/EIR are described below, beginning with the No Action/No Project Alternative followed by the Proposed Project and then the Upstream Diversion Alternative. The Proposed Project and Upstream Diversion Alternative are referred to as the "Action Alternatives" as selection of either one would result in development of a year-round facility. Differences between the two Action Alternatives include the location of the diversion/ intake structure, whether or not the Auburn Dam construction bypass tunnel would be closed, and implementation of a restoration plan for the existing dewatered segment of the American River channel at the project site. The Proposed Project would locate a new pump station and diversion/intake facility in the dewatered reach of the river channel, close the bypass tunnel, and restore the river channel. The Upstream Diversion Alternative would locate the pump station at the

[2] The Sacramento Area Water Forum is a diverse group of business and agricultural leaders, citizen groups, water managers, and local governments in Sacramento, Placer, and El Dorado counties. The Water Forum Agreement includes provisions for each of the participating agencies to achieve the plan's two co-equal objectives -- provide a reliable and safe water supply for the region's economic health and planned development to 2030; and to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. The elements of the Water Forum Agreement address key regional issues including surface water diversions, groundwater management, dry year water supplies, water conservation, and protection of lower American River resources.

same site as the Proposed Project, but place the diversion/intake facilities upstream of the bypass tunnel inlet; the bypass tunnel would remain open, and the dewatered river segment would not be restored. Both Action Alternatives propose facilities that would provide a year-round MFP water supply to PCWA with a design capacity of 100 cfs for an annual supply of up to 35,500 AF.

Table S-2 provides a comparison of each alternative to the purpose, needs, and objectives for the project. **Table S-3** lists the major features and activities associated with each alternative.

No Action/No Project Alternative

If the lead agencies do not construct a new year-round diversion and pump station facility for the American River diversion, the No Action/No Project Alternative would occur. Under this alternative, Reclamation would continue annual installation and removal of the seasonal pumps at the existing location (**Figure S-5**) and maintain responsibility for the operation and maintenance of the facilities. The seasonal pump station facility includes an inlet pipeline that draws water from a small sump pond approximately 750 feet upstream of the bypass tunnel inlet, four pump canisters (12.5 cfs capacity each), and 2,800 feet of steel pipeline placed above ground from the pump station connected to the Auburn Ravine Tunnel portal (**Figure S-6**).

Under the No Action/No Project Alternative, PCWA would rely upon operation of the seasonal pumps for its MFP water supply; however, within the next few years, PCWA would request that Reclamation install the pumps earlier in the year as PCWA customer demands and overall reliance on the pump station increase. For purposes of analysis in the Draft EIS/EIR, the seasonal pump station under the No Action/No Project Alternative would operate for eight months of the year, April through November. This operational period was selected because it excludes the normal high river flow months of December, January, February, and March, when facilities would be at the greatest risk of flood-related damages.

Under No Action/No Project Alternative operations, PCWA would divert up to 50 cfs during April through November for a total volume of up to 19,300 AFA. Generally, No Action/No Project Alternative operation and maintenance activities would be similar to current activities.

Proposed Project - Mid-Channel Diversion Alternative

The Proposed Project would integrate the water supply intake features and river restoration components into the project design, thereby meeting all stated objectives (Table S-2). The major water supply facilities and public river access features that would be constructed for the Proposed Project are summarized in Table S-3 and shown on **Figures S-7** and **S-8**. The estimated cost for construction of the Proposed Project would be $31 million. The pump station facility would cost approximately $18.1 million, bypass tunnel closure would cost approximately $1 million, and river channel excavation and restoration, including development of the public river access facilities would cost approximately $11.9 million.

Table S-2
Comparison of the Alternatives to Project Purpose, Needs, and Objectives

	No Action/ No Project Alternative	Proposed Project	Upstream Diversion Alternative
Project Purpose			
Provide facilities to allow PCWA to convey its MFP water entitlement to the Auburn Ravine Tunnel to meet demands within its service area.	No	Yes	Yes
Eliminate the safety hazard associated with the Auburn Dam bypass tunnel.	No	Yes	Partially
Restore the dewatered portion of the North Fork American River at the Auburn Dam bypass tunnel.	No	Yes	No
Project Needs and Objectives			
PCWA Water and Conveyance Needs			
Restore PCWA's ability to divert its MFP water supply year-round.	No	Yes	Yes
Provide reliable, year-round diversion capacity of up to 100 cfs.	No	Yes	Yes
Auburn Dam and Bypass Tunnel Safety			
Alleviate public safety hazards from the Auburn Dam construction site.	No	Yes	Partially
River Restoration			
Open the American River to water-based recreation from Highway 49 to Folsom Reservoir.	No	Yes	No
Public Safety River Access			
Provide public safety river access at the American River Auburn pump station site and at Oregon Bar.	No	Yes	No
Land Purchase Agreement			
Alleviate Reclamation of obligations to PCWA under the Land Purchase Agreement.	No	Yes	Yes
Expandable Conveyance Facility			
Provide potential to add future diversion capacity of 25 cfs for GDPUD and an additional 100 cfs for PCWA.	No	Yes	Yes

Table S-3
Summary of Major Features and Activities for the Alternatives [a]

Facility	No Action/No Project Alternative	Proposed Project	Upstream Diversion Alternative
Pump Station			
Pump Station Location	At the existing site, approximately 750 feet upstream of bypass tunnel inlet	Approximately 600 feet northwest of bypass tunnel inlet	Same as Proposed Project
Pump Station Elevation (feet mean sea level (msl))	525	560 (above 100-year flood level)	Same as Proposed Project
Pump Station Configuration: PCWA	4 12.5 cfs pumps (50 cfs)	5 pumps: 2 at 38 cfs and 2 at 17 cfs, one standby pump at 38 cfs	Same as Proposed Project
Expansion Planning: PCWA	None	Additional 100 cfs for a total of 200 cfs	Same as Proposed Project
GDPUD	None	25 cfs	Same as Proposed Project
GDPUD Pipeline to East Side of Canyon	No	Yes	Same as Proposed Project
Diversion/Intake Structure			
Diversion Location	At the existing site, approximately 750 feet upstream of bypass tunnel inlet	Approximately 600 feet northwest of bypass tunnel inlet	Approximately 100 feet upstream of bypass tunnel inlet
Intake Structure Design	Coarse screen diversion from sump pond	Intake structure with fish screens	Intake structure with trash rack and fish screens
Fish Screen	CDFG-approved screen or fish barrier to be placed at mouth of inlet channel	Installation of a CDFG-approved fish screen on the water supply intake structure	Same as Proposed Project
Hydraulic Gradient Control Structures	None	Series of structures constructed from rock, grouted rock, and concrete to create low-gradient hydraulic drop resulting in a rapid navigable by watercraft	Vee-notch weir
Extent of River Channel Modification	100 feet annually	4,000 feet	200 feet

[a] The pump station and associated facility locations evaluated in the EIS/EIR represent the preliminary footprint for the project at this stage in the design process. It is noted that the design continues to be refined and construction of individual facilities would be modified, based on actual site conditions at the time of construction. However, it is anticipated that such adjustments would be minor and the analysis of the project area provided in the EIS/EIR adequately address site-specific resource issues that would be affected by construction and operation of the pump station facility. Any substantial change in the size or placement of project facilities would warrant reconsideration of environmental impacts in a separate document.

Table S-3 (Continued)
Summary of Major Features and Activities for the Alternatives

Facility	No Action/No Project Alternative	Proposed Project	Upstream Diversion Alternative
River Channel Restoration			
Bypass Tunnel Closure	No	Yes	No
Restoration of the Dewatered River Channel	No	Yes	No
Public River Access Improvements	None	Parking, road, and trail improvements, CDPR entrance station, sanitation facilities	None
Construction and Restoration Excavation			
River Channel Excavation Depth	N/A	Up to 20 feet	N/A
Volume of Excavation Material to be Removed	N/A	700,000 to 1 million cubic yards	72,000 cubic yards
Excavation Material Disposal Volume by Location	N/A		
East of Auburn Dam Keyway		90,000 cubic yards	72,000 cubic yards
Bypass Tunnel Inlet		30,000 cubic years	
Bypass Tunnel Outlet		20,000 cubic yards	
Bench, South of Keyway		560,000 cubic yards	
Pipelines			
Pipeline(s) From Intake Diversion to Pump Station			
Length	16 feet	150 feet	550 feet
Diameter	Two at 8 feet each	One at 7 feet	Same as Proposed Project
Pipeline from Pump Station to Auburn Ravine Tunnel			
Length	2,800 feet	1,670 feet	Same as Proposed Project
Diameter	2.5 feet	6 feet	Same as Proposed Project
Pump Station Construction and Facility Access Roads			
Access Road Improvements	Annual re-grading and rehabilitation of all roads	All-weather road improvements:	
Entrance to Pump Station Site		1,460 feet	Same as Proposed Project
To Auburn Ravine Tunnel		1,430 feet	Same as Proposed Project
Pump Station to Diversion		150 feet	600 feet
Power Lines			
Length of New Power Lines to be Installed to the Pump Station and Intake Structure	None	Approximately 650 feet	Approximately 1,050 feet

Table S-3 (Continued) Summary of Major Features and Activities for the Alternatives			
Facility	**No Action/No Project Alternative**	**Proposed Project**	**Upstream Diversion Alternative**
Safety Features			
Safety Features to Warn and Discourage the Public from Entering the Bypass Tunnel	Signs	Tunnel closed, low gradient structures to reduce hazards to in-river users	Buoys, signs, and ropes
Project Design and Construction Cost			
Project Cost	$250,000 to $1 million annually	$31 million	$17 million
Management Responsibility			
Project Ownership, Operation and Maintenance Responsibilities	Reclamation - continued role with seasonal facilities	PCWA - pump station and related facilities Reclamation/CDPR - public river access site maintenance and management	PCWA - pump station and related facilities

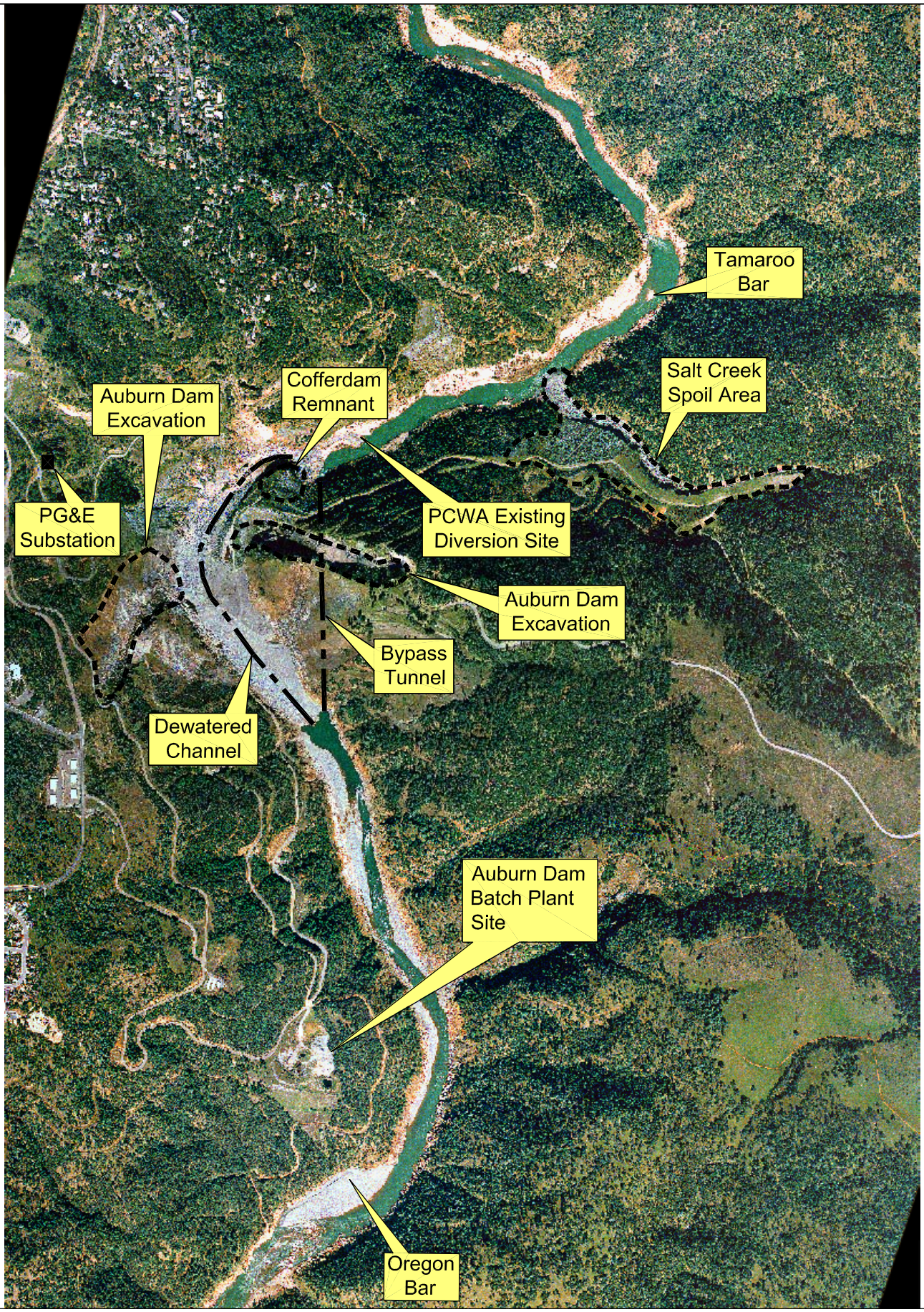


Figure S-5 Existing Project Area Conditions

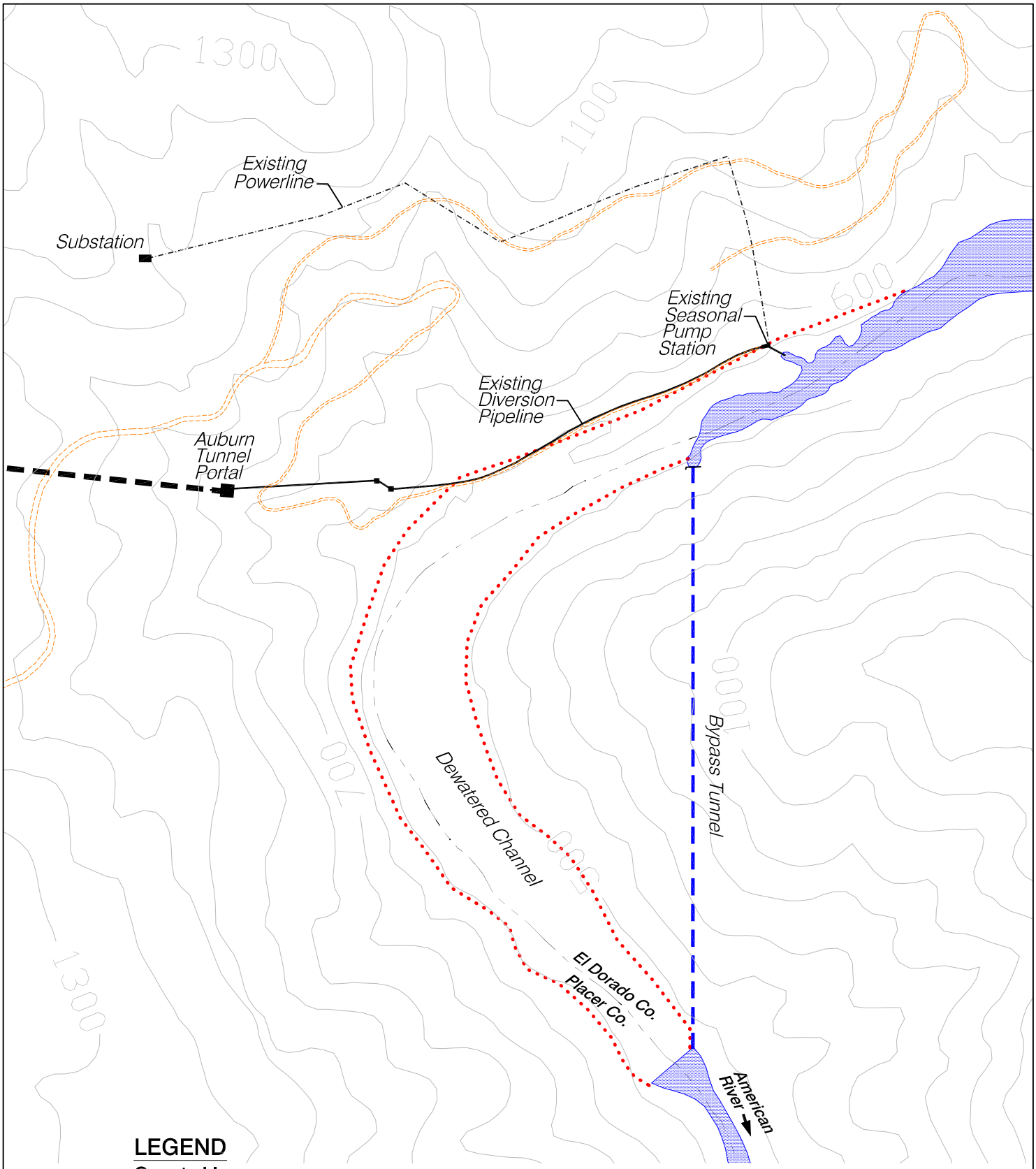


Figure S-6 Major Features of the No Action/No Project Alternative

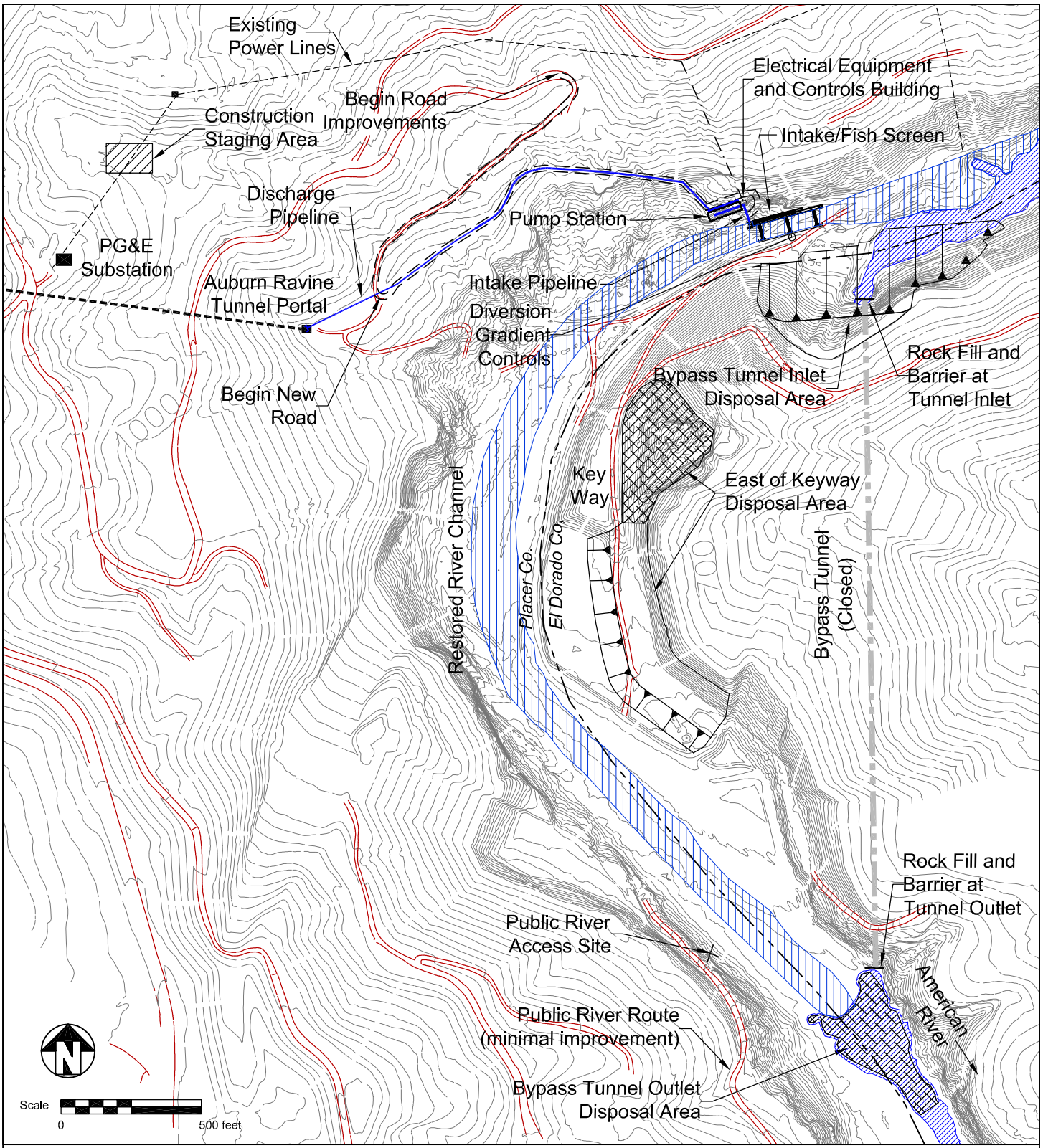


Figure S-7 Major Features of the Proposed Project (Mid-Channel Diversion)



Figure S-8 Public River Access Facilities at Auburn Dam Site and Oregon Bar (Proposed Project-revised)

The major features and activities associated with construction of the Proposed Project include:

- Construction of a new pump station, placed above the 100-year flood level;
- Construction of a water diversion/intake structure;
- Installation of a CDFG-approved fish screen;
- Closure of the bypass tunnel;
- Restoration of flow to the American River channel;
- Installation of water conveyance pipelines;
- Improvement and development of all-weather access roads for project construction and operation;
- Extension of power supply lines; and
- Creation of public river access sites/safety features and related improvements at the Auburn Dam site and near Oregon Bar.

The Proposed Project evaluated in the EIS/EIR consists of increasing diversions from the American River from 50 cfs up to 100 cfs. Consistent with the project objectives, the design of the individual facilities would provide capacity for a future potential expansion diversion of up to 225 cfs. Sizing the facilities to accommodate the potential expanded diversion amount minimizes environmental effects and costs associated with meeting project objectives. The future expansion, if implemented, would involve installation of higher capacity pumps and increased diversion from the river, the details of which remain undetermined at this time. Expansion of the pump station and any increase of diversions above 100 cfs, including extension of infrastructure to GDPUD, would be subject to additional environmental review and resource agency approvals and permitting.

The river channel restoration component of the Proposed Project incorporates several design elements with the overall goal of joining the dewatered segment of the river channel with the upstream and downstream river reaches to create, to the extent possible, a naturally functioning river system. The objectives of river restoration include:

- Development of a stable foundation for water supply diversion;
- Restoration of dewatered channel to appear and function like a natural river environment;
- Enhancement of fish and wildlife habitat; and
- Provision of public river access opportunities.

Implementation of the Proposed Project would satisfy the immediate need for water supply purposes, including creation of a stable foundation for structures and restoration of the channel to

convey year-round flows and obtain predictable water elevations in this segment of the river. A key design goal for the restoration component of the Proposed Project is to imitate, to the extent possible, the appearance and form of a natural river channel, including the banks and floodplain benches. Placement of the excavation material (Figure S-7) would be engineered and designed to accommodate anticipated natural processes and be visually and functionally compatible with river reaches up and downstream of the project site. Preliminary site-specific considerations that would be incorporated into the final design and implementation of the river channel restoration include:

- Sediment transport due to both past Auburn Dam activities and proposed river restoration;
- Bed and bank stability in light of the natural variability of erosion in the project area; and
- Range of flow conditions characteristic of the upper American River.

The major features associated with the public river access features of the Proposed Project include: an entrance gate and booth at the Maidu Drive intersection with the Auburn Dam construction access road including limited improvements to the existing parking area in this location; roadway and trail improvements to provide safe access and avoid conflicts between multiple uses; a 50-space vehicle parking area at the former Auburn Dam batch plant site; modification of the existing trail junction near Oregon Bar to allow vehicle turnaround access; three handicap-accessible spaces and river-side turnaround provisions; and sanitation facilities (trash containers and restrooms). The Draft EIS/EIR included a proposal to develop a 20-car parking area near the river across from the bypass tunnel outlet. In response to public comments regarding potential impacts associated with this use in the area, the current proposal includes only three handicap-accessible parking spaces and a vehicle turnaround in this location. These features are shown on Figure S-8 and described in detail in the Final EIS/EIR. CDPR would be responsible for the operation and maintenance of the Proposed Project public river access features. The existing agreement between Reclamation and CDPR would be updated to reflect CDPR's responsibilities for management of the area, including patrolling and enforcement activities.

Within the near-term, the Proposed Project also would improve conditions for fish and wildlife and provide interim recreational benefits. Further enhancement of fish and wildlife habitat would occur over time as the channel and the surrounding environment respond to the returned river flows. Future long-term recreation planning also will occur as part of Reclamation and CDPR update of the management plan for the Auburn SRA anticipated to begin in 2002 (such planning is beyond the scope of the pump station project).

Construction of the Proposed Project would involve two phases over approximately 22 months. Phase I activities would begin in late 2002 and extend into spring 2004. Phase II construction will be initiated in spring 2003 and extend through summer 2004. Phase I construction would include access roads, initial site preparation, dry streambed excavation (rough grading) and construction of the pump station. Phase II would involve construction of the intake/diversion structure, fish screen, pump station sediment facilities, river gauging stations, standby power facilities, final channel grading, closure of the bypass tunnel and rerouting of river flows, and public river access improvements.

Upon completion of construction and testing of the pump station, Reclamation would transfer the ownership of the facilities to PCWA, in accordance with the contract between PCWA and Reclamation to be executed prior to construction. PCWA would assume full responsibility for all operation, maintenance, and related activities associated with water supply purposes. Reclamation would retain the responsibility for all other operation and maintenance activities associated with the authorized Auburn Dam Project, and would have certain of those responsibilities performed by CDPR under its agreement to manage the Auburn SRA.

The Proposed Project operation originally involved increased delivery of American River water into Auburn Ravine in exchange for Yuba/Bear River water deliveries made to agricultural raw water customers in western Placer County, within PCWA Service Area Zone 5. In response to public comments received on the Draft EIS/EIR regarding potential impacts upon fish resources of Auburn Ravine, the Proposed Project no longer includes this manner of operation. Instead, water diverted from the North Fork American River would be conveyed to the water distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within the Auburn Ravine Tunnel, and from the tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station. The water would then flow within the South Canal where it would be delivered to PCWA's water distribution system (**Figures S-9** and **S-10**).

The double-pumping commitment by PCWA is a more costly method of water conveyance but ensures that the potential impacts resulting from an increase in volume or a change in the seasonal distribution of flow in Auburn Ravine would be avoided. The formerly proposed American River water increase in Auburn Ravine, therefore, would be avoided; however, the American River water currently delivered to Auburn Ravine would remain, within the limits of recent historical monthly maximum delivery rates.

Despite the absence of any expected adverse significant impact on the aquatic resources of Auburn Ravine from the Proposed Project or Upstream Diversion Alternative, it was determined that additional data concerning Auburn Ravine and its resources would be desirable. Accordingly, PCWA proposes to conduct a data collection program in Auburn Ravine to amass a database that can be of use for future decision-making regarding the American River and Auburn Ravine. The monitoring program will consist of flow and water temperature monitoring at locations selected to (1) enhance the ability to determine water quantities (flow) associated with Auburn Ravine and to (2) quantitatively determine the effects of the activities in the Auburn Ravine drainage on water temperatures. This program is included as one of the Conservation Measures in the Mitigation Monitoring and Reporting Program/Environmental Commitments Plan (Mitigation Plan). The Mitigation Plan is included as Appendix D to the Final EIS/EIR.

Upstream Diversion Alternative

The Upstream Diversion Alternative would provide PCWA with a reliable, year-round diversion of its MFP water supply from the North Fork American River while alleviating Reclamation of its obligations to PCWA under the Land Purchase Agreement. Additionally, the Upstream Diversion Alternative would provide the potential for future increased diversion capacity for PCWA as well as GDPUD.

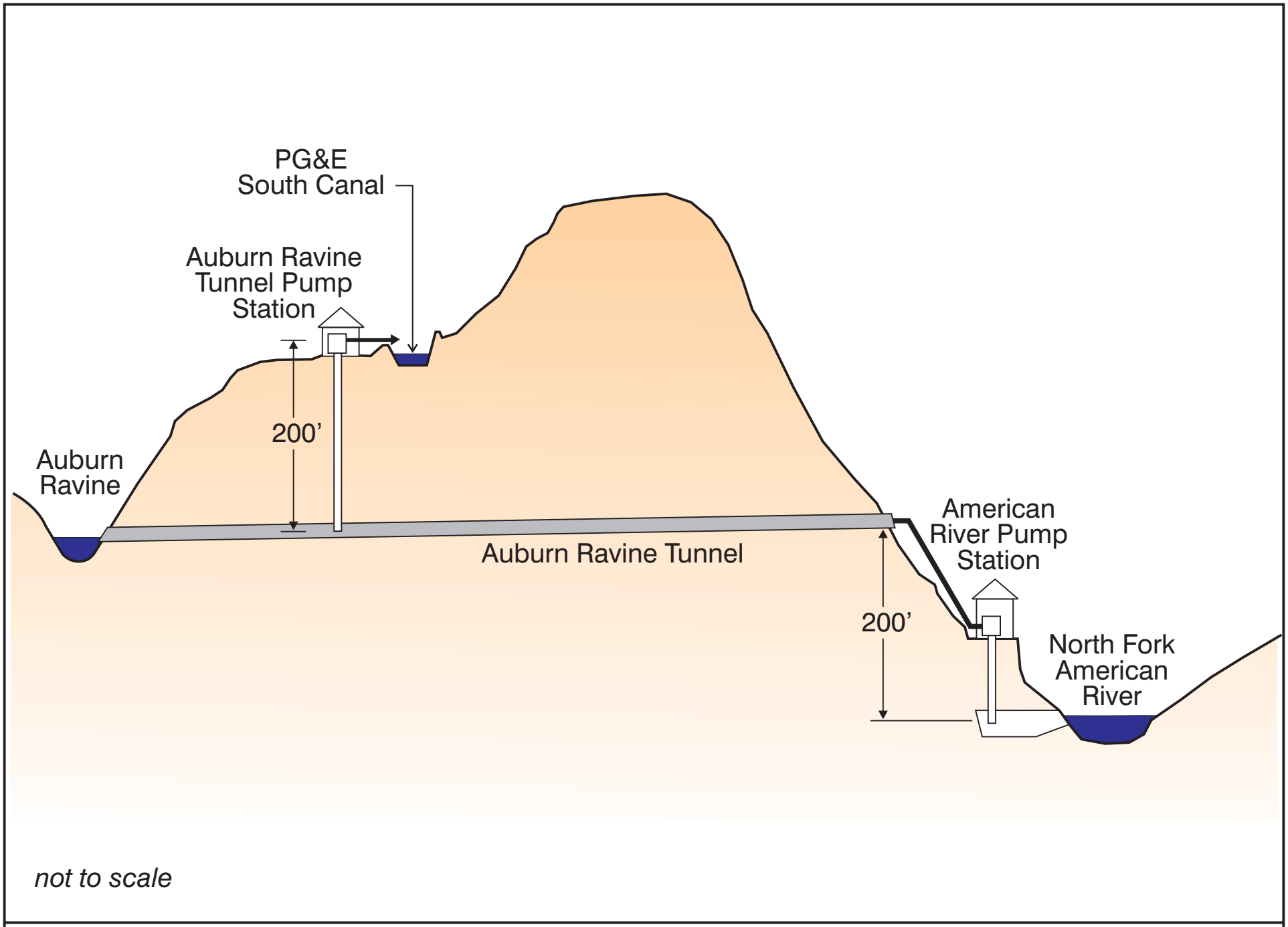


Figure S-9 Hydraulic Profile of Water Deliveries from the American River Pump Station

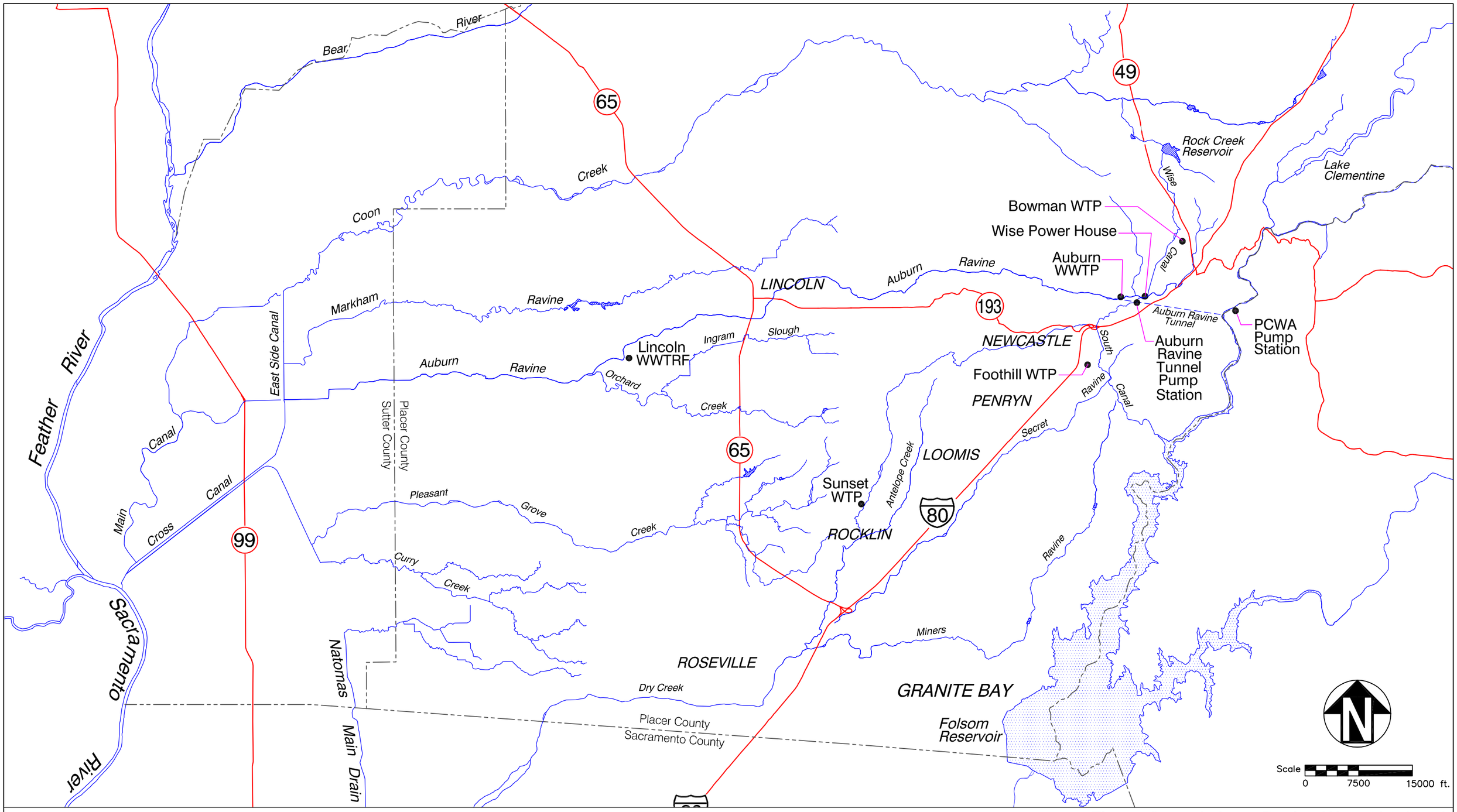


Figure S-10 Auburn Ravine Watershed and Related Delivery System Infrastructure

The major features that would be constructed for the Upstream Diversion Alternative include the water diversion/intake structures, including a CDFG-approved fish screen; water conveyance pipelines, a new pump station, placed above the 100-year flood level; all-weather access roads; power lines; and safety features (Table S-3). The Upstream Diversion Alternative would site the diversion/intake structure upstream of the bypass tunnel inlet. Locating the diversion upstream of the bypass tunnel would not require channel restoration or tunnel closure. The project area would remain closed to the public, except for authorized designated trail use. No additional public access facilities would be developed. The pump station location and associated facilities would be the same as proposed for the Proposed Project. These features are shown on **Figure S-11** and discussed below. The estimated cost for construction of the Upstream Diversion Alternative would be approximately $17 million.

Construction of the Upstream Diversion Alternative would require approximately 21 months beginning in 2003 and ending in summer 2004.

As with the Proposed Project, upon completion of construction and testing of the pump station, Reclamation would transfer the ownership of the facilities to PCWA, in accordance with the contract between PCWA and Reclamation to be executed prior to construction. PCWA would assume full responsibility for all operation, maintenance, and related activities associated with the pump station. Reclamation would retain the responsibility for all other operation and maintenance activities associated with the authorized Auburn Dam Project. CDPR would continue to manage existing recreation-related activities within the project area; however, use of the river would continue to be restricted under CDPR order.

Affected Environment and Environmental Consequences

This section summarizes the affected environment and environmental consequences of implementing the Proposed Project or other alternatives. The resource topics addressed by the Final EIS/EIR were initially identified by the project team engineers, planners, and facility operators, through public and agency scoping meetings, and during preliminary consultations with regulatory and resource agencies. Sections 3.4 through 3.19 of the Final EIS/EIR provide an evaluation of the following resource topics:

- Water Supply and Hydrology
- Fish Habitat and Aquatic Resources
- Terrestrial Resources
- Water Quality
- Recreation
- Visual Resources
- Cultural Resources
- Power Supply
- Land Use
- Geology and Soils
- Transportation and Circulation
- Air Quality
- Noise
- Public Health and Worker Safety
- Indian Trust Assets
- Environmental Justice
- Essential Fish Habitat
- Irreversible and Irretrievable Use of Resources
- Short-term Uses of the Environment Versus Long-term Productivity
- Climate Change
- ESA Compliance

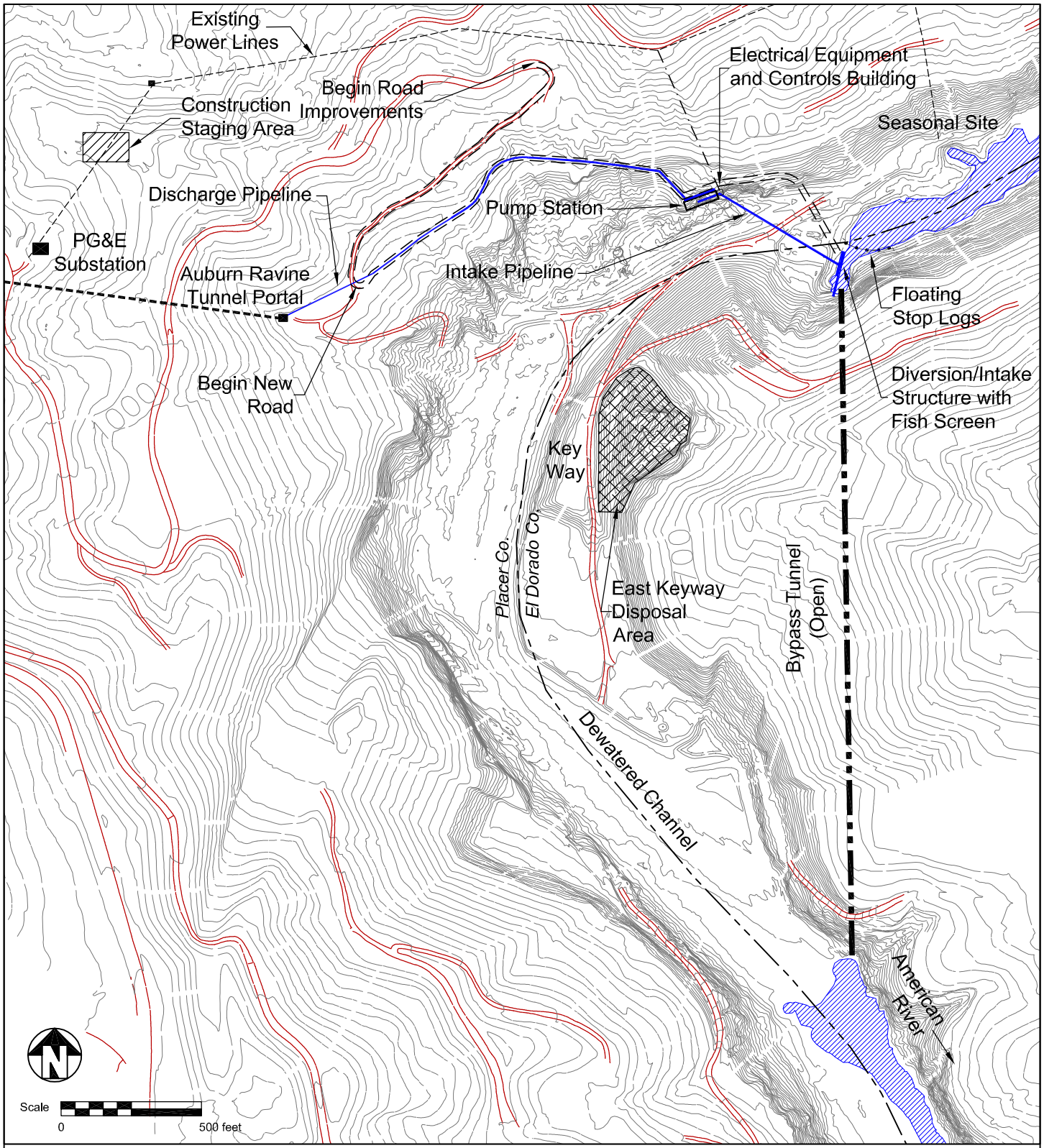


Figure S-11 Major Features of the Upstream Diversion Alternative

Project Study Area

The study area includes the following subareas: regional setting, project area setting, PCWA water service area, and American River Basin water service area.

Regional Setting

The regional setting encompasses the water bodies and waterways that may be influenced by changes in CVP or SWP operations in response to increased diversions from the American River watershed, including the Proposed Project. The Proposed Project is one of several reasonably foreseeable actions that would result in changed operations of Reclamation's CVP American River Division facilities, including Folsom Dam and Reservoir. Reclamation's coordinated operations between Folsom and Shasta/Trinity reservoirs result in a need to consider the Shasta CVP facilities and upper and lower Sacramento River. Additionally, integrated operations between the California Department of Water Resources (DWR) and Reclamation may affect Oroville Reservoir, lower Feather River, and Delta facilities. These are all included in the regional study area. Other future actions, interrelated to the American River system, also are considered in the evaluation. These include Yuba/Bear River system, Cosumnes River/Sly Park-Jenkinson Lake (CVP facilities), and the upper forks and tributaries of the American River. The resources within the regional setting area would not be affected directly by the construction, operation, or maintenance of the pump station project, and are therefore also considered to define the indirect effect study area.

Project Area Setting

The project area setting represents the direct effect study area and encompasses all areas where the direct effects of construction, operation, and maintenance of the Proposed Project or alternatives would occur for a particular resource topic.

Placer County Water Agency Water Service Area

PCWA will continue to convey and deliver the MFP water diverted from the pump station to Service Area Zones 1 and 5. This water would be used to meet current needs, serve as back-up to the Drum-Spaulding Project water, and accommodate growth as projected in approved general, specific, and community planning documentation adopted for these areas of western Placer County.

Water Service Area for U.S. Bureau of Reclamation's Future Central Valley Project Actions in the American River Basin

Reclamation has identified several reasonably foreseeable federal actions that, over the next 25 years, would result in substantial changes in CVP system operations and an increase of American River or Sacramento River diversions for M&I and agricultural water supplies for use in the American River Basin.

The cumulative service area analysis evaluates the potential secondary, indirect effects of providing increased water supplies to lands within the service boundaries of the water purveyors and includes lands within Placer, El Dorado, Sacramento, Alameda, and Contra Costa counties

where impacts to environmental resources could result from the collective actions associated with future planned urbanization. Maps depicting these service areas are provided on **Figures S-12** and **S-13**.

Impact Assessment Framework and Methodology

Implementation of the Proposed Project or alternatives is anticipated to produce two distinct types of effects within the local or regional setting: (1) direct impacts related to construction and operation of the facilities (such as noise); and (2) indirect diversion-related effects (such as changes in hydrology) resulting from the increased diversion of water from the North Fork American River. The facilities impacts are localized, and are mostly construction-related; the potential effects of increased diversions are long-term, and may affect environmental resources beyond the local project area. It was determined that future changes in water supply system operations associated with the Proposed Project and other actions evaluated for the cumulative analysis would not result in changes to the Cosumnes River, nor the Yuba/Bear River system. These water bodies are therefore not addressed in any detail in the analysis.

Issues Identified and Considered in the EIS/EIR Process

During all public and agency stakeholder meetings held prior to and during preparation of the Draft EIS/EIR, participants were provided with a brief presentation concerning the project and particular challenges associated with each of the project alternatives, including the No Action/No Project Alternative. A summary listing of issues and comments identified by the public, resource agencies, and project proponents is presented below.

Water Supply and Hydrology

- Commitment to Water Forum purveyor-specific agreement elements
- River channel stability – cofferdam debris movement
- Long-term stability of the diversion structure
- Backwater effect at Tamaroo Bar
- Flood event effects on project facilities
- Meet increased demand by conservation or water exchanges with other purveyors
- Instream flow/diversion effect
- Discuss possible use of pump station facilities by GDPUD, identify any rate increase associated with facility construction
- Consistency of this project with the CVPIA PROSIM 99 model
- Groundwater supplies

Fish Resources and Aquatic Habitat

- Special-status species – chinook salmon, steelhead (flow, diversion structure)
- Instream flow requirements for fisheries
- Water chemistry changes – effects on special-status fish species migration (Auburn Ravine)
- Restoration of coho salmon to the north and middle forks of river (otters and eagles)
- Restore the river channel

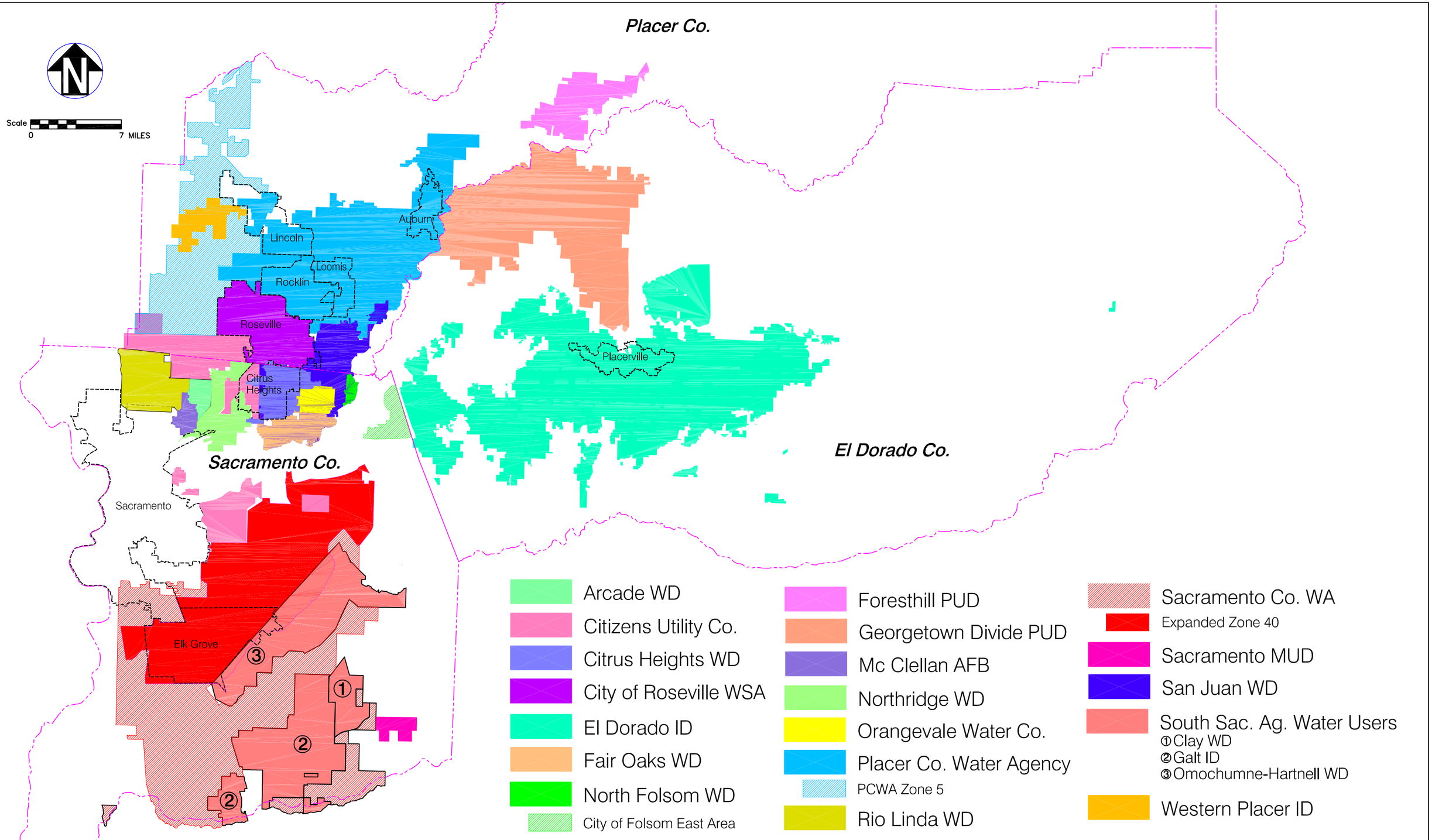


Figure S-12 American River Basin Water Service Study Area

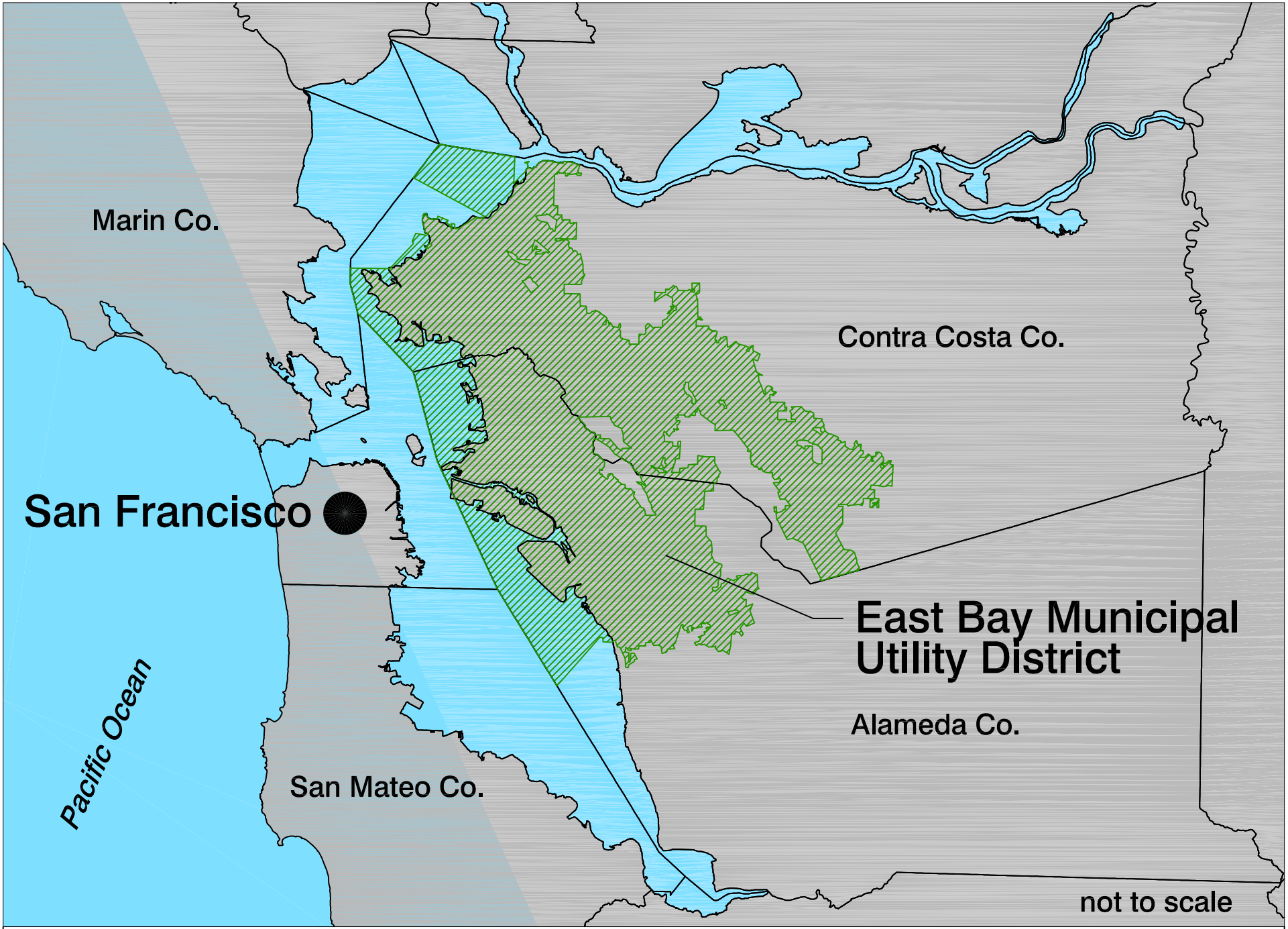


Figure S-13 East Bay Municipal Utility District Water Service Study Area

- Restore fish runs upstream of Folsom Dam
- Protection of fish from injury at the pump station
- Auburn Ravine impacts from increased flows

Terrestrial Resources

- Wildlife migration corridors and flyways
- Riparian habitat protection/enhancement
- Restore the river channel to improve the ecosystem

Water Quality

- Sedimentation/turbidity
- Water temperature
- Auburn Ravine – when the water leaves the Auburn Ravine Tunnel – where does it go?
- Groundwater quality

Recreation

- Public access – hiking/equestrian/bicycle trails, access to the river for water-based activities
- Public use of roads constructed by the project
- Project consistency with the Auburn State Recreation Area Interim Management Plan
- Cost-benefit comparison of recreation opportunities between alternatives
- Diversion tunnel safety hazard to recreation
- Restore the river channel for water-based activities
- Attract Olympic events

Visual Resources

- Pump station aesthetics

Land Use

- Growth-inducement aspects of increased diversion/water supply (traffic, loss of habitats, public service burden)
- Agriculture impacts
- Placer County General Plan – what does "build-out" look like; will the project serve build-out; and will other facilities need to be constructed?
- Public utilities and services – energy consumption by pump station

Air Quality

- Short-term construction emissions
- Long-term operational emissions

Public Health and Worker Safety

- Diversion tunnel safety
- Structures as potential attractive nuisance (safety issue)
- Fire safety

Alternatives Analysis

- Upstream location poor choice – silt settling basin requires frequent dredging or special effort to maintain
- Cost-benefit analysis between alternatives – particularly related to recreation opportunities

Other Issues

- Political support
- Funding/use of tax dollars
- Auburn Dam – future construction/waste of resources
- Future planned changes to Folsom Dam (height)
- Relationship of project to other local and regional projects (cumulative analysis)
- Public Trust Doctrine
- Unreasonable methods of diverting water prohibited by Article X, Section 2 of the California Constitution and Section 100 of the California Water Code

Impact Conclusions

An overview of the Final EIS/EIR impact conclusions for each resource topic addressed in the EIS/EIR is provided below. The results of the impact analyses comparing the impacts among the alternatives and describing the significance of impacts of the alternatives after implementation of environmental protection or mitigation measures are summarized following these sections. Environmental protection measures have been incorporated as either construction management practices or design features to minimize or eliminate most potentially significant impacts to levels considered less than significant. The No Action/No Project Alternative would result in potentially significant, unavoidable impacts to water supply, fish resources and aquatic habitat, recreation, land use/plan consistency, and noise resources. Implementation of the Proposed Project would result in potentially significant, unavoidable water supply, recreation, and air quality (construction) impacts. The Upstream Diversion Alternative would result in potentially significant unavoidable water supply, recreation, and land use/plan consistency impacts.

Under the cumulative condition, potentially significant impacts have been identified for water supply, fish resources and aquatic habitat, water quality, recreation, cultural resources, power supply, and air quality (construction) impacts. Of these conditions, the Proposed Project potentially would have a considerable contribution only to air quality, and only in the event that other construction projects with unmitigated nitrogen oxide (NO_x) emissions occur within the air basin within the same timeframe as the Proposed Project construction.

Water Supply and Hydrology

Relative to the existing condition, potentially beneficial effects on water supply and river hydrology at the site would occur under the Proposed Project. All alternatives would provide PCWA an increased amount of water for use within Service Area Zone 1. No additional American River water relative to historical monthly maximum deliveries would be supplied to Service Area Zone 5 until further evaluation of potential effects upon Auburn Ravine resources was completed. The No Action/No Project Alternative facilities, however, would be subject to flooding and capacity limitations that make it potentially unreliable and unable to meet the project purposes and objectives. The No Action/No Project Alternative would potentially worsen groundwater overdraft conditions due to the likelihood that agricultural and rural farms would increase reliance upon groundwater as raw surface water supply deliveries ultimately would be reduced as a measure of conserving water and meeting treated water demands. The Proposed Project would close the bypass tunnel and restore surface water flows to the dewatered channel; this long-term beneficial effect upon North Fork American River hydrology would not occur under the No Action/No Project or Upstream Diversion alternatives.

American River water rights holders would not be subject to any supply deficiencies associated with the alternatives. CVP Settlement and Exchange Contractors would not experience any change in allocations. Although small and infrequent, potential reductions in CVP delivery allocations to Water Service Contractors would occur under all alternatives (reduced by up to five percent in up to two years out of the 70-year simulation). Under the cumulative condition, water delivery allocations for both SWP customers and CVP Water Service Contractors would be affected. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export. Because any reduction delivery allocations to these customers is considered significant, the impact upon SWP and CVP contractors would be considered an unavoidable adverse impact.

Fish Resources and Aquatic Habitat

Fish Passage Through Project Area

The No Action/No Project Alternative would include use of fish screening techniques approved by CDFG and included in the Streambed Alteration Agreement terms and conditions for the seasonal pump station. These provisions would be re-evaluated every five years. Implementation of these measures would protect fish from entrainment and impingement at the intake. The Action Alternatives would both include installation of a permanent CDFG-approved fish screen and provide a long-term reduction of fish impacts at the intake/diversion. Action Alternative construction would result in temporary, short-term disturbances of aquatic habitat; however, fish and water quality protection measures included in the Mitigation Plan would minimize these

effects to levels considered less than significant. The Mitigation Plan is included as Appendix D to the Final EIS/EIR and would be incorporated into Reclamation's construction contractor specifications. Potential water quality impacts upon fish habitat due to increased public use of the area would be minimized through stormwater runoff control and sanitation facilities. The Proposed Project would be the only alternative that would meet the objective of river restoration and enhanced fish/aquatic habitat at the project site. Fish passage through the project area would be improved under the Proposed Project by the river restoration; this benefit would not exist with the No Action/No Project or Upstream Diversion alternatives. However, these alternatives would not result in an adverse change from the existing condition.

Auburn Ravine

In response to the public and agency comments on the Draft EIS/EIR, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine as under the existing conditions instead of releasing additional North Fork American River water into Auburn Ravine in exchange for Yuba/Bear River water. Water diverted from the North Fork American River would now be conveyed to the PCWA water supply distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within the Auburn Ravine Tunnel, and from the tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station. The water would then flow within the South Canal where it would be delivered to the Foothill Water Treatment Plant (WTP). The formerly proposed American River water increase in Auburn Ravine therefore would be avoided; however, the American River water currently delivered to Auburn Ravine would remain within the limits of recent historical monthly maximum delivery rates.

The double-pumping commitment by PCWA is a more costly method of water conveyance but ensures that the potential impacts resulting from an increase in volume or a change in the seasonal distribution of flow in Auburn Ravine would be avoided. Still, American River water would be delivered to Auburn Ravine as historically conveyed, as well as via the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF). Commenters suggest that these actions may still affect salmonid homing. However, a thorough review of the mechanisms that salmonids utilize when homing to natal streams indicates that it is unlikely that the Proposed Project or alternatives would produce a genetic disruption of Auburn Ravine salmonid stocks primarily due to the acute olfactory homing mechanisms in the salmonid family; the environmental homing cues and the fate of these cues within the study area; the sequential imprinting process; the probable lack of persistent, native Auburn Ravine stocks within the Central Valley Evolutionarily Significant Unit (ESU); and the mitigation programs of other water projects affecting Auburn Ravine. Similarly, the municipally delivered Proposed Project water which is distributed to the service areas of Placer County Department of Public Works SMD No. 3 and the two City of Roseville Wastewater Treatment Plants (WWTP) will undergo treatment as well, a process which is likely to drastically alter the homing cues before the effluent is discharged into Dry Creek and Pleasant Grove Creek. Therefore, the homing cues found in the American River water utilized within the PCWA service area are likely to be dramatically altered before entering Auburn Ravine, Dry Creek, and Pleasant Grove Creek suggesting that the water reaching these streams would retain low potential for attracting American River fish. These findings are described in detail in Response to Comments (Appendix C, Volume 1, Master Response 3.1.13, Auburn Ravine).

Diversion-Related Fisheries Effects in Regional Water Bodies

Changes to river flows and reservoir elevations in the regional study area would not be expected to result in adverse fish resources or aquatic habitat impacts due to the alternatives. Cumulative conditions, however, would result in potentially significant impacts to the following conditions affecting fish resources:

- Availability of littoral habitat for warmwater fish at Folsom Reservoir and an increase of nest-dewatering events;
- Availability of rearing habitat for juvenile fall-run chinook salmon and steelhead and increased water temperatures of the lower American River;
- Availability of useable habitat for splittail in the lower American River;
- Availability of littoral habitat for warmwater fish at Shasta Reservoir;
- Increased water temperatures of the upper Sacramento River, including additional exceedances of NMFS Biological Opinion temperature thresholds for winter-run chinook salmon and decrease in the long-term average early-lifestage survival for fall-run and winter-run chinook salmon;
- Increased water temperatures of the lower Sacramento River such that additional exceedances of temperature thresholds would occur;
- Decreased Delta outflow and shifts in X2 (2 parts per thousand (ppt) isohaline in the Delta);
- Changes in elevation and storage at Oroville Reservoir such that warmwater fish resources may be adversely affected; and
- Changes in flow of the lower Feather River such that fish resources may be adversely affected.

The assessment of the Action Alternatives' incremental contribution to these cumulative effects indicate that the Proposed Project and Upstream Diversion Alternative would not result in significant effects upon these resources or conditions.

Terrestrial Resources

The No Action/No Project Alternative would not result in disturbance of riparian or other vegetation and associated habitats at the project site beyond that which already occurs as part of the seasonal pump station installation under the existing condition. Because the site is already highly disturbed from past Auburn Dam construction activity, the Proposed Project and Upstream Diversion Alternative would result in vegetation/habitat loss, including riparian and wetland areas. Temporary habitat disturbance would result from construction of the proposed facilities and permanent habitat loss would occur due to placement of water supply and public river access features, including placement of excavated materials removed from the river channel within the study area (Figures S-7 and S-11). Overall, under the Proposed Project, approximately 3.35 acres

of vegetation and up to 37 acres of "disturbed" area (i.e., grasses, scattered shrubs, and trees) would be either temporarily or permanently affected, as shown below:

Table S-4
Proposed Project Construction Impacts on Habitat Types (acres)

Urban	0
Potential Wetlands	0.01
Riparian Vegetation	1.06
Early Successional Oak Woodlands	2.08
Late Successional Oak Woodlands	0.20
Disturbed	37

Under the Proposed Project, restoration of the river channel would result in the replacement and enhancement of riparian/wetland areas at the site. Additional mitigation of potential wetlands, potentially involving restoration, enhancement or creation of wetland area, would be implemented according to consultations with resource agencies for the permanent loss of acreage that would occur if the Upstream Diversion Alternative were selected. Cumulative facilities-related impacts would be less than significant.

Bank and slope erosion would be common for annual flows much less than the 100-year flood event, and passive restoration according to site potential would occur naturally once the disturbed areas within the project area stabilize in response to natural processes associated with channel formation and seasonal fluctuations in river levels. However, until the extent of floodplain inundation and other channel characteristics have been established, it would not be practical to implement a revegetation program because the benefits of these efforts may be lost during high water events. Reclamation, through implementation of the environmental commitments included in the Mitigation Plan (Appendix D to the Final EIS/EIR), would monitor the area for natural vegetation growth and habitat establishment to determine whether adaptive resource management actions would be appropriate or needed in the project study area. Please see Master Response 3.1.5, Project Area River Restoration and the Mitigation Plan (Appendix D to the Final EIS/EIR).

Special-Status Wildlife Species

Pre-construction site surveys would be conducted to determine the presence of habitat and, if necessary, relocate individuals of California horned lizard, spotted bat, greater western mastiff-bat, yellow-legged frogs, western toads, and chorus frogs. A survey for red-legged frogs was ongoing in early June 2002 pursuant to the USFWS 1997 protocol and as a follow-up to the March 2002 red-legged frog habitat assessment performed at the project site. Findings of the survey will be provided to USFWS as part of the ESA Section 7 consultation for the Proposed Project. No red-legged frogs were sighted in the project area during the first phase of the observation period. However, should red-legged frogs be found to use the project area ponds, appropriate terms and conditions to mitigate for potential project impacts would be incorporated into the USFWS Biological Opinion for the project and included in the construction contractor specifications. Reclamation may not issue its Record of Decision for the project until the USFWS ESA consultation is complete. Additionally, construction worker briefings would be held to provide

educational materials regarding what to do should these species be observed during construction. These measures are included in the Mitigation Plan (Appendix D to the Final EIS/EIR) and would minimize habitat and special-status species impacts to less than significant.

Diversion-Related Effects to Terrestrial Resources Within Regional Water Bodies

Diversion-related changes to CVP operations affecting river flows and reservoir elevations would not be anticipated to result in adverse effects to riparian vegetation, open-water habitat, or associated wildlife habitat for the lower American River, upper or lower Sacramento River, the Delta, or Folsom, Shasta, or Trinity reservoirs under any alternative or under the cumulative condition. Future increased demands on the SWP would result in potentially significant impacts at Oroville Reservoir and along the lower Feather River. These effects are not directly or indirectly related to the Proposed Project.

Water Quality

The No Action/No Project Alternative and Action Alternatives would not be expected to result in significant water quality impacts at the project site. Avoidance of significant construction-related increases in sedimentation and turbidity would be accomplished through the implementation of environmental protection measures including standard Best Management Practices (BMPs) to control erosion of rock and soils from disturbed areas and to minimize, to the extent feasible, in-river use of construction equipment. Regulatory agency review and permitting processes would be completed under all alternatives and would require the implementation of additional site-specific terms and conditions to be determined through coordination with the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and CDFG. The terms and conditions of the regulatory permits would include provisions to handle post-construction erosion and sedimentation that would result from restoration of the river channel.

Potential increases in constituent concentrations associated with decreased dilution capacities of the lower American River; upper and lower Sacramento River; Folsom, Shasta, or Trinity reservoirs; or the Delta would not be anticipated to result in state or federal drinking water quality criteria or standards to be exceeded, relative to the existing condition, under any of the alternatives. However, under the cumulative condition, reductions in river flows and reservoir elevations and shifts in X2 at the Delta would potentially lead to such violations. The assessment of the Action Alternatives' incremental contribution to these impacts indicates the Proposed Project or Upstream Diversion Alternative would have less than considerable effects.

Recreation

Project Trail Use During Construction Period

Under the Proposed Project and Upstream Diversion Alternative, some closure/restricted public access within the project construction areas would be necessary to protect the public and facilitate pump station construction, bypass tunnel closure, and river channel restoration. Restricted access in the project area is appropriate and required to protect the health and safety of the general public from the various hazards (i.e., heavy construction equipment operations, blasting, extensive

earthwork and unsafe materials, including explosives) associated with construction of the Action Alternatives as well as to protect the construction area and equipment.

The total area closed to public access would vary by construction phase and activity. Several trails pass around or through the project study area including Pioneer Express, Cardiac Hill, Cardiac Hill Bypass, Auburn-to-Cool, Riverview, Western States, Robie Point Fire Break, Pointed Rocks Fire Break and Olmstead Loop trails (**Figure S-14**). Construction of the Proposed Project would not affect public use of the Pioneer Express, Western States, Robie Point Fire Break, Pointed Rocks Fire Break or Olmstead Loop trails. Access impacts to these trails due to project construction would be less than significant.

Special events or activities utilizing these trails would not be expected to be adversely affected by construction of the Proposed Project. CDPR would work with special event coordinators including the Western States Endurance Run, Tevis Cup Western States Trail Ride and the American River 50-Mile Endurance Run, and Reclamation's construction contractor to avoid trail access impacts for these events. Coordination with event sponsors would enable CDPR and Reclamation to ensure safe, adequate passage along event routes for the set-up, operation and break-down/clean-up associated with each event. The impact of the Action Alternatives upon these annual trail events would be considered less than significant.

Auburn-to-Cool Trail

Under the Proposed Project, the closure of the Auburn Dam bypass tunnel and restoration of the North Fork American River to its historic channel would result in the bifurcation of the Auburn-to-Cool Trail, which currently crosses the dewatered portion of the river. Although the Auburn-to-Cool Trail serves mountain bikers, equestrians, runners, and hikers, the route is not a designated recreational trail. Rather, the Auburn-to-Cool Trail makes use of Auburn Dam Project construction roads on the south side of the canyon from the Olmstead Loop near Cool, crosses the dewatered section of river channel, and then follows construction roads up the north side of the canyon. Though the official route follows the primary construction road down to the Auburn Dam site from Maidu Drive to the bottom of the canyon, trail users follow several alternate routes up the north side of the canyon, including a steep dirt track that follows the approximate alignment of PCWA's temporary pipes.

The closure of the Auburn Dam bypass tunnel is a proposal made by, and which would be undertaken by, Reclamation in response to (1) assertions by the State of California that, in the absence of a Congressional commitment to proceed with the long-stalled Auburn Dam, Reclamation lacks authority to continue to divert water from the dewatered stretch of the North Fork American River through the bypass tunnel, and (2) the State of California's insistence that the river be restored to its historic (pre-Auburn Dam) channel. PCWA has tentatively agreed, subject to CEQA compliance, that the best location for a permanent pump station may be in a spot that is currently dewatered; but PCWA is by no means the primary actor in closing the tunnel and restoring the river. Nor does it control Reclamation's decision to do so. In fact, as Reclamation has acknowledged, the federal government has a contractual obligation, under the so-called "Land Purchase Agreement," to provide an interim pumping facility or alternative water supply until the Auburn Dam was completed. PCWA's interest is to obtain a permanent pump station that will

Figure S-14

allow it to resume the water supply operations interrupted by Auburn Dam construction activities, and to expand its diversions, consistent with existing water rights, to address increasing demands for water due to population growth in the PCWA service area.

It is PCWA's position, then, and not necessarily Reclamation's, that PCWA is not undertaking any discretionary actions that would constitute the sole or even primary cause of the bifurcation of the Auburn-to-Cool Trail. Instead, responsibility for loss of the Auburn-to-Cool Trail lies primarily with Reclamation, as the entity responsible for closing the tunnel and returning the North Fork American River to its historic channel. These distinctions follow from the very nature of the agency decisions at issue. Thus, the Proposed Project should be understood as a combination of two independent but closely related actions in which Reclamation proposes both to restore the river and to build PCWA a new pump station, and PCWA proposes to enter into a contract accepting ownership of such new facilities, and operate them for water supply purposes, thereby relieving Reclamation of its obligations under the Land Purchase Contract.

Because, from a CEQA standpoint, PCWA's actions will not be the primary cause of the impacts on the Auburn-to-Cool Trail, PCWA cannot be solely responsible for attempts to mitigate those impacts. Instead, assuming that PCWA is only partly responsible for the impact, PCWA staff, as co-author of the Final EIS/EIR, recommend that the PCWA Board allocate a maximum of $500,000 towards future construction of a river crossing or similar mitigation – *if*, after a project-specific NEPA/CEQA process, Reclamation and CDPR choose to proceed with such a crossing, and only at a point in time at which the pump station has cleared all regulatory and other legal hurdles, so that it is clear that a new pump station actually will be built and operated. Such an amount is intended to approximate what might be called a "fair share" contribution to the total estimated costs of such a process and such a crossing, which are currently estimated to be $1.5 million.

Reclamation agrees with PCWA that the most appropriate venue for considering a new crossing is a separate planning and environmental review process, such as the pending update of the General Plan/Resources Management Plan for the Folsom Lake SRA. Reclamation, therefore, further believes that the current EIS process for the American River Pump Station Project is not the proper vehicle or venue for developing a potential crossing or other means of preserving a multi-use route between Auburn and Cool. For these reasons, Reclamation does not, as part of this process, propose any mitigation measure addressing Reclamation's contribution to impacts associated with bifurcation of the Auburn-to-Cool Trail. Importantly, though, Reclamation will cooperate in any CDPR-initiated planning and environmental review process addressing a proposal to build a crossing with state- or local-funding.

As to PCWA, there is legal authority under California law suggesting (by analogy) that such a contribution can constitute sufficient mitigation for any impact caused by PCWA's activities. This analogous authority provides that, where a particular project will incrementally contribute to a larger cumulative impact, the project's incremental contribution can be adequately mitigated if the project "is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." (Cal. Code Regs., tit. 14, div. 6, ch. 3 ["CEQA Guidelines"], § 15130, subd. (a)(3)). Although the bifurcation of the Auburn-to-Cool Trail is not, strictly speaking, a "cumulative impact," it is analogous in the sense that the impact is caused either by Reclamation, acting alone, or by Reclamation and PCWA acting together. Thus, a "fair

share" contribution to a new bridge is a fair and reasonable means by which PCWA can attempt to facilitate the ultimate approval and construction of a replacement river crossing or similar mitigation measure (e.g., construction of a new multi-use trail allowing mountain bikers and others to use the Highway 49 Bridge or Mountain Quarries Bridge to cross over the North Fork American River).

Because any such crossing will involve environmental issues requiring project-specific analysis, and all actions necessary to implement a replacement crossing must be taken by entities other than PCWA, another and separate environmental review process will be required. Such a process will likely involve preparation of a joint NEPA/CEQA document, with Reclamation and CDPR acting as joint lead agencies.

PCWA and Reclamation have had numerous conversations with CDPR and the Resources Agency of the State of California, in which the latter entity has indicated that it will devote a total of $1 million to environmental review for a replacement river crossing and, eventually, construction of such a project – if, that is, the resulting environmental impacts are deemed acceptable after compliance with NEPA and CEQA.

CDPR and Reclamation will have to decide between themselves exactly how to proceed with environmental review for any bridge proposal. The two most likely possible approaches are (1) to prepare a project-specific environmental document focusing solely on the bridge and alternatives and (2) to fold bridge planning into the pending revision of the General Plan/Resource Management Plan for Folsom Lake SRA, which is contiguous to Auburn SRA. Under either approach, the two agencies will focus their efforts on identifying the best possible location for a new crossing or other measures that can mitigate the impact of the bifurcated Auburn-to-Cool Trail.

Project Area Trails and Recreation Uses and Plans

The Proposed Project would result in improved trail conditions and river access near Oregon Bar. Project design includes measures to minimize mixed-use conflicts so that equestrians, boaters and pedestrians can safely enjoy the area. The No Action/No Project and Upstream Diversion alternatives would maintain river flows through the bypass tunnel. The tunnel is considered to pose a safety hazard and keeping it open is in conflict with direction given by the State Attorney General's office. This would be a significant impact.

The increased recreation use at the site would generate additional demand for parking at the North Fork/Middle Fork confluence. Because of the already impacted conditions on peak recreation days, this would be considered a significant, unavoidable impact. As with other recreation issues in the Auburn SRA, Reclamation and CDPR would develop long-term management goals, policies and programs as part of the upcoming comprehensive plan. The Action Alternatives would not result in conflict with the American River Parkway Plan or state and federal Wild and Scenic River acts' designations.

Whitewater Boating Opportunities

The Action Alternatives would result in changes in operation of the MFP to continue to meet water supply and environmental instream flow requirements. Modification of releases would affect the

frequency and duration of Middle Fork river flows that provide suitable whitewater rafting flows. Although the analysis of potential impacts upon whitewater boating on the Middle Fork American River is considered conservative, the loss of recreation opportunity would be considered a significant impact upon river boaters and commercial rafting. The Proposed Project river restoration element provides increased river rafting opportunity along the North Fork American River below the confluence. Although the anticipated Class I to Class III character of the restored river section would not provide a replacement for the more challenging boating opportunities lost on the Middle Fork, it would open up an additional reach of the river for boating activities not currently available in the project area. It is also noted that CDPR would not propose or permit commercial river rafting in this reach of the American River as part of the Proposed Project. Increased boating opportunities in the project area would not exist under the No Action/No Project or Upstream Diversion alternatives.

Diversion-Related Recreation Effects in Regional Water Bodies

Water-based and enhanced recreation would not be adversely affected along the upper or lower American River; upper or lower Sacramento River; Feather River; Delta; or Folsom, Shasta, Trinity, or Oroville reservoirs under any of the alternative conditions. However, cumulative conditions would result in potentially significant impacts upon recreation opportunities during some months or years for the lower American River, Feather River, Folsom Reservoir boating and swimming, Shasta Reservoir boating, and Oroville Reservoir activities. Further assessment of these conditions indicate that the Action Alternatives would not have a substantial or considerable contribution to these conditions.

Visual Resources

The visual character of the project area would not change substantially under the No Action/No Project or Upstream Diversion alternatives. The Proposed Project would provide an enhancement of the local viewshed through river restoration and closure of the bypass tunnel. Construction activities would involve use of up to 54 construction vehicles (heavy equipment) and up to 50 construction workers during peak activity; however, views of the site are limited to portions of the pump station location and parts of access roads. Few receptors have views of the Auburn Dam batch plant site where the Proposed Project would result in construction of a "rustic" parking area associated with the Oregon Bar river access feature. The partial and intermittent views of these locations would not be substantially negatively altered over the long-term. Recreation trails would be closed periodically throughout the construction period minimizing the visual effects upon recreationists.

The appearance of the pump station and intake/diversion structures would be improved over the existing condition. The pumps would be within a specific block enclosure of a light neutral/earthtone color to blend with the surroundings. Closure of the bypass tunnel under the Proposed Project would be performed in such a way as to blend with existing formations. Increased use of the site for recreation-related activity would change the look of the area from some of the residential and trail viewpoints. Because these uses are consistent with the planning goals for the area and would be managed to minimize the number of people and hours of use, these changes would be considered less than significant. Additionally, all amenities to be provided would be designed in compliance with CDPR guidelines.

Reductions of river flows and reservoir elevations associated with the Action Alternatives and related changes to CVP operations would not result in adverse visual effects; with few exceptions water surface or flow fluctuations generally would be within ranges experienced under the existing condition for all alternatives. Occurrences of flows or surface water elevations below the existing condition would not be of sufficient frequency to result in an overall long-term change in visual character. No significant cumulative impacts upon visual resources would be expected. Changes within the SWP system, however, due to increased system demands may result in potentially significant impacts upon visual resources of the lower Feather River and at Oroville Reservoir. These effects would occur even without implementation of the project or future CVP actions.

Cultural Resources

No sensitive cultural resources or historic properties are known to occur within the Area of Potential Effect (APE) at the project site or within the construction zone of the alternatives. The high level of past disturbances at the site from Auburn Dam construction activities make it unlikely that any buried cultural resources remain within the APE. The construction management plan for the selected alternative would include standard federal and state measures to be implemented in the event buried cultural resources or human remains are uncovered.

Reductions or increases of river flows and reservoir surface water elevations below or above those typically experienced have the potential to expose resources that are usually inundated or to inundate resources that have already been exposed. In most locations within the study area, river flows and surface water elevations at reservoirs would be within ranges similar to the existing condition and would not result in an increased potential for damage or exposure of cultural resources. At Shasta Reservoir, however, under the cumulative condition, reduction of the surface water elevation below minimum levels anticipated for existing conditions would be potentially significant, and the contribution of the Action Alternatives' to this condition would be considerable. Reclamation has initiated consultation with the SHPO regarding this potential impact. Implementation of an Action Alternative would, therefore, include development and implementation of a Programmatic Agreement with SHPO to adequately address the potential concerns related to changes in Shasta Reservoir elevations. The National Advisory Council on Historic Preservation and other interested parties would participate in the development of the terms of the agreement to ensure protection of known or potential resources at this location. These efforts would mitigate this potential impact to less than significant.

Increased future demands upon the SWP system also would result in potential for increased exposure of cultural resources along the lower Feather River or in the Oroville Reservoir drawdown zone. The Action Alternatives would not contribute to these effects.

Power Supply

Increased North Fork American River diversions and associated changes in CVP operations would result in minor reductions of gross CVP hydropower generation and dependable capacity and increase water supply pumping energy requirements for the Folsom Reservoir pumping plants (Folsom and El Dorado Irrigation District (EID)). Under the cumulative condition, these effects would be potentially significant. Future demands upon the SWP system also would result in potentially significant impacts upon power supply at Oroville Reservoir. The assessment of the

Action Alternatives' incremental contribution to these impacts indicate a less than significant change.

Land Use

Project Area Land Use

The Proposed Project would result in closure of the bypass tunnel in compliance with the State Attorney General's office direction to do so; the other alternatives would result in a conflict with this direction, as the tunnel would remain open. River restoration and the interim public access facilities, under the Proposed Project, would be consistent with the long-range planning goals of Reclamation and CDPR for uses in the Auburn SRA. The other alternatives would not result in these improvements. No land use designations or zoning changes would be required, although all alternatives would result in increased water supply utility-related activity, either seasonally, or year-round. No businesses, homes or individuals would be displaced as a result of any of the alternatives.

Placer County Water Agency Water Service Area Growth Inducement

Rapid growth has occurred in Placer County since the mid-1980s and growth demands have pushed the limits of PCWA's existing water supply delivery means from both the Drum-Spaulding Project and the MFP seasonal pump station. Further growth and development have been approved through local planning process (i.e., different City and County general plans).

PCWA's need for a larger pump station and the added capacity associated with it does not increase the quantity of PCWA's existing water entitlement. The proposed larger pump station facility would only enable PCWA to withdraw the quantity of water to which it is rightly entitled under the law, in accordance with its Federal Energy Regulatory Commission (FERC) license and two Water Rights permits granted by the SWRCB.

It is the responsibility of planning agencies to foresee future needs and try to develop land use development alternatives that will meet impending demands while being environmentally sound and beneficial to the overall needs of the community. PCWA does not possess land use regulating authority; however, it is PCWA's mandate to meet water demand within its service area. Provisions in existing state and county planning efforts running through 2030 have anticipated what future water supply demands will be under mid-range growth and build-out projections, and have established alternative water sources within the Central Valley as well as other combinations of efforts including reduction over time in the amount of MFP water supplied to SSWD.

PCWA's legal duties arise in part from the Placer County Water Agency Act, which is found in Section 81-1, et seq., of the appendices to the California Water Code. Section 81-4 of that enabling legislation gives PCWA the power "to do **any and every lawful act** necessary in order that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the agency, including, but not limited, to, irrigation, domestic, fire protection, municipal, commercial, industrial and all other beneficial uses and purposes." (Emphasis added.) Section 81-4.3 gives PCWA the authority to appropriate and acquire water and...[to] utilize...water for any purpose useful to the agency." Section 81-6 gives PCWA the authority to cooperate and

contract with Reclamation with respect to the "construction of works" for "water supply" and other purposes.

PCWA also is subject to the Urban Water Management Planning Act (Water Code, Section 10610 et. seq.) as amended in 2001 in response to the Legislature's concern that California's water supply agencies might not be engaged in adequate long-term planning. That Act requires PCWA, as an "urban water supplier," to maintain an "urban water management plan" that must identify existing water supply and demand, and must identify any new water sources required to satisfy demand as projected at least 20 years into the future. The projected 20-year water supply must account for "average, single-dry, and multiple-dry water years."

In predicting 20-year water demands, PCWA, like other urban water agencies, must rely on "data from the state, regional, or local service agency population projections[.]" Thus, to the extent that Placer County and its incorporated cities (e.g., Roseville, Rocklin, Lincoln, Auburn and Loomis) anticipate large population increases in their adopted general plans, PCWA is required to identify water sources necessary to serve such planned development, and is not in a position to refuse to comply with that legal obligation as a means of reducing the "growth-inducing" effects of obtaining new water supplies.

The PCWA Surface Water Supply Update for Western Placer County (PCWA 2001) contains an evaluation of the build-out demands under the existing general plans of the cities and the county within its present service area, based on a mid-range estimate of probable growth rates (PCWA 2001). The existing general plans permit development as indicated by the plans, without future evaluation. The Surface Water Supply Update indicates that the build-out demands that are documented in those plans extend to 2030 and require and additional 70,000 AF of water to be supplied by PCWA. These water demand projections assume PCWA's continued implementation and support for water use efficiency measures, as state on page 1-6 of the Draft EIS/EIR.

PCWA's Surface Water Supply Update report, which shows PCWA's long-term need for the construction of new diversion, treatment, transmission and distribution infrastructure facilities, from both the American and Sacramento rivers, of equal capacity to PCWA's existing water supply entitlements in order to meet the future demands of Placer County. Ultimately, the size of these facilities may be smaller in their final phases as PCWA moves forward with planned conservation and water use efficiency measures and others move forward with planned reclamation projects. However, nothing except a building moratorium in Placer County will allay the need to construction the American River Pump Station now.

It is unlikely that a precedent will be set allowing further construction of larger pump stations along the Middle Fork of the American River in the future, because this would require an increase in PCWA's overall water entitlements from a river whose water is already in high demand and highly regulated. Any future request for an increase in water rights allocations or alterations to annual use patterns from existing sources would require extensive and long-term adjudication affecting a multitude of numerous planning policies and regulatory actions. This would include new water rights permits, which would be opposed by downstream users, Reclamation, the Water Forum, and other environmental groups.

Geology and Soils

The No Action/No Project Alternative would not result in changed geology or soils conditions at the site. Development of the Proposed Project or Upstream Diversion Alternative would result in the short-term creation of unstable slopes over the course of construction; however, these areas would be stabilized prior to re-opening the site for public access. Additional geotechnical investigations would be conducted based on the final design to develop site-specific construction and slope stabilization methods and refine facility placement. Monitoring of construction activities would be performed by a registered geotechnical engineer. Public use of the river area under the Proposed Project would result in the potential to increase exposure to unstable areas within the canyon. Measures to minimize these impacts include posting warning signs and enforcing compliance by increased patrolling of the area.

Transportation and Circulation

The No Action/No Project Alternative would not generate traffic above what occurs under existing conditions. Under the Action Alternatives, up to 146 additional construction-related trips (construction workers and supply deliveries) could occur during peak levels of construction activity. On average, the number of additional trips would be up to 116. The project area roads have sufficient vehicle and load capacity to handle the additional trips and heavy construction equipment. Trips along Maidu Drive have the potential to reduce the level of service (LOS) at the Maidu Drive/Burlin Way intersection, if all trips were to occur during the peak 15-minute morning period when commute traffic and school-related trips travel through the intersection (8:00 to 8:15 a.m.). To avoid this impact, the Mitigation Plan includes a measure in which Reclamation would ensure that the construction contractor limit personnel travel through this intersection during the morning peak hour (7:15 a.m. to 8:15 a.m.) as an element of the Construction Traffic Management Plan. As part of implementing the plan, Reclamation and the construction contractor also would coordinate with the city public works department, local emergency service providers, and local residents to provide information regarding construction activity and timing.

The Proposed Project also would result in additional vehicle trips along Maidu Drive related to use of the public river access features. On a peak day, up to 206 river access-related trips may occur. Under a worst-case assessment, when these trips, commute trips, and school related travel all occur concurrently during the peak 15-minute period before school, the LOS would decrease from C to D. This LOS does not require mitigation by City of Auburn standards. Overall, the Proposed Project traffic impact would be less than indicated because (1) typical use of the river access area would generate less traffic than assumed for peak holiday and summer weekend use; (2) peak use periods would not coincide with commuter an school-related trips; and (3) river access trips would not occur during the morning peak hour. This impact is considered to be less than significant.

An assessment was performed to evaluate potential pedestrian impacts related to increased travel along Maidu Drive. The results indicate that current pedestrian use of Maidu Drive (15 pedestrians in morning peak hour before school) does not reach California Department of Transportation (CALTRANS) thresholds that would warrant implementation of additional actions such as crossing guards (30 pedestrians), warning beacons (40 pedestrians) or traffic signals (70 pedestrians).

Under cumulative conditions, the LOS would decrease at the Maidu Drive/Burlin Way intersection whether the Proposed Project is constructed or not. Future subdivisions all would be required to pay City of Auburn mitigation fees for use toward implementation of traffic control measures. The Proposed Project Mitigation Plan includes payment of mitigation fees to the City of Auburn. No further mitigation is required.

Air Quality

The Proposed Project and alternatives would result in increased emissions of ozone precursors (reactive organic gases (ROG) and nitrous oxides (NO_x)) and particulate matter of less than 10 microns in size (PM_{10}). The evaluation used thresholds of significance and construction emission calculation worksheets from the Placer County and El Dorado County air pollution control districts. With the exception of NO_x emissions during construction of the Proposed Project, all other air pollutant emissions of concern would be below the significance thresholds and would be considered less-than-significant impacts. For the Proposed Project, all feasible NO_x emission control measures would be implemented, however, the ability to reduce these emissions below the APCD quarterly emission threshold is unknown. The Mitigation Plan includes a measure to ensure that Reclamation and the construction contractor would work with the Placer County and El Dorado County APCDs to ensure this impact is reduced to the extent possible. This would remain a potentially significant impact. This impact also would be cumulatively considerable in the event other construction activities in the air basin are unable to fully mitigate for NO_x emissions. Emissions of ROG and PM_{10} would be reduced below the quarterly emission threshold for all other conditions through the implementation of standard vehicle and dust emission controls recommended by the APCDs. An air quality monitoring program and emissions inventory documentation would be undertaken to ensure emissions would be maintained below the construction thresholds.

The Action Alternatives would result in additional travel to the project site for operation and maintenance visits. The vehicular emissions from these trips would not be significant. In addition to project operation trips, the Proposed Project would result in up to 206 river access-related trips in the project study area, on a peak recreation day (anticipated to occur on summer weekends and holidays, if the facilities are open for use). The air pollutant emissions associated with these trips would be well below the Placer County and El Dorado County air pollutant thresholds of significance for all pollutants of concern (ROG, NO_x and PM_{10}) for 2005, 2010 and 2015.

Operation of the pump station facilities would not result in a substantial increase in emissions of pollutants of concern.

Noise

Existing noise levels exceed the City of Auburn noise standard for residential land uses adjacent to the project area. The extended operational period under the No Action/No Project Alternative would result in a potentially significant unavoidable impact (noise levels that do not comply with City ordinance). Construction of one of the Action Alternatives would result in increased noise levels at the project site. The Mitigation Plan requires that Reclamation ensure the construction contractor implement all noise reduction measures and schedule noise-generating construction activities within hours specified by local noise ordinances (i.e., City of Auburn, Placer County and

El Dorado County). Implementation of these measures reduces construction-related noise impacts to levels considered less than significant. Additionally, Reclamation would implement a public notification program to provide local residents and other interested parties with information regarding the timing of construction activities.

Operation of the pump station under one of the Action Alternatives would result in lower noise levels, relative to the seasonal pump station, as the new pumps would be enclosed in a stone-walled structure that would be designed and constructed to provide noise attenuation to comply with the City of Auburn noise standards.

The additional noise sources associated with the Proposed Project include increased use of the project area for river access. Estimated increases in traffic noise along neighborhood roadways would be less than 3 decibels (dB), which is not perceptible to the human ear. Additionally, within the Auburn SRA, Reclamation would require CDPR to enforce the provisions of CCR 4320 - Peace and Quiet, which regulates use of noisy devices (such as machinery or electronic equipment). Overall, the increases noise levels associated with the Proposed Project would not be significant.

Public Health and Worker Safety

Hazardous Materials Use and Storage

The No Action/No Project Alternative would not substantially change practices related to hazardous materials use or storage on-site compared to the existing condition. Presently, there are no hazardous materials stored on-site. Construction of the Action Alternatives would result in a substantial short-term increased use and storage of commercially available but potentially hazardous materials (e.g., fuel, paint, solvents, oils, concrete curing compound) and explosives at the project site potentially increasing public exposure and worker safety risks due to use of these substances. Additionally, the Action Alternatives involve substantial amounts of excavation and blasting, including serpentine rock that may result in the release of asbestos fibers to the air and surrounding environment. The Mitigation Plan for the selected alternative would include extensive public and worker protection measures to minimize risk and reduce exposure to such materials.

Fire Management - Project Construction

Reclamation would review and approve and ensure that the construction contractor prepare and carry out an effective fire protection and prevention program covering all phases of construction for the selected alternative. Representatives of CDFFP and/or other local fire protection agencies would participate in the construction conferences before and during project construction to explain fire hazards and procedures for protection and prevention. The construction contractor would be required to provide and maintain fire suppression supplies and tools and, at all times when work is in progress, a sufficient number of employees familiar with use of the equipment. Construction fire breaks would be created in areas where grass, brush, or other natural fuels are present and where roads or creek beds will not serve the purpose. The firebreak would be within the right-of-way acquired by the government and consist of a 10-foot wide strip with flammable material either cleared or covered with mineral soil. All construction operations shall be in compliance with

Reclamation Construction Safety Standards and other applicable federal and state codes that regulate construction fire protection and prevention.

Fire Management - Auburn SRA and Public River Access Use

Increased public use of the Auburn Dam and Oregon Bar areas at the site and of the North Fork American River from the confluence and downstream past the project area introduces an increased fire risk associated with human activity in the canyon. Reclamation, CDPR, and the California Department of Forestry and Fire Protection (CDFFP) are preparing a comprehensive fire prevention and suppression plan for the Auburn SRA, including the project area. The plan will be in place prior to opening the site for public access.

A Comprehensive Fire Management Plan is being prepared through coordination and consultation with local agencies, including Fire Safe Councils for the Auburn Dam and Reservoir Project lands. As part of this effort, CDPR, CDFFP, and Reclamation have prepared an Auburn State Recreation Area Prefire Management Plan (January 2002). This plan is included as Appendix A to the Final EIS/EIR.

The Comprehensive Fire Management Plan will include all aspects of public and firefighter safety and prevention and fire suppression activities. The Fuels Management Action Plan component of the Comprehensive Fire Management Plan has been completed and is included in the Prefire Management Plan. This element provides out a process to implement fire management strategies for the Auburn SRA lands that are a priority interface with the Greater Auburn Area. As a major component of mitigation for the potential of increased fire danger on public lands within the interface areas directly affected by the American River Pump Station Project, ground implementation of the Fuels Management Action Plan is planned to be completed prior to opening the area for public use. Through coordination and partnerships with local neighborhoods, citizen groups, and others, CDPR and Reclamation, will work to implement appropriate fire management strategies as prescribed in this plan. The interface lands will be divided into priority areas with each having its own site-specific environmental review process.

Shaded fuel breaks will be developed on public lands that interface private lands directly affected by the American River Pump Station Project. Creating a shaded fuel break involves carefully planned thinning of dense vegetation, intended to inhibit fire from easily moving from ground into the overhead tree canopy. A shaded fuel break does not involve the removal of all vegetation in a given area. Shaded fuel breaks, to be most effective, must be accomplished in conjunction with the other prescriptions, such as defensible space and defensible landscapes, which would occur largely on adjacent private properties. The managing partners of the comprehensive fire plan are working with local entities and citizen groups to implement the Fuels Management Action Plan.

Shaded fuel breaks also would be constructed along the public river access roads and around the proposed parking and vehicular turnaround areas. Access road improvements would meet emergency vehicle access needs. Additionally, CDPR would prohibit open fires within the project area which would reduce the risk of wildfire potentially related to increased public use.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property and rights held in trust for Indian tribes or individuals by the United States and include Indian reservations, rancherias, and allotments. No ITAs have been identified within the project study area. The Proposed Project or alternatives would not result in adverse impacts to ITAs.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS regarding potential impacts on EFH. EFH only applies to commercial fisheries and includes identified waters and substrate necessary for spawning, breeding, feeding, or maturing. In the study area, EFH includes the lower American River to Nimbus Dam, waters of the Delta, the Sacramento River up to Keswick Dam, and tributaries up to impassable barriers for chinook salmon habitat. Implementation of the Proposed Project or alternatives would not be expected to adversely affect fall-run chinook salmon essential fish habitat.

Environmental Justice (Executive Order 12898)

No disproportionately high or adverse environmental or human health effects on minority or low-income communities would be expected to occur with implementation of the Proposed Project or alternatives.

Irreversible and Irretrievable Use of Resources

Implementation of the Proposed Project or alternatives would result in the irreversible commitment of construction materials, labor, land area devoted to facilities, and energy required for construction, operation, and maintenance.

Under the Upstream Diversion Alternative, up to 0.11 acre of wetlands would be permanently lost in the area. This loss would be mitigated through replacement, creation, or mitigation banking as determined appropriate through resource agency permitting.

Short-term Use of the Environment Versus Long-term Productivity

Installation of a year-round pump station would increase the reliability and availability of water supplies for PCWA. This increased reliability and availability would help PCWA meet current and projected demands, thus supporting economic viability of the project service area. The Proposed Project or Upstream Diversion Alternative would have short-term impacts on air quality, habitat for wildlife species, recreation, and noise, but these impacts would not be expected to alter the long-term productivity of the natural environment.

The Proposed Project includes restoration of the currently dewatered segment of the North Fork American River, resulting in increased habitat availability for fish and aquatic resources in the project vicinity. This habitat alteration represents a long-term beneficial effect for fish resources and aquatic habitat. Additionally, fish passage conditions through the project area would be

greatly improved through river restoration, providing a long-term benefit to fish species of the American River.

The Proposed Project would have long-term beneficial effects on water supply, fish and terrestrial resources and recreation. On balance, these long-term improvements or benefits outweigh the potentially significant short-term impacts to the environmental resources in the project area.

Endangered Species Act Compliance

The USFWS and NMFS have defined the different conclusions and determinations that can be reached through consultation with these agencies. These different conclusions are *"it is likely to adversely affect," "it is likely to jeopardize proposed species/adversely modify proposed critical habitat" and "it is not likely to adversely affect"* (USFWS and NMFS 1998). *"It is likely to adversely affect"* is the appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action, or indirect result of the interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. In the event the overall effect of the proposed action is beneficial to the listed species, but also is likely to cause some adverse effects, then the proposed action *"is likely to adversely affect"* the listed species. If incidental take is anticipated to occur as a result of the proposed action, an *"is likely to adversely affect"* determination should be made (USFWS and NMFS 1998). *"It is likely to jeopardize proposed species/adversely modify proposed critical habitat"* is the appropriate conclusion when the action agency or USFWS and/or NMFS identify situations where the proposed action is likely to jeopardize the proposed species or adversely modify critical habitat. If this conclusion is reached, conference is required (USFWS and NMFS 1998). *"It is not likely to adversely affect"* is the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial (USFWS and NMFS 1998).

Based on analysis of the existing environment in the Proposed Project area, the habitat status in the Proposed Project site, the regional study area, and potential project effects, it is concluded that the Proposed Project is not likely to adversely affect federally listed fish species, nor is it expected to jeopardize the continued existence of any federally listed species.

Overall, in the Sacramento River and the Delta and according to the definitions described above, the Proposed Project relative to the existing condition is not likely to adversely affect the Central Valley ESUs of steelhead, spring-run chinook salmon, fall-run and late fall-run chinook salmon, Sacramento winter-run chinook salmon, delta smelt, and Sacramento splittail. Long-term water temperatures in the upper Sacramento River would not change relative to the existing condition, and monthly mean water temperatures would remain essentially equivalent under both scenarios. Long-term average flow in the lower Sacramento River (i.e., Freeport) would not change more than 0.2 percent during any month of the year, and monthly mean water temperatures would remain essentially equivalent in all but one year of the simulation. Long-term average water temperatures at Freeport would not change more than 0.1ºF during any month of the year. In the Delta, reductions in long-term average Delta outflow would be up to 0.3 percent, and there would be no change in X2 position for any given month of the February through June period. Moreover, Sacramento winter-run chinook salmon, Central Valley spring-run chinook salmon and fall-run and late fall-fun chinook salmon would not exhibit any substantial long-term increase in absolute early-lifestage survival, and reflect either slight increases or minor decreases in relative early-

lifestage survival. Therefore, based on these results, a conclusion of *"it is not likely to adversely affect"* is warranted. Also, impacts to Critical Habitat that includes the Sacramento River and the Delta are likely to be insignificant, and discountable. For further discussion and additional detail regarding the Proposed Project effects on water temperature, flows, early-lifestage salmon survival, Delta outflow, and X2 position, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

In the lower American River, the Proposed Project is not likely to adversely affect fall-run chinook salmon, steelhead or Sacramento splittail. Under the Proposed Project, there would be minor decreases in flow and increases in water temperature in some years, although these changes will be accompanied by minor flow increases and water temperature decreases in other years. Slight increases in long-term average absolute and relative early-lifestage fall-run chinook salmon survival would occur under the Proposed Project relative to the existing condition. Under the Proposed Project, potential differences in flow and water temperature are expected to have a less-than-significant impact on fall-run chinook salmon, steelhead, and Sacramento splittail. Of these species, Critical Habitat previously was designated only for steelhead, although the designation recently was withdrawn. Adverse modification of Critical Habitat is defined as "*...a direct or indirect alteration that appreciably diminishes the value of Critical Habitat for both the survival and recovery of a listed species* [50 CFR §402.02]." The phrase "*appreciably diminishes the value*" is further defined as "*...to considerably reduce the capability of designated or proposed Critical Habitat to satisfy requirements essential to both the survival and recovery of listed species* (USFWS and NMFS 1998)." The minor changes in flow and water temperature in the lower American River do not "*appreciably diminish the value*" of steelhead habitat. Nonetheless, potentially significant flow-related impacts on steelhead rearing and potential Sacramento splittail spawning habitat in the lower American River were identified for the cumulative versus ESA baseline comparison. Therefore, for the lower American River, it is concluded that the Proposed Project is not likely to adversely affect the federal candidate or listed species, and the cumulative condition is not likely to affect fall-run chinook salmon but may adversely affect but not jeopardize the continued existence of the federally threatened steelhead and Sacramento splittail.

In the upper American River, construction, operation and maintenance of the Proposed Project is not likely to adversely affect the federally threatened bald eagle. As previously discussed, construction-related increases in noise and human activity at the Proposed Project site would not be expected to disturb the bald eagle because they are rarely seen and are not known to nest in the area. Individuals foraging in the area could easily use other similar or higher quality habitats in the canyon. Most of the construction activities would occur in a previously dewatered part of the river channel that contains no roosting habitat for the bald eagle. Moreover, operation activities would likely disturb bald eagle at a level below existing conditions, because the annual installation and dismantling of seasonal facilities would not be necessary. In addition, operation and maintenance of the Proposed Project is not likely to adversely affect the federally threatened valley elderberry longhorn beetle (VELB). Backwater ponds, open water habitats, and cottonwood forest in the lower American River would not be expected to be significantly altered under the Proposed Project, relative to the existing condition; therefore, elderberry shrub and Critical Habitat for VELB would not be expected to be adversely affected.

Environmentally Superior Alternative

The environmentally superior alternative is the one that minimizes significant, or potentially significant, changes in the physical environment and meets the project objectives to the extent possible. The Proposed Project would have long-term beneficial impacts to water supply, fish and terrestrial resources, and recreation. On balance, these long-term benefits outweigh the potentially significant short-term impacts to environmental resources in the project area. The Proposed Project would be considered environmentally superior to either the No Action/No Project Alternative or Upstream Diversion Alternative.

Agency Preferred Alternative

The Proposed Project is Reclamation's preferred action. This alternative would result in closure of the bypass tunnel, as directed by the State Attorney General's office. Additionally, the Proposed Project would satisfy the terms of the MOA between Reclamation and the state regarding improved public safety access at the site. PCWA's project objectives would be satisfied through implementation of either the Proposed Project or the Upstream Diversion Alternative.

Mitigation Monitoring and Reporting Program/Environmental Commitments Plan

The Mitigation Plan will identifies measures to be incorporated into the design, construction, operation, and maintenance practices for the selected alternative. These measures are included in the summary table (**Table S-5**), and in most instances, would be anticipated to reduce impacts to levels considered less than significant. The Mitigation Plan is included as Appendix D to the Final EIS/EIR. As part of the decision-making process for the project, the lead agencies would approve and adopt the Mitigation Plan measures appropriate to the selected project alternative. Table S-5 provides a summary of impacts and mitigation measures for the project alternatives. Impact issues are summarized by resource topic, in the same order as presented in the Final EIS/EIR, and compared between alternatives. The impact significance statement assumes implementation of identified environmental protection and mitigation measures. These measures reflect those included in the Mitigation Plan. If an impact is found to be less than significant, then no mitigation measures have been proposed. Additionally, if there are no feasible measures or alternatives, or if the project alternatives do not have a considerable contribution to the potentially significant cumulative impacts, then no mitigation is required or proposed.

Table S-5

Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures [a]
WATER SUPPLY AND HYDROLOGY (Section 3.4)		
Facilities-Related Impacts		
Reliability of water supply facilities.		
No Action/No Project Alternative. Operations would be subject to times when high flows prevent spring installation, or flood flows result in damage to the facilities such that they become inoperable. Due to the extended operation period, these events would be expected to occur more frequently than under the existing condition.	Potentially significant and unavoidable.	No feasible mitigation available.
Action Alternatives. The year-round facilities would be placed above the 100-year flood level in the canyon and would be protected from high flood flows substantially reducing or eliminating the potential for reliability issues as compared to the existing or No Action/No Project Alternative conditions.	Significant beneficial impact.	None proposed.
Ability to meet PCWA water supply demands.		
No Action/No Project Alternative. PCWA currently has need of obtaining surplus water supplies from neighboring water districts as the existing condition seasonal pump station operations do not meet demand. PCWA's ability to obtain surplus water from other districts would vary from year-to-year and is not considered a reliable source. The extended operation of the seasonal pump station would potentially satisfy increased and projected demands until about 2008. However, due to capacity and operational period limitations, the seasonal pump station would not meet overall long-term objectives of providing a reliable, year-round water supply to satisfy current back-up supply needs and future demands associated with planned/approved development.	Short-term beneficial/long-term potentially significant.	No feasible mitigation available.
Action Alternatives. Increasing capacity and operational period for the American River pump station would supplement PCWA's Drum-Spaulding Project water supply sufficiently to meet water demands through about 2015, as compared to only 2008 under the No Action/No Project Alternative.	Beneficial impact.	None proposed.
Groundwater overdraft.		
No Action/No Project Alternative. PCWA likely would implement stringent water conservation policies that would reduce the amount of surface water provided to the agricultural and rural farms/ranchettes in western Placer County leading to increased use of groundwater and/or discontinued/changed farming operations. Although PCWA would continue to work toward development of alternative water supply options; the timing and the eventual availability of such supplies remains speculative. Current groundwater overdraft conditions would be exacerbated.	Potentially significant and unavoidable.	No feasible mitigation readily available.

[a] Construction-related environmental protection measures would be included in the project contract specifications prior to contractor bidding.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER SUPPLY AND HYDROLOGY (Section 3.4) (Continued)		
Groundwater overdraft (continued).		
Action Alternatives. The increased water supply from the year-round pump station would meet raw and treated water customer demands until approximately 2015; agricultural and rural users would not need to withdraw additional groundwater supply.	Less than significant.	None proposed.
Channel instability from backwater effects.		
No Action/No Project Alternative. The diversion/intake would be the same as the existing configuration and would not lead to a backwater effect or related effects upon channel stability.	Less than significant.	None proposed.
Action Alternatives. Under existing conditions, Tamaroo Bar rapids become inundated when river flows reach 6,000 cfs. Below 6,000 cfs, the backwater effect would increase water surface elevation by a minor amount; the effect would not result in channel stability effects at the Tamaroo Bar rapids, relative to the existing condition. Because the existing dewatered portion of the channel will be deepened and widened at the cofferdam, at higher flows, the backwater may be less than it is now. As part of final project design/pre-construction, additional site surveys and hydraulic modeling would be conducted to evaluate potential backwater effects. Preliminary design criteria is to not substantially alter conditions above Tamaroo Bar Rapids.	Less than significant.	None proposed.
Cumulative Facilities-Related Impacts		
The Action Alternatives would contribute to an improvement of water supply reliability that potentially could be further developed with future expansion of the facility for PCWA and GDPUD. Future expansion would require additional environmental review, resource agency consultations, and regulatory permitting.	Potentially beneficial.	
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant water supply effects on American River water rights holders, SWP customers, or CVP Settlement and Exchange contractors. Some minor and infrequent reduction of CVP water service contractor delivery allocations may occur. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export.	American River water rights holders, SWP customers, CVP Settlement and Exchange Contractors: Less than significant. CVP Water Service Contractors: Potentially significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER SUPPLY AND HYDROLOGY (Continued)		
Water supply availability to American River water rights holders.		
Action Alternatives Compared to the Existing Condition. Water supply deliveries/availability to American River water rights holders would be the same as under the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Water supply deliveries/availability to American River water rights holders would be the same as under the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Water supply deliveries/availability to American River water rights holders would be the same as under the existing condition.	Less than significant.	
Delivery allocations to SWP customers.		
Action Alternatives Compared to the Existing Condition. Water supply delivery allocations to SWP customers would be the same as under the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Water supply delivery allocations to SWP customers would be the same as under the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Feather River Service Area customers would not experience any reduction in allocations, compared to the existing condition. Delta Service Area customers would be subject to frequent (42 out of 70 years simulated) and substantial (5 to 45 percent) allocation reductions.	Feather River Service Area: Less than significant. Delta Service Area: Significant impact.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. The delivery allocation to Delta Service Area SWP customers would remain unchanged between cumulative (future with the project) and future base (future with project diversions held at 8,500 AFA).	Delta Service Area: Less than significant.	Delta Service Area: None proposed.
Delivery allocations to CVP contractors.		
Action Alternatives Compared to the Existing Condition. Water supply delivery allocations to CVP Settlement and Exchange Contractors would be the same as under the existing condition. Water supply delivery allocations to CVP water service contractors would experience small and infrequent reductions in percent delivery allocations. Although reduction in allocation percent would be only 5 percent in less than at most 2 years over the 70-year simulation, any reduction would be considered significant. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export.	CVP Settlement and Exchange Contractors: Less than significant. CVP Water Service Contractors: Potentially significant and unavoidable.	CVP Settlement and Exchange Contractors: None proposed. CVP Water Service Contractors: None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER SUPPLY AND HYDROLOGY (Section 3.4) (Continued)		
Delivery allocations to CVP contractors (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Water supply delivery allocations to CVP Settlement and Exchange contractors would be the same as under the No Action/No Project Alternative. Water supply delivery allocations to CVP water service contractors would experience small and infrequent reductions in percent delivery allocations. Although reduction in allocation percent would be minor, any reduction would be considered significant. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export.	CVP Settlement and Exchange Contractors: Less than significant CVP Water Service Contractors: Potentially significant and unavoidable.	CVP Settlement and Exchange Contractors: None proposed. CVP Water Service Contractors: None proposed.
Cumulative Condition. Water supply delivery allocations to CVP Settlement and Exchange contractors would be the same as under the existing condition. Water supply delivery allocations to CVP water service contractors would be reduced by 5 to 25 percent in a substantial number of years.	CVP Settlement and Exchange Contractors: Less than significant CVP Water Service Contractors: Potentially significant and unavoidable.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Water supply delivery allocations to CVP water service contractors would experience small and infrequent reductions in percent delivery allocations under the future condition with the project versus the future with project diversions held at current levels. Although reduction in allocation percent would be minor, any reduction would be considered significant. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export.	CVP Water Service Contractors Potentially significant and unavoidable.	CVP Water Service Contractors: None proposed.
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5)		
FACILITIES-RELATED IMPACTS		
Construction effects on aquatic resources of the North Fork American River.		
No Action/No Project Alternative. Installation and removal of the seasonal pump station would not differ in a way that would affect aquatic resources of the North Fork American River.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Construction effects on aquatic resources of the North Fork American River (continued).		
Proposed Project. In-river construction would have the potential to disturb aquatic habitat areas and fish resources not affected by existing or No Action/No Project Alternative conditions. Construction-related activities would involve substantially more earthwork than under existing, No Action/No Project Alternative, and Upstream Diversion Alternative conditions. Implementation of BMPs identified in the Water Quality section would prevent degradation of aquatic habitat in the project area.	Less than significant.	3.3-1: Removal of Construction Litter and Debris 3.3-2: Construction-related Water Quality Protection Measures
Upstream Diversion Alternative. With the exception of construction associated with river channel restoration and river access development, the Upstream Diversion Alternative would have the same construction-related consequences as the Proposed Project. Water Quality Environmental Protection and Mitigation Measures would be included.	Less than significant.	3.3-1: Removal of Construction Litter and Debris 3.3-2: Construction-related Water Quality Protection Measures
Fish impingement and entrainment at the point of diversion.		
No Action/No Project Alternative. Reclamation, under coordination and consultation with CDFG, would determine the method for temporary fish screening methods on a regular basis (every five years) as part of renewing their Streambed Alteration Agreement. Compliance with these terms and conditions would protect fish resources at the site.	Less than significant.	None proposed.
Action Alternatives. The Action Alternatives would include installation of a CDFG-approved fish screen.	Beneficial impact.	3.1-1: Prevent Fish Entrainment and Impingement at the Water Supply Intake/Point of Diversion
Alteration of habitat through creation of backwater on the North Fork American River upstream of the intake structure.		
No Action/No Project Alternative. Upstream aquatic habitat would remain unchanged compared to the existing condition. Under the existing condition, fish passage is restricted by the bypass tunnel.	Less than significant.	None proposed.
Proposed Project. Aquatic habitat conditions at the project site would be greatly improved due to restoration of the river channel as compared to the existing, No Action/No Project Alternative and Upstream Diversion Alternative conditions. Backwater created during flow conditions below 6,000 cfs could alter habitat conditions somewhat, but not to the extent that native fish habitat would be adversely modified.	Beneficial impact.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Alteration of habitat through creation of backwater on the North Fork American River upstream of the intake structure (continued)		
Upstream Diversion Alternative. Backwater created during flow conditions below 6,000 cfs would not be expected to adversely affect fish habitat as compared to the existing and No Action/No Project Alternative conditions. This alternative would not provide restoration of the river channel so the benefit of overall improved fish habitat and aquatic resource conditions would not be present as under the Proposed Project.	Less than significant.	None proposed.
Fish passage through the project area.		
No Action/No Project Alternative. No additional structures or other features would be developed that might alter fish passage conditions as compared to the existing condition.	Less than significant.	None proposed.
Proposed Project. Restoration of the river channel would improve fish passage conditions over the existing, No Action/No Project Alternative, and Upstream Diversion Alternative conditions by removal of the bypass tunnel. Gradient control for the water supply diversion would include design considerations for effective fish passage.	Beneficial impact.	None proposed.
Upstream Diversion Alternative. The bypass tunnel would remain open as under the existing and No Action/No Project Alternative conditions.	Less than significant.	None proposed.
Auburn Ravine salmonids.		
No Action/No Project Alternative. The existing diversion pattern from the North Fork American River to Auburn Ravine will not change, thereby avoiding any flow-related impacts to the Auburn Ravine aquatic ecosystem. No Action/No Project Alternative water deliveries to Lincoln WWTRF do not significantly exacerbate the potential impact relating to increases in flow in Auburn Ravine identified by the City of Lincoln (1999) WWTRF Draft EIR.	Less than significant.	3.1-2: Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources
Action Alternatives. The existing diversion pattern from the North Fork American River to Auburn Ravine will not change, thereby avoiding any flow-related impacts to the Auburn Ravine aquatic ecosystem. Action Alternatives' water deliveries to Lincoln WWTRF do not significantly exacerbate the potential impact relating to increases in flow in Auburn Ravine identified by the City of Lincoln (1999) WWTRF Draft EIR.	Less than significant.	3.1-2: Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources
Public river access parking areas.		
Proposed Project. Increased public use of the project area would have the potential to introduce pollutants or contaminants associated with vehicular and human activities from the parking areas and river access. Design of the parking lots, trails and roadways would incorporate appropriate drainage improvements to minimize potential for water quality impacts. Sanitation facilities (restrooms and trash containers) also would serve to minimize water quality degradation.	Less than significant.	3.3-4: Minimize Water Quality Impacts From Increased Public Access

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Cumulative Facilities-Related Impacts		
All future planned actions or projects within the river channel would be responsible for implementing water quality protection measures according to regulatory and planning agency requirements. No significant cumulative impact upon water quality affecting fish resources would be anticipated.	Less than significant.	
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant effects on fish habitat or aquatic resources, nor would it result in a significant or considerable contribution to the cumulative condition.	Less than significant.	None proposed.
North and Middle forks of the American River		
Action Alternatives Compared to the Existing Condition. *Upstream of Diversion* - Hydrologic modeling indicates that monthly mean flows above the diversion would be essentially equivalent to the existing condition for most of the time. Under low-flow conditions, river flows would differ only slightly due to changes in MFP operations with a long-term increase compared to the existing condition. Changes in flow would not be expected to result in measurable changes in water temperature upstream of the project site relative to the existing condition. *Downstream of Diversion* - Monthly mean flows downstream of the project site would be reduced in summer months when water supply diversions are highest; however, during low-flow months, river flows would be higher than under the existing condition. Changes in water temperature would not be expected to be measurable. Additionally, restoration of the river channel provides an overall improvement of fish habitat and aquatic resource conditions not provided under the existing, No Action/No Project Alternative, or Upstream Diversion Alternative conditions.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). *Upstream of Diversion* - Average long-term monthly mean flows in the upper American River above the diversion would be essentially equivalent all months of the year, compared to the No Action/No Project Alternative. Changes in average long-term monthly mean flows would range from decreases and increases of up to 0.6 percent. The relatively minor changes in average long-term monthly mean flows would not be expected to affect fish of the upper American River. The minor changes in flow would not be expected to result in measurable changes in river water temperature.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
North and Middle forks of the American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future) (Continued). *Downstream of Diversion* - Average long-term monthly mean flows downstream of the project diversion would be reduced in all but one month of the year, with decreases ranging from less than one percent to 5.8 percent. These minor changes in flow would not be expected to adversely impact fish resources in the river below the site. Under the Proposed Project, river restoration would provide an overall benefit to these resources. The relatively minor changes in river flow would not be expected to result in measurable changes in water temperature.	Less than significant.	None proposed.
Cumulative Condition. *Upstream of Diversion* - Lower monthly mean flows would occur during peak diversion season (April through September) with the percentage decrease ranging from 0.2 to 3.7 percent. The changes in monthly mean flows would be considered minor and would not affect fish resources, relative to the existing condition. The relatively minor changes in river flow would not be expected to result in measurable changes in water temperature. *Downstream of Diversion* - Long-term average monthly mean flows downstream of the project diversion would be reduced in all but two months of the year, with decreases ranging from less than one percent to 10 percent. These minor changes in flow would not be expected to adversely impact fish resources in the river below the site. Under the Proposed Project, river restoration would provide an overall benefit to these resources. The relatively minor changes in river flow would not be expected to result in measurable changes in water temperature.	Less than significant.	
Folsom Reservoir warmwater fisheries.		
Action Alternatives Compared to the Existing Condition. Additional diversions from the North Fork American River and associated changes in CVP operations would result in almost no difference in the long-term average end-of-month water surface elevation in Folsom Reservoir during the critical spawning and rearing period (i.e., March through September) as compared to the existing condition. Related, the long-term reduction of reservoir littoral habitat would be minor and infrequent (two percent or less) and would not reduce long-term average initial year-class strength of the warmwater fish populations. The potential for reservoir elevations to decrease by more than nine feet during the primary fish-spawning months (March through July) would not increase during any month of the spawning period when compared to the existing condition.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Folsom Reservoir warmwater fisheries (continued).		
Action Alternatives Compared to No Action/No Project (Future). The long-term average end-of-month water surface elevation during March through September (spawning and initial rearing period) would be the same in all months but July, when modeling indicates a reduction of up to one foot. In most months, the elevation would increase or remain essentially the same as under the No Action/No Project Alternative. Differences in reservoir elevation would potentially result in a range of increased littoral habitat by up to 1.4 percent to a decrease of up to 3.1 percent, relative to the No Action/No Project Alternative. These changes would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength. The frequency of nest-dewatering events would increase only slightly (up to two more occurrences) than under the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Long-term average end-of-month water surface elevations would be reduced up to eight feet during March through September; these reductions could lead to reductions in the long-term average amount of available littoral habitat of between 5 and 31 percent. These reductions in habitat availability could lead to increased predation on young-of-the-year warmwater fish, potentially reducing the long-term initial year-class strength of the population. The increased frequency of nest-dewatering events would be significant, relative to the existing condition.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. A comparison of the future with the project (cumulative) versus the future with project diversions held at existing levels (8,500 AFA) indicates almost no difference in the long-term average end-of-month water surface elevation during March through September. Seasonal reductions in littoral habitat availability also would be expected to be minor and infrequent by comparison. The frequency with which potential nest-dewatering events would occur would not change significantly. The incremental contribution to the cumulative condition would therefore not be considerable.	Less than significant.	None proposed.
Folsom Reservoir's coldwater fisheries.		
Action Alternatives Compared to the Existing Condition. Minor changes in Folsom Reservoir end-of-month storage during some years of the April through November period would occur due to changes in CVP operations associated with increased North Fork American River diversions, as compared to the existing condition. For any given month, a less than one percent reduction in long-term average end-of-month storage would be the largest change from the existing condition. Such reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years; physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations; and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Folsom Reservoir's coldwater fisheries (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Minor reductions in Folsom Reservoir end-of-month storage would occur, relative to the No Action/No Project Alternative. The largest difference in any given month would be up to 4,000 AF, or less than one percent change. Anticipated reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Less than significant.	None proposed.
Cumulative Condition. Decreases in long-term average reservoir storage would not be substantial compared to the existing condition. These changes would not adversely affect coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to affect the primary prey species utilized by coldwater fish.	Less than significant.	
Nimbus Fish Hatchery.		
Action Alternatives Compared to the Existing Condition. CVP operations of Folsom Reservoir and Dam associated with the Action Alternatives would have very little effect on water temperatures entering the Nimbus Fish Hatchery from Lake Natoma during the May through September critical period for hatchery operations, compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). CVP operations of Folsom Reservoir and Dam associated with the Action Alternatives would have very little effect on water temperatures entering the Nimbus Fish Hatchery from Lake Natoma during the May through September critical period for hatchery operations, compared to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. CVP operations of Folsom Reservoir and Dam associated with the cumulative condition would have very little effect on water temperatures entering the Nimbus Fish Hatchery from Lake Natoma during the May through September critical period for hatchery operations, compared to the existing condition.	Less than significant.	
Lower American River Fisheries Impacts		
Fall-run chinook salmon and steelhead in the lower American River.		
Action Alternatives Compared to the Existing Condition. Minimal potential differences in lower American River flows and water temperatures, relative to the existing condition, would not be expected to adversely affect fall-run chinook salmon and steelhead immigration, spawning and incubation, or juvenile rearing and emigration.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Fall-run chinook salmon and steelhead in the lower American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Minimal potential differences in lower American River flows and water temperatures, relative to the No Action/No Project Alternative, would not be expected to adversely affect fall-run chinook salmon and steelhead immigration, spawning and incubation, or juvenile rearing and emigration.	Less than significant.	None proposed.
Cumulative Condition. Flow reductions under the cumulative condition may adversely affect long-term juvenile fall-run chinook salmon rearing habitat availability. Temperature increases during March through June represent a potentially significant impact to juvenile fall-run chinook salmon rearing. The cumulative condition also would result in periods of reduced flows (March through June) affecting juvenile steelhead rearing success. Temperature increases during March through June represent a potentially significant impact to juvenile steelhead rearing.	Juvenile fall-run chinook salmon rearing habitat availability: Potentially significant. Juvenile steelhead rearing: Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Flows below Nimbus Dam and at Watt Avenue would be within 2 percent of the future base condition, or essentially equivalent in most months. Modeling results indicate there would be additional years in which flows below Nimbus Dam would be lower than future base conditions by more than 10 percent. Further examination of these data, however, indicates that in seven of the eight years, such differences are due to time-step functions in PROSIM; real-time operations and adjustments would result in a less substantial decrease in storage. The Action Alternatives' incremental contribution to the cumulative condition (reduced flows and increased temperatures) would therefore not be substantial.	Juvenile fall-run chinook salmon rearing habitat availability: Less than significant. Juvenile steelhead rearing habitat availability: Less than significant.	None proposed.
Splittail in the lower American River.		
Action Alternatives Compared to the Existing Condition. The long-term average flow at Watt Avenue during February through May would range between 0.5 to two percent less than under the existing condition. The long-term average acreage of usable riparian vegetation inundated during the February to May spawning period would not change substantially relative to the existing condition. Flow changes would have little, if any, effect on the availability of in-channel spawning habitat availability from the mouth up to River Mile (RM) 5. Long-term population trends of splittail would not be expected to be adversely affected, compared to the existing condition. No substantial change in the frequency of water temperature exceeding the reported preferred range for splittail spawning would occur, relative to the existing condition.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Splittail in the lower American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). The long-term average flow at Watt Avenue during February through May would range between 0.3 to 0.9 percent less than under the No Action/No Project Alternative. The long-term average acreage of usable riparian vegetation inundated during the February to May spawning period would not change for any month relative to the No Action/No Project Alternative. Flow changes would have little, if any, effect on the availability of in-channel spawning habitat availability from the mouth up to RM 5. Long-term population trends of splittail would not be expected to be adversely affected, compared to the No Action/No Project Alternative. No substantial change in the frequency of water temperature exceeding the reported preferred range for splittail spawning would occur, relative to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Under the cumulative condition, the long-term average flow at Watt Avenue (February to May) would be 1.6 to 6.3 percent less than the existing condition. The estimated reduction of useable riparian habitat for splittail would be considered significant compared to the existing condition.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Long-term average usable inundated riparian habitat would not change during February through May under the cumulative condition (future with an Action Alternative) compared to the future base (future with project diversions held at 8,500 AFA). Minor and infrequent decreases in the amount of habitat would occur in these months, but would not represent a significant contribution to the cumulative condition.	Less than significant.	None proposed.
American shad in the lower American River.		
Action Alternatives Compared to the Existing Condition. Average river flows at the American River mouth would be reduced by about one percent in May and June, relative to the existing condition. While flow reductions could potentially reduce the total number of shad attracted into the river, shad are known to spawn opportunistically where suitable conditions are found and overall production within the Sacramento River system would not be expected to be adversely affected. Modeling results also indicate that the probability of occurrence of flows required to maintain the shad sport fishery (3,000 cfs) would not differ, relative to the existing condition. Mean monthly water temperatures in May and June would be similar to the existing condition, with the exception of one year (out of 70) where temperature may be outside of the reported preferred range (60°F to 70°F).	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
American shad in the lower American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Average river flows at the American River mouth would be reduced by up to 0.3 percent in May and increased by up to 0.1 percent in June, relative to the No Action/No Project Alternative. Such flow changes would be unlikely to affect the total number of shad attracted into the river, particularly because shad are known to spawn opportunistically where suitable conditions are found and overall production within the Sacramento River system would not be expected to be adversely affected. Modeling results also indicate that the probability of occurrence of flows required to maintain the shad sport fishery (3,000 cfs) would not differ, relative to the No Action/No Project Alternative. Mean monthly water temperatures in May and June would be similar to the No Action/No Project Alternative, with the exception of one year (out of 70) where temperature may be outside of the reported preferred range (60°F to 70°F).	Less than significant.	None proposed.
Cumulative Condition. Average river flows at the American River mouth would be reduced by about seven percent in May and 3.4 percent in June, relative to the existing condition. Such flow changes would potentially reduce the total number of shad attracted into the river; however, because shad are known to spawn opportunistically where suitable conditions are found, overall production of shad within the Sacramento River would not be expected to be adversely affected. Modeling results also indicate that the probability of occurrence of flows required to maintain the shad sport fishery (3,000 cfs) would meet this threshold in one less year, relative to the existing condition. Mean monthly water temperatures in May and June would be similar to the existing condition, with the exception of one year (out of 70) for each month where temperature may be outside of the reported preferred range (60º to 70º).	Less than significant.	
Striped bass in the lower American River.		
Action Alternatives Compared to the Existing Condition. Striped bass juvenile rearing would not be affected by changes in river flows, compared to the existing condition. River flows at the mouth to maintain the striped bass sport fishery (1,500 cfs) would be met or exceeded in most years during both May and June; the strength of the striped bass fishery would not be expected to be adversely affected by infrequent increased reductions of May or June monthly mean flows that would occur relative to the existing condition. The frequency for suitable temperature for juvenile striped bass rearing in the river would remain essentially unchanged.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Striped bass in the lower American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Striped bass juvenile rearing would not be affected by changes in river flows, compared to the No Action/No Project Alternative. River flows at the mouth to maintain the striped bass sport fishery (1,500 cfs) would be met or exceeded in most years during both May and June; the strength of the striped bass fishery would not be expected to be adversely affected by infrequent increased reductions of May or June monthly mean flows that would occur relative to the No Action/No Project Alternative. The frequency for suitable temperature for juvenile striped bass rearing in the river would be within the reported preferred range for juvenile rearing two less years in both May and June below Nimbus Dam and one additional year in May at the mouth, relative to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Striped bass juvenile rearing would not be affected by changes in river flows, compared to the existing condition. River flows at the mouth to maintain the striped bass sport fishery (1,500 cfs) would be met or exceeded in most years during both May and June; the strength of the striped bass fishery would not be expected to be adversely affected by infrequent increased reductions of May or June monthly mean flows that would occur relative to the existing condition. The frequency for suitable temperature for juvenile striped bass rearing in the river would be within the reported preferred range for juvenile rearing one less year in May but one additional year in June below Nimbus Dam and two additional years in May at the mouth, relative to the existing condition.	Less than significant.	
Shasta and Trinity reservoir warmwater fisheries.		
Action Alternatives Compared to the Existing Condition. *Shasta Reservoir* - End-of-month elevation at Shasta Reservoir would be essentially equivalent to or greater than the existing condition in most months (March through September); reductions in average end-of-month elevation of one foot or more could occur four percent of the time during the March through September period. Differences in the long-term average amount of littoral habitat potentially available to fish for spawning and rearing would be infrequent and not of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. The potential for nest-dewatering events would not change substantially, relative to the existing condition.	Shasta Reservoir: Less than significant.	None proposed.
Trinity Reservoir - End-of-month elevation at Trinity Reservoir would be essentially equivalent to or greater than the existing condition in most months (March through September). Differences in the long-term average amount of littoral habitat potentially available to fish for spawning and rearing would be infrequent and not of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. The potential for nest-dewatering events would not change substantially, relative to the existing condition.	Trinity Reservoir: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Shasta and Trinity reservoir warmwater fisheries (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). *Shasta Reservoir* - End-of-month elevation at Shasta Reservoir would be essentially unchanged or greater than No the Action/No Project Alternative in most months (March through September); reductions in average end-of-month elevation of one foot or more could occur 11 percent of the time during the March through September period. Differences in the long-term average amount of littoral habitat potentially available to fish for spawning and rearing would be infrequent and not of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. The potential for nest-dewatering events would not change substantially, relative to the No Action/No Project Alternative. *Trinity Reservoir* - End-of-month elevation at Trinity Reservoir would be essentially equivalent to or greater than the existing condition in most months (March through September). Reductions in the long-term average amount of littoral habitat potentially available to fish for spawning and rearing would be infrequent and not of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. The potential for nest-dewatering events would not change substantially, relative to the No Action/No Project Alternative.	Shasta Reservoir: Less than significant. Trinity Reservoir: Less than significant.	None proposed.
Cumulative Condition. *Shasta Reservoir* - In over half of the years simulated, water surface elevation would be reduced by more than one foot compared to the existing condition (March through September). The long-term average availability of littoral habitat would be reduced to an extent that would potentially affect long-term average initial year-class strength of the fish populations. The relative frequency of potential nest dewatering events under cumulative compared to the existing condition would not change substantially. *Trinity Reservoir* - The long-term average end-of-month water surface elevation would not change substantially from the existing condition (March through September). Reductions in the long-term average availability of littoral habitat would not be reduced to an extent that would be anticipated to affect long-term average initial year-class strength of warmwater fish populations. Modeling results indicate that the potential for nest dewatering events would be less under the cumulative condition compared to the existing condition.	Shasta Reservoir: Potentially significant. Nest dewatering: Less than significant. Trinity Reservoir: Less than significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. *Shasta Reservoir* - The end-of-month water surface elevation in Shasta Reservoir would be essentially equivalent under future with project (cumulative condition) and future base (future conditions with project diversions held at 8,500 AFA) in most months of the analysis. Minor and infrequent reductions in the availability of littoral habitat would not result in reductions of the long-term average initial year-class strength of warmwater fish populations. These results indicate that the Action Alternatives' contribution to cumulative conditions would not be significant.	Shasta Reservoir: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Shasta and Trinity reservoir coldwater fisheries.		
Action Alternatives Compared to the Existing Condition. *Shasta Reservoir* - End-of-month storage would be essentially equivalent to the existing condition for most months (April through November); the largest individual storage reduction for any given month during the April through November period would be only 4.6 percent, with reductions of greater than 3 percent occurring less than approximately 1.5 percent of the time. Such reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because: (1) coldwater habitat would remain available within the reservoir during all months of all years; (2) physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations; and (3) anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Shasta Reservoir: Less than significant.	None proposed.
Trinity Reservoir - End-of-month storage would be essentially unchanged compared to the existing condition in most months (April through November); reductions in storage would be less than 1.4 percent for any individual month of the period evaluated. Such reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because: (1) coldwater habitat would remain available within the reservoir during all months of all years; (2) physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations; and (3) anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Trinity Reservoir: Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). *Shasta Reservoir* - End-of-month storage would be essentially equivalent to or greater than the No Action/No Project Alternative for most months (April through November); the largest individual storage reduction for any given month during the April through November period would be only 3 percent and would occur infrequently. Such reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Shasta Reservoir: Less than significant.	None proposed.
Trinity Reservoir - End-of-month storage would be essentially unchanged or decrease only slightly (0.1 percent) compared to the No Action/No Project Alternative in most months (April through November). These reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Trinity Reservoir: Less than significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Shasta and Trinity reservoir coldwater fisheries (continued).		
Cumulative Condition. *Shasta Reservoir* - End-of-month storage (April through November) would be reduced by 10 percent or more up to 26 percent of the time simulated under the cumulative condition compared to the existing condition. Such reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish. *Trinity Reservoir* – End-of-month storage would be essentially unchanged or decrease by no more than about five percent compared to the existing condition in most months (April through November). These reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fish because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Shasta Reservoir: Less than significant. Trinity Reservoir: Less than significant.	
Sacramento River Fisheries Impacts		
Upper Sacramento River.		
Action Alternatives Compared to the Existing Condition. Monthly mean flows below Keswick Dam in the upper Sacramento River would be essentially equivalent to the existing condition in most months. Modeling results indicate that monthly mean flows below Keswick Dam would not be reduced below the NMFS Biological Opinion (1993, as revised in 1995) 3,250 cfs threshold for the protection of winter-run chinook salmon rearing and downstream passage in any month of the October through March period. Long-term average temperatures for the upper Sacramento River (Keswick Dam, Bend Bridge) would not change from the existing condition in any month of the year; in most months, the monthly mean temperatures would be essentially equivalent to or less than the existing condition. There would be only two additional months when water temperatures could exceed 56°F or 60°F at either Keswick Dam or Bend Bridge, relative to the existing condition. There would not be any substantial decrease in annual early-lifestage survival of fall-run, late fall-run, winter-run, or spring-run chinook salmon in any individual year relative to the existing condition.	Flow and temperature-related impacts: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Upper Sacramento River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Monthly mean flows below Keswick Dam in the upper Sacramento River would be essentially equivalent to No Action/No Project Alternative in most months. Modeling results indicate that monthly mean flows below Keswick Dam would not be reduced below the NMFS Biological Opinion 3,250 cfs threshold for the protection of winter-run chinook salmon rearing and downstream passage in any month of the October through March period. Long-term average temperatures for the upper Sacramento River (Keswick Dam, Bend Bridge) would not change by more than 0.1°F compared to the No Action/No Project Alternative in any month of the year. In most months, the monthly mean temperatures would be essentially equivalent to or less than the No Actin/No Project Alternative. There would be fewer months when water temperatures could exceed 56°F at Keswick Dam or 60° F at Bend Bridge, relative to the No Action/No Project Alternative. There would not be any substantial decrease in annual early-lifestage survival of fall-run, late fall-run, winter-run, or spring-run chinook salmon in any individual year relative to the No Action/No Project Alternative.	Flow and temperature-related impacts: Less than significant.	None proposed.
Cumulative Condition. Monthly mean flows below Keswick Dam in the upper Sacramento River would be reduced by up to 9.4 percent relative to the existing condition. Modeling results indicate that monthly mean flows below Keswick Dam would not be reduced below the NMFS Biological Opinion 3,250 cfs threshold for the protection of winter-run chinook salmon rearing and downstream passage in any month of the October through March period. Long-term average temperatures for the upper Sacramento River (Keswick Dam, Bend Bridge) would change substantially from the existing condition with several additional months when temperatures exceed temperature thresholds identified in the NMFS Biological Opinion for winter-run chinook salmon, relative to the existing condition. Additionally, there would be a decrease in the long-term average early-lifestage survival of more than 10 percent in 11 years for fall-run and four years for winter-run chinook salmon; no decreases of more than 10 percent would be expected for late-fall-run and increases in survival would be anticipated for spring-run, relative to the existing condition.	Flow-related impacts: Less than significant. Temperature-related impacts: Potentially significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Upper Sacramento River (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. The future with the project (cumulative condition) would not result in more than a 0.1ºF change in the long-term average temperature in the upper Sacramento River for any month of the year relative to the future base condition (future with project diversion held at 8,500 AFA). Additionally, there would be only one additional month when temperature would potentially exceed the NMFS Biological Opinion temperature thresholds. There would not be substantial decreases in annual early-lifestage survival of fall-run, late-fall-run, winter-run, or spring-run chinook salmon in any individual year under the cumulative condition compared to the future base. These results indicate that the Action Alternatives' incremental contribution to the cumulative conditions would not be considerable.	Temperature-related impacts: Less than significant.	None proposed.
Lower Sacramento River.		
Action Alternatives Compared to the Existing Condition. The long-term average flow at Freeport in the lower Sacramento River would be within 0.2 percent of the long-term average under the existing condition in all months of the year. Flow reductions of more than five percent would occur in only one month relative to the existing condition. Based on these flow results, physical habitat availability and immigration of adult or emigration of juvenile anadromous fish would not be adversely affected relative to the existing condition. Long-term average temperatures at Freeport would not change more than 0.1°F during any month of the year; monthly mean temperatures would be essentially equivalent to the existing condition for all but one month of the simulation. The number of years in which water temperature would exceed water temperatures indices would be similar to the existing condition during the March through November period. Monthly mean water temperatures would be essentially equivalent to the No Action/No Project Alternative for all but one month (827 out of 828).	Flow-related impacts: Less than significant. Temperature-related impacts: Less than significant.	None proposed. None proposed.
Action Alternatives Compared to No Action/No Project (Future). The long-term average flow at Freeport in the lower Sacramento River would be within 0.3 percent of the long-term average under the No Action/No Project Alternative in all months of the year. Flow reductions of more than five percent would occur in only four months relative to the No Action/No Project Alternative. Based on these flow results, physical habitat availability and immigration of adult or emigration of juvenile anadromous fish would not be adversely affected relative to the existing condition.	Flow-related impacts: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Lower Sacramento River (continued).		
Action Alternatives Compared to No Action/No Project (Future) (continued). Long-term average water temperatures at Freeport would not change more than 0.1°F during any month of the year; monthly mean temperatures would be essentially equivalent to the existing condition for all but one month of the simulation. The number of years in which water temperature would exceed water temperature indices would be similar to the No Action/No Project Alternative during the March through November period, with only four additional occurrences above the water temperature indices. Monthly mean water temperatures would be essentially equivalent to the No Action/No Project Alternative for most months (825 out of 828).	Temperature-related impacts: Less than significant.	None proposed.
Cumulative Condition. The long-term average flow at Freeport would be within five percent of the long-term average under the existing condition in all months of the year. Based on these flow results, physical habitat availability and immigration of adult or emigration of juvenile anadromous fish would not be adversely affected relative to the existing condition. Long-term average water temperature at Freeport would not change more than 0.3ºF relative to the existing condition. The number of years that temperatures exceed the temperature thresholds would increase during March through November and would be considered potentially significant.	Flow-related impacts: Less than significant. Temperature-related impacts: Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Long-term average temperatures at Freeport would not change by more than 0.1ºF under the cumulative condition (future with the project) compared to the future base (future with project diversions held at 8,500 AFA). The number of years that temperatures exceed temperature thresholds would be only slightly increased during the March through November period but would not be considered significant. Based on these results, the incremental contribution of the Action Alternatives would not be considered significant.	Temperature-related impacts: Less than significant.	None proposed.
Delta fish populations.		
Action Alternatives Compared to the Existing Condition. Reductions in the long-term average Delta outflow of up to 0.3 percent for any given month could occur relative to the existing condition. Delta outflow reduction of more than three percent occurred during only seven individual months of the February to June period, relative to the existing condition. There would be no shift in the long-term average position of X2, relative to the existing condition; the maximum upstream shift for any individual month of any individual year would be less than 1 kilometer (km) (0.2 km). All model simulations assumed compliance with SWRCB X2 and Delta maximum export ratio requirements.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Delta fish populations (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Reductions in the long-term average Delta outflow of up to 0.3 percent for any given month could occur relative to No Action/No Project Alternative. Delta outflow reduction of more than three percent occurred during only eight individual months of the February to June period, relative to the No Action/No Project Alternative. There would be no shift in the long-term average position of X2 for 11 months of the year, relative to the No Action/No Project Alternative; in November, the shift would be up to 0.1 km shift. The maximum upstream shift for any individual month of any individual year would be no more than 1.1 km. All model simulations assumed compliance with SWRCB X2 and Delta maximum export ratio requirements.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition would potentially result in decreased Delta outflow and shifts in the position of X2 that would be considered potentially significant, compared to the existing condition.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Reductions in the long-term average Delta outflow of up to 0.3 percent could occur under the cumulative condition relative to the future base condition. Shifts in the long-term average position of X2 would not be by more than 0.1 km. Based on these results, the Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
Oroville Reservoir warmwater fisheries.		
Action Alternatives Compared to the Existing Condition and No Action/No Project Alternative. The Action Alternatives would not result in substantial changes in elevation at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative. Any small changes that may occur would be considered to represent less-than-significant impacts upon warmwater fish.	Less than significant.	None proposed.
Cumulative Condition. The long-term average end-of-month water surface elevation in Oroville Reservoir would be reduced under the cumulative condition. The largest decrease in water surface elevation during the March through September season would be up to 75 feet for any individual year for the 70-year period included in the analysis. Modeling results indicate that the frequency of nest-dewatering would increase substantially in Oroville Reservoir under the cumulative condition, relative to the existing condition.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less-than-significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
FISH RESOURCES AND AQUATIC HABITAT (Section 3.5) (Continued)		
Oroville Reservoir coldwater fisheries.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative. The Action Alternatives would not result in substantial changes in storage, elevation, or temperature at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative. Any small changes that may occur would be considered to represent less-than-significant impacts upon coldwater fish.	Less than significant.	None proposed.
Cumulative Condition. The long-term average end-of-month storage elevation in Oroville Reservoir would be slightly reduced under the cumulative condition. The largest decrease in long-term average end-of-month storage would be approximately 8.3 percent during the month of September. The relatively small reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish.	Less than significant.	None proposed.
Lower Feather River fisheries.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative. The Action Alternatives would not result in substantial changes in flow or temperature in the Feather River relative to the existing condition or the No Action/No Project Alternative condition. Any small changes that may occur would be considered to represent less-than-significant impacts upon Feather River fish.	Flow and temperature-related impacts: Less than significant.	None proposed.
Cumulative Condition. The long-term average flow below Oroville Dam would be reduced by up to 14.1 percent over the 70-year period of record. These reductions would be considered potentially significant. Long-term average water temperatures would not be reduced by more than 2.2ºF. There would be only four months out of 828 that would show increases greater than 0.3ºF. These small increases in water temperatures would be expected to have a less-than-significant impact on fish resources of the Feather River.	Flow-related Impacts: Potentially significant. Temperature-related Impacts: Less than significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. The Action Alternatives would not result in an incremental contribution to water temperature impacts for the Feather River under the cumulative condition.	Flow-related impacts: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6)		
FACILITIES-RELATED IMPACTS		
Construction -related disturbance of special-status species.		
No Action/No Project Alternative. The changed timing of seasonal pump station installation and removal would not be expected to result in disturbance of terrestrial resources that differs from the existing condition. The site is already highly disturbed from previous activities associated with Auburn Dam and annual seasonal pump station construction.	Less than significant.	None proposed.
Action Alternatives. Construction-related increases in noise and human activity would not be expected to disturb endangered or threatened bird species that potentially use the area (i.e., bald eagle, little willow flycatcher, and American peregrine falcon) because they are rarely seen and are not known to nest in the area. Individuals foraging in the area could easily use other similar or higher quality habitats in the canyon. Surveys conducted for the project indicate that red-legged frogs do not utilize the ponds in the project area. Special-status species (i.e., California horned lizard, spotted bat, greater mastiff bat, and yellow-legged frogs) may be temporarily or permanently displaced by earthwork and human activity in the area. Removal of vegetation potentially would result in disturbance of individuals. The Upstream Diversion Alternative would not result in the overall benefits associated with the restored river channel, but may lessen the long-term disturbance of individual species, relative to the existing condition or No Action/No Project Alternative, because annual operation and maintenance of the year-round facility would not involve the earthwork associated with installation/removal of the seasonal facilities.	Endangered/threatened species: Less than significant. Construction impact upon special-status species: Less than significant.	3.2-1: Establish Buffer Zone to Avoid Disturbance of and Prevent the Permanent Loss of Riparian, Wetland, and Pond Vegetation and Associated Habitat 3.2-2: Minimize Impacts Upon State and Federal Special-Status Species in the Project Area 3.2-3: Measures for Entrapped, Injured or Dead Special-Status Animal Species 3.2-4: Restoration of Permanent Riparian Wetland and Pond Vegetation/ Habitat Loss
Construction-related disturbance or removal of riparian and wetland habitat.		
No Action/No Project Alternative. The changed timing of seasonal pump station installation and removal would not be expected to result in disturbance of riparian or wetland resources that differs from the existing condition. Installation and removal of the seasonal pump station facilities, including placement of the intake pipeline and dredging of the sump pond would continue to take place according to a CDFG Streambed Alteration Agreement with terms and conditions to protect habitats and individual special-status species.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Construction-related disturbance or removal of riparian and wetland habitat (continued).		
Proposed Project. Temporary and permanent loss of riparian and wetland habitats has the potential to effect special-status and other species. *Foothill Yellow-Legged Frog* - Disturbance or loss of riparian or wetland habitat could result in harm or death of foothill yellow-legged frogs that may be present in the study area. *Western Toad and Chorus Frog* - Loss of wetland habitat would potentially result in the harm or death of these species. *Wetland Areas* - Placement of excavated materials on the eastern keyway bench would result in the fill of acres of potential wetland. Restoration of the river channel would be expected to result in new areas of riparian and wetland areas that would be anticipated to replace the lost habitat values.	Less than significant.	3.2-4: Restoration of Permanent Riparian, Wetland and Pond Vegetation/Habitat Loss/ 3.2-2: Minimize impacts upon state and federal special-status species in the Project Area.
Upstream Diversion Alternative. Impacts for riparian and wetland habitat and associated species generally would be as described for the Proposed Project. However, the Upstream Diversion Alternative would result in the loss of up to 0.11 acre of potential wetland habitat. Because the river would not be restored, other means of replacing or restoring wetland areas would be required.	Less than significant.	3.2-2: Minimize impacts upon state and federal special-status species in the Project Area. 3.2-4: Restoration of Permanent Riparian, Wetland and Pond Vegetation/ Habitat Loss.
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant reductions of river flows or reservoir elevations such that terrestrial resources would be adversely affected. Additionally, the No Action/No Project Alternative would not be expected to result in considerable contributions to cumulative impacts.	Less than significant.	None proposed.

Table S-5 (Continued) Summary of Impacts and Environmental Protection and Mitigation Measures		
Impact Issue	**Impact Significance**	**Environmental Protection and Mitigation Measures**
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Upper American River riparian vegetation, habitat and associated species.		
Action Alternatives Compared to the Existing Condition. Changes in upper American River flows would not be of sufficient frequency or magnitude to adversely affect riparian vegetation, relative to the existing condition. No adverse riparian habitat or associated species impacts would be anticipated.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Changes in upper American River flows would not be of sufficient frequency or magnitude to adversely affect riparian vegetation, relative to the No Action/No Project Alternative. No adverse riparian habitat or associated species impacts would be anticipated.	Less than significant.	None proposed.
Cumulative Condition. Changes in upper American River flows would not be of sufficient frequency or magnitude to adversely affect riparian vegetation, relative to the existing condition. No adverse riparian habitat or associated species impacts would be anticipated.	Less than significant.	
Lower American River riparian vegetation, habitat and associated species.		
Action Alternatives Compared to the Existing Condition. Changes in lower American River flows would result in slightly more frequent reduction of flows below the indices for cottonwood growth and terrace inundation. These reduced flows would result in a slight increase in the number of consecutive occurrences where flows would be reduced below the indices, relative to the existing condition. Overall, the flow reductions are not considered to be of sufficient magnitude and/or frequency to have long-term effects on the population and growth of cottonwoods/riparian vegetation as to affect the habitat value for special-status species or other associated species, relative to the existing condition/.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Changes in lower American River flows would result in slightly more frequent reduction of flows below the indices for cottonwood vegetation, relative to the No Action/No Project Alternative. However, these reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have long-term population growth and maintenance of cottonwoods/riparian vegetation or to affect the habitat value for special-status species or other associated species relative to the No Action/No Project Alternative.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Lower American River riparian vegetation, habitat and associated species (continued).		
Cumulative Condition. Changes in lower American River flows would result in more frequent reduction of flows below the indices for cottonwood growth and terrace inundation. Flows would be below the maintenance of radial growth index up to approximately 6.4 percent more often and below the some growth index up to 6.4 percent more often than under the existing condition. Reduced flows in the cumulative condition would result in six more occurrences of two or more consecutive months below the maintenance of radial growth index and in five additional occurrences of two or more consecutive months below the some growth index; however, these occurrences would not be in critical growing months (April through July). Overall, the cumulative condition flow reductions are not considered to be of sufficient magnitude and/or frequency to have long-term effects on the population and growth of cottonwoods/riparian vegetation or to affect the habitat value for special-status or other associated species, relative to the existing condition.	Less than significant.	
Lower American River special-status species dependent upon backwater pond/marsh habitats.		
Action Alternatives Compared to the Existing Condition. Modeling results indicate that backwater pond/marsh habitat recharge would not be significantly altered, relative to the existing condition; therefore, no adverse effects to these species would be expected to occur, relative to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Modeling results indicate that backwater pond/marsh habitat recharge would not be significantly altered, relative to the No Action/No Project Alternative; therefore, no adverse effects to these species would be expected to occur, relative to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Modeling results indicate that backwater pond/marsh habitat recharge would not be significantly altered, relative to the existing condition; therefore, no adverse effects to these species would be expected to occur, relative to the existing condition.	Less than significant.	
Lower American River elderberry shrubs/VELB.		
Action Alternatives Compared to the Existing Condition. Backwater ponds/habitats would not be expected to be significantly altered, relative to the existing condition; therefore, elderberry shrub and critical habitat for VELB would not be expected to be adversely affected.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Backwater ponds/habitats would not be expected to be significantly altered, relative to the No Action/No Project Alternative; therefore, elderberry shrub and critical habitat for VELB would not be expected to be adversely affected.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Lower American River elderberry shrubs/VELB (continued).		
Cumulative Condition. Backwater ponds/habitats would not be expected to be significantly altered, relative to the existing condition; therefore, elderberry shrub and critical habitat for VELB would not be expected to be adversely affected.	Less than significant.	
Folsom, Shasta, Trinity, and Oroville reservoir vegetation.		
Action Alternatives Compared to the Existing Condition. Long-term average end-of-month water elevations for Folsom, Trinity, Shasta, and Oroville reservoirs would be essentially equivalent to the existing condition (March through September). Slight reductions of monthly mean elevations would not be expected to affect habitat values at these reservoirs.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Long-term average end-of-month water elevations for Folsom, Trinity, Shasta, and Oroville reservoirs would be essentially equivalent to the No Action/No Project Alternative. Slight reductions of monthly mean elevations would not be expected to affect habitat values at these reservoirs.	Less than significant.	None proposed.
Cumulative Condition. Long-term average end-of-month water elevations for Folsom, Shasta and Trinity, reservoirs would be reduced relative to the existing condition with reductions ranging from 2 to 11 feet during growing season months (March through September). The anticipated reductions would not affect areas of high and consistent habitat value which would remain available for species associated with the reservoir. *Oroville Reservoir* - Compared to the existing condition, the cumulative condition would result ins substantially lower long-term average end-of-month elevation for the March through September vegetation growing period over the 70-year period of record. Long-term average end-of-month elevation reductions for Oroville Reservoir would range from six to 18 feet. During individual years, reductions of up to 76 feet in end-of-month elevation would occur.	Folsom, Shasta and Trinity Reservoirs: Less than significant. Oroville Reservoir: Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in Oroville Reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' contribution to the cumulative condition would not be considerable.	Oroville Reservoir: Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Upper Sacramento River riparian vegetation.		
Action Alternatives Compared to the Existing Condition. Long-term average flows of the upper Sacramento River during the growing season (March through October) would be essentially equivalent or slightly increased relative to the existing condition. Decreases ranging from one to 18 cfs would occur; however, during the critical growing season months, river flows would potentially increase. The greatest long-term average flow reduction would be only one percent. Changes in flows of the upper Sacramento River would not be expected to adversely affect riparian vegetation and associated habitat values or species, relative to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Long-term average flows of the upper Sacramento River during the growing season (March through October) would be essentially equivalent to the No Action/No Project Alternative. Decreases ranging from one to 27 cfs would occur, however, during the critical growing season months, river flows would potentially increase. The greatest long-term average flow reduction would be only two percent. Changes in flows of the upper Sacramento River would not be expected to adversely affect riparian vegetation and associated habitat values or species, relative to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Long-term average flows during the March through October growing season would be reduced, relative to the existing condition with decreases of 80 to 825 cfs. These decreases would be small, considering the monthly mean flow range of over 5,000 to over 13,000 cfs. The anticipated flow reduction would not be of sufficient magnitude and/or frequency to significantly alter riparian vegetation and related species, relative to the existing condition.	Less than significant.	
Lower Sacramento River riparian vegetation.		
Action Alternatives Compared to the Existing Condition. Long-term average flow reduction in the lower Sacramento River would range from 17 to 24 cfs during the growing season (March through October), relative to the existing condition. The greatest long-term average flow reduction would be only two percent. Changes in flows of the lower Sacramento River would not be expected to adversely affect riparian vegetation and associated habitat values or species, relative to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). The greatest long-term average flow reduction would be only three percent, relative to the No Action/No Project Alternative. Long-term average flow decreases would range from 10 to 47 cfs during the growing season, relative to the No Action/No Project Alternative. Changes in flows of the lower Sacramento River would not be expected to adversely affect riparian vegetation and associated habitat values or species, relative to the No Action/No Project Alternative.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Lower Sacramento River riparian vegetation (continued).		
Cumulative Condition. The greatest long-term average flow reduction would be less than five percent, relative to the existing condition. Long-term average flow reductions would range from 399 to 828 cfs during most months, with increases ranging from 36 to 466 cfs in early spring and mid-summer months. The frequency and magnitude of the flow reductions would be small considering the monthly mean flow range of over 11,000 to over 33,000 cfs during the growing season months. Existing riparian habitats of the lower Sacramento River would not be expected to be adversely affected under cumulative conditions.	Less than significant.	
Delta riparian vegetation and special-status species.		
Action Alternatives Compared to the Existing Condition. The long-term average position of X2 would not shift relative to the existing condition; the maximum shift in any individual month would be 0.7 km (less than the 1 km threshold). Lower Sacramento River flows and inflow to the Delta would not be reduced such that habitats or species would be adversely affected.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). The long-term average position of X2 would not shift relative to the No Action/No Project Alternative; the maximum shift in any individual month would be 0.8 km. Lower Sacramento River flows and inflow to the Delta would not be reduced such that habitats or species would be adversely affected.	Less than significant.	None proposed.
Cumulative Condition. Long-term flow reductions of the lower Sacramento River would not be expected to alter the riparian habitat of the Delta. Shifts in the long-term average position of X2 would be considered minor and would not adversely affect vegetation and associated habitat or species.	Less than significant.	
Feather River vegetation and special-status species.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in flow in the Feather River relative to the existing condition or to the No Action/No Project Alternative. Any small change in flow that may occur would be considered to represent a less-than-significant impact.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in changes in flow in the Feather River during the March to October growing season ranging from a reduction of 5.7 percent in March to an increase of 36.4 percent in August. Because the decreases in flows would occur when flows are already very low in the March to October period, such reductions may adversely affect riparian vegetation on the Feather River.	Potentially significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TERRESTRIAL RESOURCES (SECTION 3.6) (Continued)		
Feather River vegetation and special-status species (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
WATER QUALITY (Section 3.7)		
FACILITIES-RELATED IMPACTS		
Construction-related increase in sediment and turbidity in the North Fork American River affecting downstream water quality.		
No Action/No Project Alternative. Installation and removal of the seasonal pump station facilities would not be expected to increase sediment and turbidity levels in the river compared to the existing condition. However, due to the extended operation season, the facilities would be more vulnerable to damage from high river flows, potentially requiring occasional rebuilding and reinstallation of facilities more frequently than under the existing condition. Reclamation would continue to comply with the Corps, RWQCB, and CDFG regulatory permit terms and conditions. As needed, additional consultations and/or coordination would take place in response to high flow events requiring dredging or other work outside of the installation/removal permit terms and conditions.	Less than significant.	None proposed.
Action Alternatives. Compared to existing and No Action/No Project Alternative conditions, construction of the pump station and diversion/intake and associated facilities (pipelines, roadways) at the project site would involve substantial earthwork and some in-river activity. Under the Proposed Project, the construction activity also includes development of the public river access features. The Action Alternatives would increase sediment and turbidity in the North Fork American River, which potentially would affect the quality of water available for downstream beneficial uses.	Less than significant.	3.3-1: Removal of Construction Litter and Debris 3.3-2: Construction-related Water Quality Protection Measures
Pump station operation and maintenance-related increase in sediment and turbidity in the North Fork American River affecting downstream water quality.		
No Action/No Project Alternative. Operation and maintenance of the seasonal pump station facilities would not be expected to increase sediment and turbidity levels in the river compared to the existing condition. Reclamation would continue to comply with regulatory agency permit terms and conditions.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER QUALITY (Section 3.7) (Continued)		
Pump station operation and maintenance-related increase in sediment and turbidity in the North Fork American River affecting downstream water quality.		
Action Alternatives. Operation and maintenance of the year-round pump station facilities would be expected to result in less frequent in-river (dredging/removal of accumulated sediment at diversion/intake) and ground surface disturbances (road maintenance/rehabilitation) compared to existing and No Action/No Project Alternative conditions.	Less than significant/beneficial.	3.3-2: Project Operation and Maintenance Water Quality Protection
Proposed Project. The river access/parking could accommodate up to 53 vehicles at one time on a peak recreation day leading to potential increased contribution of vehicular and human-related pollutants to local surface water runoff.	Less than significant.	3.3-4: Minimize Water Quality Impacts From Increased Public Access
Cumulative Facilities-Related Impacts		
Implementation of the selected alternative would require permit compliance and incorporation of BMPs to minimize water quality impacts to levels considered less than significant. It is expected that regulatory agencies would require the same level of river water quality protection of other planned/proposed projects in the study area thereby reducing the potential for cumulative water quality degradation.	Less than significant.	No additional measures proposed.
DIVERSION-RELATED IMPACTS		
Increased North Fork American River diversions and changes in CVP operations could result in reduced river flows and reservoir elevations potentially increasing contaminant concentrations, affecting water quality available downstream and at other locations in the CVP and SWP systems.		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant increases in contaminant concentrations downstream of the project site or in other CVP system water bodies.	Less than significant.	None proposed.
Action Alternatives Compared to Existing Condition. Reduced contribution of high quality flows from the North Fork American River would potentially affect water quality in downstream water bodies by reducing dilution flows. Compared to the existing condition, hydrologic modeling indicates the potential for long-term reductions in river flows and reservoir storage under the Action Alternatives as follows: Folsom Reservoir storage - less than 1 percent Lower American River flows - less than 2 percent Shasta and Trinity Reservoir storage - less than 0.1 percent Upper and lower Sacramento River flows - less than 0.1 percent Oroville Reservoir storage and Feather River flows - less than 1 percent	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER QUALITY (Section 3.7) (Continued)		
DIVERSION-RELATED IMPACTS (Continued)		
Action Alternatives Compared to Existing Condition (continued). Potential increases in constituent concentrations associated with decreased dilution capacity would not be expected to cause state or federal drinking water quality criteria or standards to be exceeded within the study area.		
Action Alternatives Compared to No Action/No Project (Future). Compared to the future No Action/No Project Alternative conditions, hydrologic modeling indicates the potential for long-term average reductions in river flows and reservoir storage under the Action Alternatives as follows: Folsom Reservoir storage - less than 1 percent Lower American River flows - less than 2 percent Shasta and Trinity Reservoir storage - less than 0.1 percent Upper and lower Sacramento River flows - less than 0.1 percent Oroville Reservoir storage and Feather River flows - less than 1 percent Potential increases in constituent concentrations associated with decreased dilution capacity would not be expected to cause state or federal drinking water quality criteria or standards to be exceeded within the study area.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, cumulative CVP system conditions would have substantially reduced reservoir storage levels and river flows. Hydrologic modeling comparisons to the existing condition indicate the potential long-term average reductions in river flows and reservoir storage under the cumulative condition as follows: Folsom Reservoir storage - up to 11 percent Lower American River flows -up to 15 percent Shasta Reservoir storage -up to 7 percent Trinity Reservoir storage - up to 5 percent Upper Sacramento River flows - up to 10 percent Lower Sacramento River flows - up to 5 percent Oroville Reservoir - up to 8 percent Feather River - up to 14 percent The greatest flow reductions would occur in months when river flow is already low - September, October, and November. Potential increases in constituent concentrations associated with decreased dilution capacity could contribute to exceedance of state or federal drinking water quality criteria or standards within the study area that would not occur in the existing condition.	Potentially significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER QUALITY (Section 3.7) (Continued)		
DIVERSION-RELATED IMPACTS (Continued)		
Action Alternatives' Incremental Contribution to the Cumulative Condition. Hydrologic modeling results comparing the future with a year-round pump station and increased diversions to the future without the pump station or increased diversions (held at base diversion of 8,500 AFA) indicate the Action Alternatives would result in the following long-term average reductions of river flows and reservoir storage: Folsom Reservoir storage - less than 1.2 percent Lower American River flows - less than 2 percent Shasta Reservoir storage - less than 0.1 percent Trinity Reservoir storage - less than 0.2 percent Upper Sacramento River flows - less than 0.2 percent Lower Sacramento River flows - less than 0.3 percent Oroville Reservoir and Feather River - less than 1 percent	Less than significant.	None proposed.
Impacts to Delta water quality.		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not impact Delta water quality.	Less than significant.	None proposed.
Action Alternatives Compared to Existing Condition. Delta outflow reductions of more than three percent occur in only 7 out of 350 months simulated, relative to the existing condition. No shift in the long-term average position of X2 was indicated by the modeling results, relative to the existing condition. PROSIM assumptions include conformance with X2 requirements of the SWRCB Interim Water Quality Control Plan and the Interior's Final Administrative Proposal for the Management of 3406(b)(2) water; therefore, the maximum export ratio would not be exceeded by implementation of the Action Alternatives.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Delta outflow reductions of more than three percent occur in only 8 out of 840 months simulated (approximately 1 percent), relative to the No Action/No Project Alternative. In one month, an upstream shift of 0.1 km in the long-term average position of X2 was indicated by the modeling results, relative to the No Action/No Project Alternative. PROSIM assumptions include conformance with X2 requirements of the SWRCB Interim Water Quality Control Plan and the Interior's Final Administrative Proposal for the Management of 3406(b)(2) water; therefore, the maximum export ratio would not be exceeded by implementation of the Action Alternatives.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
WATER QUALITY (Section 3.7) (Continued)		
Impacts to Delta water quality (continued).		
Cumulative Condition. The greatest long-term average Delta outflow reduction under the cumulative condition, compared to the existing condition would be 8.3 percent. The long-term average position of X2 would move upstream by less than one kilometer, compared to the existing condition.	Potentially significant	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Hydrologic modeling results comparing the future with a year-round pump station and increased diversions to the future without the pump station or increased diversions (held at base diversion of 8,500 AFA) indicate the Action Alternatives would reduce the long-term average Delta outflow by only up to 0.3 percent and contribute to a shift of the long-term average X2 position of not more than 0.1 km, relative to the future condition with diversions at existing levels.	Less than significant.	None proposed.
RECREATION (Section 3.8)		
FACILITIES-RELATED IMPACTS		
Public recreation trail access during construction.		
No Action/No Project Alternative. Activities associated with installation and removal and operation of the seasonal pump station would not change in a way that would affect project area recreation trail uses as compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Reclamation's construction contractor would limit recreation trail access during construction to protect public safety and to facilitate project construction. To the extent feasible, recreation access will be maintained adjacent to and through the site, depending upon the nature of the construction activity. Special trail events would be coordinated among CDPR event coordinators, event organizers, and Reclamation's construction contractor such that the permitted annual events that use the project area would not be adversely affected.	Less than significant.	3.4-1: Maintain Public Recreation Trail Access During Construction 3.4-2: Avoid Recreation Trail Closures That Affect the Western States Endurance Run, Tevis Cup Western States Trail Ride or the American River – 50-Mile Endurance Run
Auburn-to-Cool Trail		
No Action/No Project Alternative. Activities associated with installation and removal and operation of the seasonal pump station would not affect recreation use of the Auburn-to-Cool Trail.	Less than significant.	None proposed.
Proposed Project. Closure of the Auburn Dam construction bypass tunnel and restoration of the North Fork American River through the project area would result in bifurcation of the Auburn-to-Cool Trail.	Significant and unavoidable.	3.4-3: Auburn-to-Cool Trail (bridge/trail feasibility studies and contribution of funding)

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Auburn-to-Cool Trail (continued)		
Upstream Diversion Alternative. The Upstream Diversion Alternative would not result in bifurcation of the Auburn-to-Cool Trail as the bypass tunnel would remain open, and flows would not be restored to the dewatered river channel.	Less than significant.	None proposed.
Project area trails and recreation uses and plans.		
No Action/No Project Alternative. Construction and operation activities associated with the continued use of the seasonal pump station would not introduce any additional public use in the project area relative to the existing condition. However, the continued unauthorized use of the river and presence of the bypass tunnel at the project site would remain unresolved public safety issues.	Potentially significant and unavoidable.	No feasible measures available under this alternative.
Proposed Project. The Proposed Project includes new trail ways and other design features, including designated parking for disabled river users, to minimize potential for trail user conflict associated with increased public use and introduction of vehicles. The Proposed Project is consistent with applicable recreation plans in the project and regional study areas. Closure of the bypass tunnel and development of a navigable waterway as part of the river restoration component of the Proposed Project would result in beneficial conditions as compared to the existing condition, No Action/No Project Alternative, and Upstream Diversion Alternative.	Less than significant/beneficial	3.4-4: Minimize Trail User Conflicts Due to Increased Public Access 3.4.-6: Provide Disabled Access Parking Area
Upstream Diversion Alternative. The bypass tunnel would remain open, posing a public safety threat to unauthorized boaters traveling through the site. Safety measures included in the design would reduce but not eliminate the safety hazard posed by the bypass tunnel.	Potentially significant and unavoidable.	No additional feasible measures available under this alternative.
Middle Fork/North Fork confluence recreation.		
Proposed Project. Restoration of the river channel at the project site would result in increased boat launching and passage at the Middle/North fork confluence, upstream of the project area. Currently, during peak recreation season (spring and summer) parking at the confluence is insufficient to meet the demand. Future comprehensive planning efforts to be undertaken by Reclamation and CDPR would include planning and development of projects to improve parking and other recreation use issues within the Auburn SRA.	Significant.	CDPR and Reclamation to address in update to Auburn SRA comprehensive plan.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant reductions of river flows or reservoir elevations such that regional recreation resources would be adversely affected.	Less than significant.	None proposed.
Middle Fork American River recreation.		
Action Alternatives Compared to the Existing Condition. PCWA would continue to release water from Ralston Afterbay to support recreational and commercial whitewater rafting in the Middle Fork American River. To meet water supply and environmental instream flow requirements, the duration of daily releases would be reduced by a maximum of up to eight hours (two percent change) during one or more months of the June to October recreation season.	Potentially significant and unavoidable.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Because water supply diversions would increase under the No Action/No Project Alternative compared to the existing condition, the difference in the duration of daily releases from Ralston Afterbay to support recreational and commercial whitewater rafting in the Middle Fork American River between the Action Alternatives and No Action/No Project Alternative would be less than the eight-hour reduction (two percent change) determined in the comparison to the existing condition.	Potentially significant and unavoidable.	None proposed.
Lower American River recreation.		
Action Alternatives Compared to the Existing Condition. Changes in CVP operations associated with the Action Alternatives would result in up to a 3.6 percent decrease in the frequency of lower American River flows in the optimal river recreation flow range, and a decrease of 0.8 percent of the frequency of river flows in the minimum to maximum recreation flow range, compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Lower American River mean monthly flows would be essentially the same as under the No Action/No Project Alternative (less than one percent reduction in the total number of months that fall within the minimum/maximum range or the optimum range). Water-based and enhanced recreation opportunities would not be adversely affected.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Lower American River recreation (continued).		
Cumulative Condition. Long-term average flows in the lower American River would be up to seven percent lower than under the existing condition resulting in a five percent decrease in the number of months when flows would be within the optimal range and a three percent decrease of months when flows would be in the minimum to maximum recreation flow range.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Flows would fall below the optimum recreation flow range approximately one percent more often than the existing condition and below the minimum to maximum recreation flow range by less than one percent.	Less than significant.	None proposed.
Folsom Reservoir boating.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling indicates that Folsom Reservoir elevations would drop below the 420-foot elevation (all boat ramps operable) in four additional months (out of 490; less than one percent decrease in availability) compared to the existing condition. Throughout the boating season, the availability of at least one low-water boat ramp on each side of the reservoir would be approximately the same as under the existing condition. The availability of marina wet slips would be the same as the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Reservoir elevations would be below the minimum recreation surface elevation for boating and marinas in slightly more years than the No Action/No Project Alternative. However, throughout the boating season, the availability of at least one low-water boat ramp on each side of the reservoir would be approximately the same as under the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Under cumulative conditions, the usability of all boat ramps and marina wet slips would decrease by up to 7.6 percent; there would be no net change in the availability of at least one useable boat ramp on each side of the reservoir.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Boat ramp and marina wet slip usability would decrease in only one month (out of 70) compared to the existing condition.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Folsom Reservoir swimming.		
Action Alternatives Compared to the Existing Condition. Lowered reservoir elevations during the peak swimming season (May through September) would occur infrequently compared to the existing condition. Overall, there would be two fewer months (out of 350) when reservoir elevations would be below the optimum and useable beach ranges.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). There would be no net effect on the frequency of reservoir elevations meeting the useable threshold for swimming opportunities at beaches during the recreation season; a less than one percent decrease in the frequency of elevations meeting the optimum level would occur, compared to the existing condition.	Less than significant.	None proposed.
Cumulative Condition. The frequency in which the water levels would be within the usable beach range would be reduced by seven percent; and by four percent for the optimum range.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Folsom Reservoir elevations would be essentially the same for the future with the project (cumulative condition) and future base condition (future with the project diversions held at existing levels); indicating the Action Alternatives would not result in a considerable contribution to the cumulative condition.	Less than significant.	None proposed.
Shasta Reservoir recreation.		
Action Alternatives Compared to the Existing Condition. The total number of years when all boat ramps are usable and the total number of years when at least one public ramp is available on each of the reservoir arms would not change, compared to the existing condition. Shoreline and camping facilities also would not be affected, compared to the existing condition.	Less than significant.	
Action Alternatives Compared to No Action/No Project Alternative (Future). The long-term mean end-of-month water surface elevations during the recreation season would be essentially the same as the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Water level reductions below critical recreation thresholds would diminish recreation opportunities at Shasta Reservoir more frequently than under the existing condition.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. Shasta Reservoir elevations would be unchanged for future with the project (cumulative condition) relative to the future base condition (future with the project diversions held at existing levels) for boat ramp and camping thresholds; elevations would be reduced below the shoreline threshold less than one percent of the time (one year for one month) indicating the Action Alternatives would not result in a considerable contribution to the cumulative condition.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Trinity Reservoir recreation.		
Action Alternatives Compared to the Existing Condition. There would be no change in the frequency of reservoir levels required to allow for boat launching from the three major public boat ramps during the recreation season.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). There would be no change in the frequency of reservoir elevations required for boating and other water-related recreation, compared to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Water level reductions below critical recreation thresholds would diminish recreation opportunities at two of the Trinity Reservoir arm boat ramps more frequently than under the existing condition. Overall, reservoir elevation reductions would be infrequent and would not adversely affect boating and other water-related recreation compared to the existing condition.	Less than significant.	
Upper Sacramento River recreation.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling indicates that the probability of upper Sacramento River flows meeting the 5,000 cfs minimum recreation flow would be unchanged, compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Upper Sacramento River flows would be essentially the same as the No Action/No Project Alternative during the recreation season.	Less than significant.	None proposed.
Cumulative Condition. Hydrologic modeling indicates that the probability of upper Sacramento River flows meeting the 5,000 cfs minimum recreation flow would be lowered infrequently, compared to the existing condition.	Less than significant.	
Lower Sacramento River recreation.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling indicates that the probability of lower Sacramento River flows exceeding 10,000 cfs is identical in all months of the recreation season. In August, when existing condition flows are below 10,000 cfs, the Action Alternatives would result in slightly higher river flows.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Lower Sacramento River flows would be essentially the same as the No Action/No Project Alternative during the recreation season.	Less than significant.	None proposed.
Cumulative Condition. The frequency of lower Sacramento River flows meeting or exceeding the 5,000 cfs minimum recreation flow would be essentially the same as the existing condition during the recreation season.	Less than significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Delta recreation.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling indicates that Delta inflows would be reduced by about only 0.1 percent during the recreation season, compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Flows into the Delta would be essentially the same as the No Action/No Project Alternative during the recreation season.	Less than significant.	None proposed.
Cumulative Condition. Sacramento River inflows would be decreased at most by approximately 850 cfs during the recreation season; because this amount is substantially less than the 13,200 to 19,200 cfs range of tidal influence on Delta inflows, it would not affect recreation opportunities available under the existing condition.	Less than significant.	
Consistency with the American River Parkway Plan.		
Action Alternatives Compared to the Existing Condition. The evaluation of lower American River flows indicates that the Action Alternatives would not result in recreation season flows below the D-1400 standard more often than the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). The evaluation of lower American River flows indicates that Action Alternatives would not result in recreation season flows below the D-1400 standard more often than under the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. The evaluation of lower American River flows indicates that cumulative conditions would not result in recreation season flows below the D-1400 standard more often than under the existing condition.	Less than significant.	
Consistency with state and federal Wild and Scenic River Act designations.		
Action Alternatives Compared to the Existing Condition. The evaluation of river flows indicates that the Action Alternatives would not diminish the recreation values and would be consistent with the state and federal recreational river designations.	Less than significant.	None proposed.
Action Alternatives Compared No Action/No Project Alternative (Future). The evaluation of river flows indicates that the Action Alternatives would not diminish the recreation values and would be consistent with the state and federal recreational river designations.	Less than significant.	None proposed.
Cumulative Condition. The evaluation of river flows indicates that the cumulative condition would potentially diminish the recreation values of designated river segments; however the Action Alternatives would not result in a considerable contribution to this effect and would not contribute to inconsistencies with the state and federal recreational river designations.	Less than significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
RECREATION (Section 3.8) (Continued)		
Oroville Reservoir recreation.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in elevation at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative (future) condition.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in substantially lower long-term average end-of-month elevation for most months of the year over the 70-year period of record, with up to 18 feet reduction in long-term average end-of-month elevation in September, potentially resulting in significant cumulative impacts upon recreation.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
Feather River recreation.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in Feather River flows relative to the existing condition or to the No Action/No Project Alternative (future) condition.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the Feather River would experience substantial changes in flow in most months of the year for the 70-year period of record. Changes in long-term average monthly mean flow would range from a decrease of 14.1 percent in November to an increase of 36.4 percent in August. Given the uncertainty associated with the potential effects that these flow reductions may have on recreation activities in the Feather River, impacts would represent a potentially significant impact.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in river flows would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
VISUAL RESOURCES (Section 3.9)		
FACILITIES-RELATED IMPACTS		
Construction-related effects on the visual character and views of the study area from sensitive receptors' viewpoints.		
No Action/No Project Alternative. Installation and removal of the seasonal pump station would involve few vehicles (six heavy construction vehicles) and up to 15 construction workers at the site daily over the course of several weeks (installation lasts four to six weeks, removal, two weeks) and would be virtually the same as under the existing condition with regard to visual impacts in the study area.	Less than significant.	None proposed.
Action Alternatives. Construction activity would introduce up to 54 pieces of heavy construction equipment and 50 workers during peak activity at the project site and at Oregon Bar (parking area) for a period of up to 22 months. Improvements to trail from turnaround to Oregon Bar would be performed manually, no construction equipment would be introduced to that area. *Residential Areas Along Western Canyon Ridgetop* - Although the visual character of the project site and Oregon Bar area would be changed as compared to the existing condition and No Action/No Project Alternative for the duration of the construction period, views of the few sensitive receptor locations that view the site would be limited to portions of the access roadways and related construction vehicles and would not result in a substantial visual impact. More scenic views of the canyon hillsides would not be obscured. *Western States Trail*. A limited portion of the trail would have intermittent views of the construction staging area and access road. Because of the limited number of sensitive receptors and temporary nature of the construction activities, no substantial visual character impact would be expected.	Less than significant.	None proposed.
Upstream Diversion Alternative. With the exception of the activities associated with Oregon Bar, visual impacts to residents and recreationists would be as described for the Proposed Project (above). Up to 24 pieces of heavy equipment and 50 construction workers would be at the site during peak activity.	Less than significant.	None proposed.
Operations and maintenance-related effects on the visual character and views of the study area from sensitive receptors' viewpoints.		
No Action/No Project Alternative. The primary visual change under the No Action/No Project Alternative compared to the existing condition would be the extended operational period leaving the seasonal pump station and associated facilities in place for up to eight months rather than four months. The facilities are visible only from the Auburn-to-Cool Trail Cofferdam Viewpoint, therefore affecting a limited number of potentially sensitive receptors for a limited duration of travel along the trail. This would not result in a substantial change in the visual character of the project site.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
VISUAL RESOURCES (Section 3.9) (Continued)		
Operations and maintenance-related effects on the visual character and views of the study area from sensitive receptors' viewpoints (continued).		
Action Alternatives. Restoration of the river channel would result in a potentially beneficial change from existing and No Action/No Project Alternative conditions in the local visual character for recreationists on the Western States Trail. Limited, intermittent views from ridgetop residential areas also would be improved. The Auburn-to-Cool Trail through the project site would be bifurcated; however, recreation use of the site and river passage through the site would experience more natural-looking scenery. Parking-related changes at the Auburn Dam Batch Plant plateau and increased public use of the area would result in a change in the type and level of activity visible from homes along the southwestern ridge of the canyon. The "rustic" improvements proposed for the parking area/river access use would change certain elements of the viewshed; however, because the batch plant is currently highly disturbed and littered with Auburn Dam-related remains, the improvements to the site would not degrade the view. Patches of ruderal vegetation may become covered by the parking lot. Minimal vegetation would be removed for the trail or turnaround. Overall, these uses would be considered consistent with the land use and recreational plans and character of the area.	Less than significant/potentially beneficial.	None proposed.
Upstream Diversion Alternative. The pump station would be partially visible from a limited number of residential viewpoints along the northwestern ridge. Because the enclosure would be painted a neutral color to blend with the surrounding landscape, it would not create a visual impairment at the project site.	Less than significant.	None proposed.
Cumulative Facilities-Related Impacts		
No substantial changes to the visual character of the canyon would be expected to occur with implementation of the Proposed Project; Foresthill Bridge modifications would provide improvement.	Less than significant.	
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant reductions of river flows or reservoir elevations such that visual resources would be adversely affected.	Less than significant.	None proposed.
Visual character of the upper American River.		
All Conditions. Hydrologic modeling of the upper American River indicates that visual resources would not be affected by changes in MFP operations.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
VISUAL RESOURCES (Section 3.9) (Continued)		
Visual character of Folsom Reservoir.		
Action Alternatives Compared to Existing Condition. Hydrologic modeling indicates that reductions in surface water elevation under the Action Alternatives compared to the existing condition would be 10 feet or less.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Hydrologic modeling indicates that in one month (February) over the 70-year simulation, reservoir elevation under the Action Alternatives would drop by more than 10 feet when compared to the No Action/No Project Alternative. However, because February is not a critical recreation month, this change in elevation would have a limited visual effect.	Less than significant.	None proposed.
Cumulative Condition. Hydrologic modeling indicates that under the cumulative condition, Folsom Reservoir elevations would drop below 10 feet approximately one percent more frequently than under the existing condition. These reductions would not be expected to substantially affect the visual character, relative to the existing condition.	Less than significant.	
Visual character of the lower American River.		
Action Alternatives Compared to Existing Condition. Hydrologic modeling indicates that minimal reductions in river flows would occur under the Action Alternatives compared to the existing condition. These changes would not affect the visual character or views of the lower American River.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Hydrologic modeling indicates that minimal reductions in river flows would occur under the Action Alternatives compared to the No Action/No Project Alternative. The simulated flows would not alter the visual character or views of the river.	Less than significant.	None proposed.
Cumulative Condition. Reduced lower American River flows under cumulative conditions would not adversely affect the riparian vegetation of the viewshed, compared to the existing condition.	Less than significant.	
Visual character of Trinity and Shasta reservoirs.		
Action Alternatives Compared to Existing Condition. Hydrologic modeling indicates that reductions in surface water elevation under the Action Alternatives compared to the existing condition would be 10 feet or less at both Trinity and Shasta reservoirs. These changes would not affect the visual character or views of Trinity or Shasta reservoirs.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Hydrologic modeling indicates that reductions in surface water elevation under the Action Alternatives compared to the No Action/No Project Alternative would be 10 feet or less at both Trinity and Shasta reservoirs. These changes would not affect the visual character or views of Trinity or Shasta reservoirs.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
VISUAL RESOURCES (Section 3.9) (Continued)		
Visual character of Trinity and Shasta reservoirs (continued).		
Cumulative Condition. Hydrologic modeling indicates that under the cumulative condition, Shasta and Trinity reservoir elevations would drop below 10 feet more frequently than under the existing condition. These changes would not affect the visual character or views of Trinity or Shasta reservoirs.	Less than significant.	
Visual character of the Sacramento River and Delta.		
Action Alternatives Compared to Existing Condition. Hydrologic modeling indicates that minimal reductions in upper and lower Sacramento River flows would occur under the Action Alternatives compared to the existing condition. These changes would not affect the visual character or views of the Sacramento River or Delta.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Hydrologic modeling indicates that minimal reductions in upper and lower Sacramento River flows would occur under the Action Alternatives compared to the No Action/No Project Alternative. These changes would not affect the visual character or views of the Sacramento River or Delta.	Less than significant.	None proposed.
Cumulative Condition. Reductions of Sacramento River flows, compared to the existing condition, would not be expected to impact the riparian vegetation element of the viewshed; therefore, visual quality of the river would not be adversely altered.	Less than significant.	
Visual character of Oroville Reservoir.		
Action Alternatives Compared to the Existing Condition and No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in elevation at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative (future) that would affect visual resources. Any small changes that may occur would be considered to represent less-than-significant impacts upon visual resources of Oroville Reservoir.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in substantially lower long-term average end-of-month elevation for most months of the year. Long-term end-of-month elevation reductions for Oroville Reservoir would range from six to 18 feet, and, in individual years, reductions of up to 76 feet in end-of-month elevation would occur. Such reductions in reservoir elevation would expose large areas of bare soil around the reservoir and may affect vegetation growth resulting in potentially significant visual impacts.	Potentially significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
VISUAL RESOURCES (Section 3.9) (Continued)		
Visual character of Oroville Reservoir (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
Visual character of the Feather River.		
Action Alternatives Compared to the Existing Condition and No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in flow in the Feather River relative to the existing condition or to the No Action/No Project Alternative (future) that would affect visual resources. Any small changes that may occur would be considered to represent less-than-significant impacts upon visual resources along the lower Feather River.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in changes in flow during the March to October growing season ranging from a reduction of 5.7 percent in March to an increase of 36.4 percent increase in August. Because the decreases in flows would occur when flows are already low in the March to October period, such reductions may adversely affect riparian vegetation on the Feather River, and consequently, the visual character of the river.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in river flows would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
CULTURAL RESOURCES (Section 3.10)		
FACILITIES-RELATED IMPACTS		
Disturbance of cultural resources in the project area.		
No Action/No Project Alternative. Continued installation and removal of the seasonal pump station facilities would occur in areas already disturbed by Auburn Dam-related construction and by previous seasonal pump station construction; no previously undisturbed lands would be graded or excavated. The potential to encounter previously undisturbed cultural resources would be similar to the existing condition.	Less than significant.	3.6-1: Stop Construction Activities if Cultural Resources or Human Remains are Uncovered

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Disturbance of cultural resources in the project area (continued).		
Action Alternatives. Field inspection of the anticipated construction areas for the Proposed Project and Upstream Diversion Alternative confirmed that these lands all have been previously disturbed and that no known cultural resources exist in those areas. Although the Action Alternatives, particularly the Proposed Project, which includes the river channel restoration, involve extensive excavation and blasting activities, it is considered highly unlikely that buried cultural resources would be discovered.	Less than significant.	3.6-1: Stop Construction Activities if Cultural Resources or Human Remains are Uncovered
Proposed Project - Public River Access. Compared to existing, No Action/No Project Alternative, and Upstream Diversion Alternative conditions, the Proposed Project would result in increased public use of the Auburn Dam area for recreation. Because the APE contains no previously recorded cultural resources or historic properties and the site has been greatly altered, there is little likelihood that increased public use of the area would result in the discovery of buried cultural resources.	Less than significant.	3.6-1: Stop Construction Activities if Cultural Resources or Human Remains are Uncovered
Cumulative Facilities-Related Impacts		
The potential for facilities-related cultural resources impacts is considered to be site-specific. The alternatives would not be expected to result in any disturbance of cultural resources in the study area, and would therefore not result in a considerable contribution to cumulative impacts upon cultural resources. Additionally, project-specific protection measures to be implemented in the event unknown resources are discovered would reduce the potential effect.	Less than significant.	No additional protective measures proposed.
DIVERSION-RELATED IMPACTS		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in changes in river flows or reservoir elevations for water bodies in the study area that would contribute to a significant effect upon cultural resources.	Less than significant.	None proposed.
Flows of the upper American River.		
Action Alternatives Compared to Existing Condition. Hydrologic modeling of the upper American River indicates that river flows under the Action Alternatives, would not fall below existing minimum flows and would not result in increased exposure of buried cultural resources compared to the existing condition. Additionally, due to the highly disturbed nature of the project area, it is unlikely that cultural resources remain in the study area.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Flows of the upper American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Under future conditions, the Action Alternatives would result in lower monthly mean flows relative to the No Action/No Project Alternative but would not drop below minimum flow levels during any month. The changes in flow would not result in increased exposure of buried cultural resources compared to No Action/No Project Alternative conditions. Additionally, due to the highly disturbed nature of the project area, it is unlikely that cultural resources remain in the study area.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition flows would not be expected to drop below existing minimum flows and would, therefore, not result in increased exposure of buried cultural resources. Additionally, due to the highly disturbed nature of the project area, it is unlikely that cultural resources remain in the study area.	Less than significant.	
Water surface elevation at Folsom Reservoir.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling of Folsom Reservoir indicates that reservoir elevations under the Action Alternatives, would not rise above maximum elevations or fall below minimum levels as compared to the existing condition and would not result in increased exposure of cultural resources relative to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Under future conditions, the Action Alternatives would not result in a higher maximum elevation compared to the No Action/No Project Alternative. Lower monthly mean end-of-month water surface elevations would potentially occur in some winter months, however, these elevations would not be below the minimum reservoir elevation and would not result in increased exposure of cultural resources relative to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition reservoir elevations would not rise above maximum reservoir elevations but would potentially fall below the minimum end-of-month elevation by up to three feet in two months (out of the 70-year simulation/840 months). Due to the limited frequency and magnitude of the reduced reservoir elevation, cumulative conditions would not be expected to result in increased exposure of cultural resources relative to the existing condition.	Less than significant.	
Flows of the lower American River.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling of the lower American River indicates that the Action Alternatives would result in maximum monthly mean river flows that would be virtually identical to those simulated for the existing condition.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Flows of the lower American River (continued).		
Action Alternatives Compared to No Action/No Project Alternative (Future). Under future conditions, the Action Alternatives would result in an increase of less than three percent in maximum monthly mean river flows during late-summer, fall and winter months, compared to the No Action/No Project Alternative. Because these months are not typical peak river flow months, the changes simulated would not result in damage to cultural resources that would not usually be submerged or affected by river flow fluctuations.	Less than significant.	None proposed.
Cumulative Condition. Under the cumulative condition, maximum monthly mean flows in the lower American River would be essentially the same or slightly lower than the existing condition; the changes simulated would not result in damage to cultural resources that would not usually be submerged or affected by river flow fluctuations.	Less than significant.	
Water surface elevation at Shasta Reservoir		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling of Shasta Reservoir indicates that the Action Alternatives would result in slightly lower winter and spring end-of-month elevations and slightly higher summer end-of-month elevations when compared to the existing condition. These anticipated differences in reservoir elevation would not result in elevation fluctuations outside of the existing minimum and maximum fluctuation range.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). The modeling results indicate that future Shasta Reservoir levels under the Action Alternatives would not result in a higher maximum elevation but potentially would be slightly lower (ranging from one to five feet) than No Action/No Project Alternative minimum end-of-month levels.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition reservoir elevations would not rise above maximum reservoir elevations but would regularly fall below the minimum end-of-month elevation within the range of 8 to 45 feet. Due to the frequency and magnitude of the reduced reservoir elevation, cumulative conditions would be considered potentially significant and would increase the potential for increased exposure of cultural resources relative to the existing condition.	Potentially significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Water surface elevation at Shasta Reservoir (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. The hydrologic evaluation of the Action Alternatives' incremental contribution to the cumulative condition indicates that reductions from one to six feet below the minimum reservoir end-of-month elevations may occur. The timing, frequency, and magnitude of these end-of-month elevation reductions result in a potentially significant impact; therefore, CVP operations associated with implementation of an Action Alternative would result in a considerable contribution to the cumulative condition. Reclamation has initiated consultation and preparation of a Programmatic Agreement with SHPO and the Advisory Council on Historic Preservation. The purpose of the Programmatic Agreement would be to ensure compliance with Section 106, by ensuring development and implementation of measures to protect resources from the effects of exposure when reservoir levels go below historic minimum levels. It is expected that the terms of the agreement would require Reclamation to implement measures that result in mitigation of potential effects to levels considered less than significant by SHPO and the National Advisory Council on Historic Preservation.	Less than significant.	3.6-2: Develop and Implement Programmatic Agreement with SHPO Regarding Potential Indirect Impacts at Shasta Reservoir
Water surface elevation at Trinity Reservoir.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling results indicate that the Action Alternatives would not result in any significant difference in reservoir elevations compared to the existing condition.	Less than significant	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). The modeling results indicate that future Trinity Reservoir levels under the Action Alternatives would not result in a higher maximum elevation or a lower minimum elevation than No Action/No Project Alternative end-of-month levels.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition maximum water surface elevation would be similar to the existing condition. Minimum end-of-month levels would be lower than the existing condition in certain months but would not fall below the minimum end-of-month level simulated for the existing condition. The cumulative condition would not be expected to result in increased exposure of cultural resources.	Less than significant.	
Flows of the upper and lower Sacramento River.		
Action Alternatives Compared to the Existing Condition. Hydrologic modeling results indicate that the Action Alternatives would not result in any significant difference in river flows of the upper or lower Sacramento River compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project Alternative (Future). Hydrologic modeling indicates that maximum monthly mean river flows of the upper and lower Sacramento River would be similar under the Action Alternatives and No Action/No Project Alternative conditions.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Flows of the upper and lower Sacramento River (continued).		
Cumulative Condition. For the upper Sacramento River, under the cumulative condition, summer month increases in maximum monthly mean river flows would not be above peak river flows of the existing condition and the reduction of minimum monthly mean river flows would not be below the lowest river flows of the existing condition. Overall, the cumulative condition would not result in increased exposure or damage to cultural resources. Lower Sacramento River results indicate that the cumulative condition would result in maximum monthly mean river flows that are similar or lower than existing condition flows. Minimum river flows would potentially be reduced below existing condition minimum monthly mean flows, but no significant cultural resources would be expected to be affected within the lower stretch of the Sacramento River.	Less than significant.	
Water surface elevation at Oroville Reservoir.		
Action Alternatives Compared to the Existing Condition and No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in elevation at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative (future). Any small changes that may occur would be considered to represent less-than-significant impacts upon cultural resources of Oroville Reservoir.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in substantially lower end-of-month elevation for most months of the year. Long-term end-of-month elevation reductions for Oroville Reservoir would range from six to 18 feet, and, in individual years, reductions of up to 76 feet in end-of-month elevation would occur. Such reductions in reservoir elevation potentially could result in exposure or damage to known or unknown cultural resources within the reservoir.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
CULTURAL RESOURCES (Section 3.10) (Continued)		
Flows of the Feather River.		
Action Alternatives Compared to the Existing Condition and No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in flow in the Feather River relative to the existing condition or to the No Action/No Project Alternative (future) that would affect cultural resources. Any small changes that may occur would be considered to represent less-than-significant impacts upon cultural resources of the lower Feather River.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in changes in flow ranging from a reduction of 5.7 percent in March to an increase of 36.4 percent increase in August. These flow fluctuations potentially could increase the exposure and damage to known or unknown cultural resources within the Feather River floodplain.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in river flows would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
POWER SUPPLY (Section 3.11)		
DIVERSION-RELATED IMPACTS Note: There are no facilities-related power supply impacts.		
No Action/No Project Alternative Compared to Existing Condition. The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant effects on gross hydropower generation, gross hydropower dependable capacity or upon pumping energy requirements.	Less than significant.	None proposed.
Gross hydropower generation.		
Action Alternatives Compared to the Existing Condition. The impact on annual gross generation is estimated to average reduction by 8 gigawatthours (GWh), or less than 0.2 percent.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Under future conditions, the effect of the Action Alternatives on CVP gross hydropower generation would be a reduction of up to 7 GWh, or a less than 0.2 percent loss of generation compared to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in an annual reduction of up to 356 GWh, representing a seven percent loss of hydropower generation. This would have significant economic results.	Significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
POWER SUPPLY (Section 3.11) (Continued)		
Gross hydropower generation (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. The assessment of the Action Alternative incremental contribution to the cumulative condition indicates up to an average annual reduction of 9 GWh, representing less than 0.2 percent of annual generation.	Less than significant	None proposed.
Gross hydropower dependable capacity.		
Action Alternatives Compared to the Existing Condition. Implementation of an Action Alternative would result in, at most, a less than one percent reduction in gross dependable capacity compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). Under future conditions, the effect of the Action Alternatives on gross hydropower dependable capacity would be reduced by up to two percent at most compared to the No Action/No Project Alternative.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, cumulative conditions would result in a reduction of total dependable capacity of up to 24 percent (August). This would have significant results.	Significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. The assessment of the Action Alternative incremental contribution to the cumulative condition indicates a very small contribution to the future condition with at most a less than one percent of the median and less than two percent reduction of total dependable capacity..	Less than significant.	None proposed.
Folsom and EID pumping energy requirements.		
Action Alternatives Compared to the Existing Condition. The Action Alternatives would result in lower Folsom Reservoir elevations creating the need for greater amounts of energy to pump water at the Folsom and EID pumping plants. Compared to the existing condition, under the Action Alternatives, the increased energy requirement would be 1.4 percent greater at Folsom and 0.1 percent greater at EID.	Less than significant.	None proposed.
Action Alternatives Compared to No Action/No Project (Future). The anticipated future increased energy requirements for the Action Alternatives compared to the No Action/No Project Alternative would be 0.7 percent at Folsom and less than 0.1 percent at EID.	Less than significant.	None proposed.
Cumulative Condition. Compared to the existing condition, the cumulative condition would result in increased energy requirements that double existing Folsom pumping plant needs and would be six times greater for the EID pumping plant needs. This would be significant.	Significant.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
POWER SUPPLY (Section 3.11) (Continued)		
Folsom and EID pumping energy requirements (continued).		
Action Alternatives' Incremental Contribution to the Cumulative Condition. The assessment of the Action Alternative incremental contribution to the cumulative condition indicates that increased energy requirements at Folsom, 1.8 percent, and at EID, 0.1 percent, would be relatively minor and would not represent a significant contribution to the cumulative condition.	Less than significant	None proposed.
Power at Oroville Reservoir.		
Action Alternatives Compared to the Existing Condition and the No Action/No Project Alternative (Future). The Action Alternatives would not result in substantial changes in elevation at Oroville Reservoir relative to the existing condition or to the No Action/No Project Alternative (future) condition. Any small changes that may occur would be considered to represent less-than-significant impacts upon power supply resources of Oroville Reservoir.	Less than significant.	None proposed.
Cumulative Condition. The cumulative condition would result in a reduction in the long-term average reduction in storage of up to 8.5 percent. The effects of SWP demands on hydropower dependable capacity and energy requirements for pumping at Oroville Reservoir are uncertain. Due to this uncertainty, potential power supply cumulative impacts would be considered potentially significant.	Potentially significant.	
Action Alternatives' Incremental Contribution to the Cumulative Condition. No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to the cumulative effects. The Action Alternatives' incremental contribution to the cumulative condition would not be considerable.	Less than significant.	None proposed.
LAND USE (Section 3.12)		
FACILITIES-RELATED IMPACTS Note: There are no diversion-related land use impacts.		
Change in existing or planned land use designations resulting in incompatibility with local or regional characteristics or leading to displacement of homes or businesses.		
No Action/No Project Alternative. No change from existing condition.	Less than significant.	None proposed.
Action Alternatives. The types of land uses would not change although the intensity and level of activity would increase from existing or No Action/No Project Alternative conditions due to year-round, rather than seasonal operations of the water supply facilities and associated recreation-related influx of people. No homes or businesses would be displaced. Anticipated increased use of the project area would be consistent and compatible with local and regional characteristics.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
LAND USE (Section 3.12)		
Change in existing or planned land use designations resulting in incompatibility with local or regional characteristics or leading to displacement of homes or businesses (continued).		
Upstream Diversion Alternative. The same water supply utility-related activities as under the Proposed Project (above).	Less than significant.	None proposed.
Conflict with local or regional planning policies, goals, or objectives.		
No Action/No Project Alternative. Continued operation of the seasonal pump station would be in direct conflict with the State Attorney General's office direction to close the Auburn Dam bypass tunnel and would result in potential inconsistencies with Reclamation and CDPR long-range planning goals for the Auburn SRA.	Significant, unavoidable.	No feasible mitigation available under this alternative.
Action Alternatives. Development of the year-round pump station would not result in conflict or inconsistency with Reclamation policies governing land use at the project site. Closure of the bypass tunnel would be consistent with the State Attorney General Office's direction to Reclamation, as compared to the continued conflict that would occur under the No Action/No Project and Upstream Diversion Alternatives. Introduction of interim public river access sites would be consistent with state goals for the Auburn SRA.	Less than significant/potentially beneficial.	None proposed.
Upstream Diversion Alternative. Similar to the No Action/No Project Alternative, this alternative would be in direct conflict with the State Attorney General's office direction to close the Auburn Dam bypass tunnel and would result in potential inconsistencies with Reclamation and CDPR long-range planning goals for the Auburn SRA.	Significant, unavoidable.	No feasible mitigation available under this alternative.
Cumulative Facilities-Related Impacts		
The Proposed Project and other future actions, specifically potential future expansion of the Auburn pump station and potential increased recreation development within the canyon, would change the intensity of water supply utility and recreation uses in the area; no land use or zoning designation changes would be required or anticipated. These cumulative activities would be considered consistent with long-range planning goals and would not result in policy conflicts. Certain land ownership and responsibilities would have to be arranged and contracted between appropriate entities.	Less than significant/potentially beneficial.	

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
GEOLOGY AND SOILS (Section 3.13)		
FACILITIES-RELATED IMPACTS Note: There are no diversion-related geology and soils impacts.		
Slope stability and geologic substructure changes that affect human safety.		
No Action/No Project Alternative. Seasonal pump station installation and removal activities would not differ substantially or result in disturbance of previously undisturbed areas as compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives. Construction would involve extensive grading, excavation, and blasting to develop sites for the pump station facilities and to restore the river channel. Ground surface modification would result in the temporary creation of potentially unstable slopes. Restoration of the river channel would be considered a potentially beneficial aspect of this alternative that would not take place under the No Action/No Project or Upstream Diversion alternatives.	Less than significant/potentially beneficial.	3.10-1: Minimize the Potential for Increased Erosion and Slope Instability During Project Construction.
Upstream Diversion Alternative. Existing unstable slopes would be temporarily disturbed and present additional localized geologic hazards as compared to the existing or No Action/No Project Alternative. Substantially less ground-disturbance would occur under this alternative compared to the Proposed Project. This alternative would not result in restoration of the river channel.	Less than significant.	3.10-1: Minimize the Potential for Increased Erosion and Slope Instability During Project Construction.
Increased public exposure or property damage due to geologic hazards.		
No Action/No Project Alternative. Public use of the river would continue to be restricted and no additional facilities would be constructed, as under the existing condition.	Less than significant.	None proposed.
Action Alternatives. Extensive earthwork would create temporary but potentially hazardous conditions as compared to the existing or No Action/No Project Alternative conditions. Public access in the project area would be limited to and directed away from active construction areas throughout the construction period, thereby minimizing exposure to temporarily unstable slope or ground surface conditions. Increased public use of and passage through the area would potentially increase exposure of the general public to existing geologic hazards (landslides and unstable slopes).	Construction: Less than significant. Public River Access: Less than significant.	None proposed.
Upstream Diversion Alternative. The potential for increased public exposure to geologic hazards is similar to the Proposed Project, although, because the river channel would not be restored, there would be less area disturbed/unstable during construction. Public access and passage through the project area would not be expected to increase as under the Proposed Project.	Less than significant.	None proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
GEOLOGY AND SOILS (Section 3.13) (Continued)		
Cumulative Facilities-Related Impacts		
All future planned projects involving grading, excavation or blasting within the North Fork American River canyon would have the potential to result in slope stability and/or related public safety concerns. Each of these activities/projects would be required develop and implement site-specific measures to stabilize slopes following construction and to ensure protection of public safety. Because the Action Alternatives and future actions would include such measures, there would not be a significant cumulative impact upon geology and soils resources.	Less than significant.	
TRANSPORTATION AND CIRCULATION (Section 3.14)		
FACILITIES-RELATED IMPACTS Note: There are no diversion-related transportation and circulation impacts.		
Increase in traffic levels on Interstate 80, Highway 49, Auburn-Folsom Road, Pacific Avenue, and Maidu Drive.		
No Action/No Project Alternative. Implementation of the No Action/No Project Alternative would not change the number of project-related trips made to the site or within the study area, compared to the existing condition.	Less than significant.	None proposed.
Action Alternatives. Maximum construction-related trip generation would result in up to 146 daily trips on local roadways for workers and supply deliveries, or 116 daily trips over the existing or No Action/No Project Alternative conditions. Construction-related trips could potentially conflict with residential and commercial vehicular, bus, or bicycle traffic on local roadways, contributing to more frequent congestion or safety hazards than would occur under the existing or No Action/No Project Alternative conditions. Operation/maintenance of the year-round pump station would generate only up to eight daily trips that would be easily accommodated on local roadways. This results in six more daily trips than under existing or No Action/No Project Alternative conditions. Action Alternatives. Use of the public river access sites would generate up to 214 recreation-related vehicle trips on a peak summer day resulting in a noticeable seasonal influx of traffic, as compared to the existing condition and the No Action/No Project or Upstream Diversion Alternatives which do not include development of these sites. Roadway capacity and LOS would not be impaired.	Construction: Less than significant. Operation and Maintenance: Less than significant. Proposed Project - Public River Access: Less than significant.	3.7-1: Develop and Implement a Construction Traffic Access Management Plan 3.7-2: Provide Information Regarding New Public River Access

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
TRANSPORTATION AND CIRCULATION (Section 3.14) (Continued)		
Cumulative Facilities-Related Impacts		
Construction at the project site may impact the local roadway system, and in combination with other local projects could interfere with established traffic patterns or cause a safety hazard. The Action Alternatives' incremental contribution to the cumulative condition could be potentially significant should the construction timeframes overlap. *Public River Access* - The seasonal influx of recreation traffic along Maidu Road would add to the anticipated cumulative increases in travel associated with residential developments. These increases would not exceed roadway capacity or adversely affect roadway LOS.	Construction: Less than significant. Public River Access: Less than significant.	No additional measures proposed.
AIR QUALITY (Section 3.15)		
FACILITIES-RELATED IMPACTS *Note: There are no diversion-related air quality impacts.*		
Increase in ozone precursor concentrations during project construction.		
No Action/No Project Alternative. Under the No Action/No Project Alternative, the ozone precursors and particulate matter generated during installation and removal of the seasonal pump station and maintenance trips to the project site would not be expected to change from the existing condition.	Less than significant.	None proposed.
Action Alternatives. Construction of the Action Alternatives would result in increased ozone precursor (ROG and NO_x) air pollutant emissions throughout the construction period at levels higher than those under the existing and No Action/No Project Alternative conditions. Proposed Project. Ozone precursor emissions were estimated as: ROG - 2,633 pounds per quarter NO_x - 26,711 pounds per quarter Upstream Diversion Alternative. Ozone precursor emissions were estimated as: ROG - 891.6 pounds per quarter NO_x - 6,121.7 pounds per quarter.	Proposed Project - Construction: ROG Emissions - Less than significant. NO_x Emissions - Potentially significant and unavoidable.	3.8-1: Minimize Ozone Precursor Emissions During Project Construction No mitigation measures are proposed for Action Alternatives operation or maintenance activities or for Proposed Project public river access.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
AIR QUALITY (Section 3.15)		
Increase in PM_{10} concentrations during project construction.		
Action Alternatives. Construction of the Action Alternatives would result in PM_{10} air pollutant emissions throughout the construction period at levels higher than those under the existing and No Action/No Project Alternative conditions. Proposed Project PM_{10} emissions were estimated as 2,117.5 pounds per quarter Upstream Diversion Alternative PM_{10} emissions were estimated as 557 pounds per quarter	Less than significant.	3.8-2: Minimize PM_{10} Emissions During Project Construction
Increase in vehicular emissions due to project operation and maintenance.		
No Action/No Project Alternative. No change in operation and maintenance trips.	Less than significant.	None proposed.
Action Alternatives. Year-round operation and maintenance of the pump station facilities would generate up to six additional trips to the project site. Under the Upstream Diversion Alternative, this represents a less-than-significant increase in vehicular air emissions.	Less than significant.	None proposed.
Proposed Project. The Proposed Project total vehicle trips include those due to public river access plus operations for a total of up to 214 trips on a peak area use day. Anticipated levels of air pollutant emissions would remain well below the local APCD thresholds of significance for ROG, NO_x, and PM_{10}.	Less than significant.	None proposed.
Exposure of sensitive receptors to significant amounts of air pollutants.		
Action Alternatives. With the exception of NOx emissions generated during construction of the Proposed Project, construction and operation emissions for the Action Alternatives would be below local APCD significance thresholds, although higher than the emissions associated with existing or No Action/No Project Alternative conditions.	Exposure to ROG and PM_{10}: Less than significant. Exposure to NO_x: Proposed Project - potentially significant and unavoidable. Upstream Diversion Alternative - less than significant.	3.8-1: Minimize Ozone Precursor Emissions During Project Construction 3.8-2: Minimize PM_{10} Emissions During Project Construction 3.8-3: Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction
Cumulative Facilities-Related Impacts		
All local projects could affect air quality during construction and/or operation phases. Each project would be required to incorporate all feasible mitigation measures recommended or required by local APCDs, thereby minimizing air quality effects to the extent practicable. However, because future projects, similar to the Proposed Project, may not feasibly reduce all air quality emissions below APCD significance thresholds, the potential for significant cumulative air quality impacts exists.		

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
AIR QUALITY (Section 3.15) (Continued)		
Cumulative Facilities-Related Impacts (Continued)		
Proposed Project's Contribution to the Cumulative Condition. Because the further reduction of NO_x emissions through implementation of adaptive construction management activities cannot be quantified, it is uncertain whether these emissions can be reduced below the Placer County APCD's quarterly emissions significance threshold. This is considered a considerable contribution to potential cumulative air quality impacts.	Potentially significant and unavoidable.	No additional mitigation proposed.
NOISE (Section 3.16)		
FACILITIES-RELATED IMPACTS		
Note: There are no diversion-related noise impacts.		
Increase in ambient noise levels during construction and operation of the alternatives.		
No Action/No Project Alternative. Installation/removal of the seasonal pump station facilities results in short-term increases in ambient noise levels. These noise levels do not exceed local noise ordinances or CDPR standards. Operation of the seasonal pumps (all four pumps) would result in a potential noise level of up to 55 dB exceeding both the City of Auburn night noise levels (45 dB, 10:00 p.m. to 7:00 a.m.) and the Placer County noise standard (50 dB, all times) for residential land uses. Additionally, noise levels at the nearest recreation trail segments could be as high as 60 dB. Maintenance activities for the seasonal pump station would be similar to the existing condition and would not be expected to generate noise levels that exceed local noise standards.	Installation and Removal: Less than significant. Operation: Potentially significant and unavoidable. Maintenance: Less than significant.	Installation and Removal: None proposed. Operation: No feasible mitigation available for potentially significant operation noise level increases. Maintenance: None proposed.
Action Alternatives. Construction of the Action Alternatives would result in increased ambient noise levels throughout the construction period due to use of explosives, construction vehicle traffic, and high noise level-generating construction equipment potentially impacting local residents and recreationists (trails and Auburn Recreation District campground) compared to existing and No Action/No Project Alternative conditions. Operation of the pumps would potentially result in noise levels of up to 90 dBA at a distance of 10 feet resulting in potential exceedances of local noise standards without additional design considerations. Because up to two additional pumps would be operated under the Action Alternatives as compared to existing or No Action/No Project Alternative conditions (which already may exceed noise level standards), this is a potentially significant impact. Maintenance of the pump station facilities would not generate noise levels in excess of those that occur under the existing condition or those anticipated under the No Action/No Project Alternative condition.	Construction: Less than significant. Operation: Less than significant. Maintenance: Less than significant.	3.9-1: Minimize Noise During Project Construction 3.9-2: Minimize Operational Noise Levels by Enclosing Pumps

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
NOISE (Section 3.16) (Continued)		
Increase in ambient noise levels during construction and operation of the alternatives (continued).		
Proposed Project. Use of the public river access sites would generate additional recreation-related noise within the study area compared to the existing condition and to the No Action/No Project and Upstream Diversion alternatives which do not include development of such areas or uses in the study area.	Proposed Project - Public River Access: Less than significant.	3.9-3: Minimize Noise Levels Associated with Public Use of River Access Features
Cumulative Facilities-Related Impacts		
In the future, ambient noise levels near the pump station site and in adjacent neighborhoods likely would increase as a result of increased recreation activity and residential development in Auburn. These anticipated land use changes and associated noise would be consistent with the character of the area and would not be expected to be significant. It is assumed that individual projects would be subject to the same noise restrictions as the pump station alternatives (limits on timing of noisy activity) and, therefore, adequately mitigated to prevent cumulative impacts.	Less than significant.	
PUBLIC HEALTH AND WORKER SAFETY (Section 3.17)		
FACILITIES-RELATED IMPACTS *Note: There are no diversion-related public health and worker safety impacts.*		
No Action/No Project Alternative. There are no hazardous materials currently stored on site and the No Action/No Project Alternative would not substantially change either public health or worker safety conditions compared to existing practices for seasonal pump station installation/removal and operation/maintenance.	Less than significant.	None proposed.
Increased project construction personnel and public exposure to commercially available hazardous materials or explosives.		
Action Alternatives. During construction, use and storage of commercially-available materials (diesel fuel, gasoline, paint, solvents, etc.) that could be flammable, volatile, or possess other hazardous characteristics would be greater than under existing or No Action/No Project Alternative conditions, increasing project construction personnel and public exposure to related hazards. The storage locations and amount stored on site at a given time would not differ substantially between the Action Alternatives. Implementation of the environmental protection measures would minimize potentially significant adverse public health impacts associated with increased use of potentially hazardous materials at the project site.	Less than significant.	3.10-2: Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
PUBLIC HEALTH AND WORKER SAFETY (Section 3.17) (Continued)		
Increased project construction personnel and public exposure to asbestos.		
Action Alternatives. Excavation and blasting activities under the Action Alternatives could release asbestos fibers, not released by earthwork activities associated with existing or No Action/No Project Alternative conditions. Proposed Project. A much larger amount of earthwork and blasting would be involved under the Proposed Project as compared to the Upstream Diversion Alternative. The Environmental Protection Plan construction management activities would be specific to the selected alternative. Implementation of the environmental protection measures would minimize potentially significant adverse public health impacts associated with increased exposure to asbestos fibers from blasting and earthwork activities.	Less than significant.	3.8-3: Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction
Increased project construction personnel and public exposure to fire hazards.		
Action Alternatives. During construction, use and storage of commercially-available materials (diesel fuel, gasoline, paint, solvents, etc.) that could be flammable, volatile, or possess other hazardous characteristics would be greater than under existing or No Action/No Project Alternative conditions, exposing construction workers to related hazards. The storage locations and amount stored on site at a given time would not differ substantially between the Action Alternatives. Implementation of the environmental protection measures would minimize potentially significant adverse worker health impacts associated with increased exposure to hazardous and explosive materials during project construction. Proposed Project. Increased public use of the Auburn Dam and Oregon Bar areas at the site and of the North Fork American River from the confluence and downstream past the project areas introduces an increased fire risk associated with human activity in the canyon.	Less than significant.	3.10-2: Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction 3.10-4: Minimize the Risk of Public Exposure to Fire Hazards During Project Operations
Cumulative Facilities-Related Impacts		
Action Alternatives. Contribution to Facilities-related Cumulative Public Health and Worker Safety Conditions. Implementation of the selected alternative would require compliance with all local, state and federal regulations governing the transport, delivery, transport, use, storage, and accident response activities relative to the project to protect public health and worker safety. It is expected that regulatory agencies would require the same level of public health and worker safety protection of other planned/proposed projects in the study area thereby minimizing the potential for cumulative public health or worker safety effects.	Less than significant.	No additional measures proposed.

Table S-5 (Continued)
Summary of Impacts and Environmental Protection and Mitigation Measures

Impact Issue	Impact Significance	Environmental Protection and Mitigation Measures
OTHER IMPACT CONSIDERATIONS (Section 3.18)		
Indian Trust Assets. The Proposed Project or alternatives would not be expected to result in adverse impacts to ITAs.	Less than significant.	None proposed.
Essential Fish Habitat. Essential fish habitat (specifically, chinook salmon) within the regional study area exists on the lower American River from the mouth to Nimbus Dam; such habitat also exists on the Sacramento River and its tributaries from the Delta upstream to Keswick Reservoir. The potential for the alternatives to adversely effect such habitat would be determined during consultation with NMFS. Appropriate terms and conditions to prevent impacts upon essential fish habitat would be developed during the NMFS consultation.	Proposed Project or alternatives are not likely to adversely affect EFH for fall-run chinook salmon.	
Environmental Justice. No disproportionately high or adverse environmental or human health impacts on minority or low-income communities have been identified for this project.	Less than significant.	None proposed.
Irreversible and Irretrievable Use of Resources. Irreversible commitments of resources would include construction materials, labor, land area, and energy consumed during construction, operation and maintenance activity. *Upstream Diversion Alternative*. Up to 0.11 acre of wetlands would be permanently lost under this alternative. Wetland acreage would be mitigated/replaced according to terms of the Corps' consultation and permitting process.	Less than significant.	3.2-4: Restoration of Permanent Riparian Wetland and Pond Vegetation/ Habitat Loss
Short-term Uses of the Environment Versus Long-term Productivity. The increased reliability and availability of water supplies for PCWA would meet current and projected water demands, thus supporting economic viability within the project service area. The project would have potential short-term impacts to air quality, terrestrial vegetation and habitats, recreation, and noise levels, but would not be expected to alter the long-term productivity of the natural environment.	Less than significant.	None proposed.
Climate Change. While the long-term environmental consequences associated with climate change are speculative at best, the location and design specifications for the Action Alternatives are expected to withstand a range of climate events, such as increased river flows.	Less than significant.	None proposed.

AF	acre-feet
AFA	acre-feet annually
AFRP	Anadromous Fish Restoration Program
APCD	Air Pollution Control District
APE	Area of Potential Effect
Auburn SRA	Auburn State Recreation Area
BMPs	Best Management Practices
CAWC	California-American Water Company
CALTRANS	California Department of Transportation
CDFFP	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
cfs	cubic feet per second
Corps	U.S. Army Corps of Engineers
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
dB	decibel
dBA	A-weighted decibels
Delta	Sacramento-San Joaquin River Delta
DWR	California Department of Water Resources
EDCWA	El Dorado County Water Agency
EFH	Essential Fish Habitat
EID	El Dorado Irrigation District
EIS/EIR	Environmental Impact Statement/ Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act (federal)
ESU	Evolutionary Significant Unit
FERC	Federal Energy Regulatory Commission
GDPUD	Georgetown Divide Public Utility District
GWh	gigawatthours
Interior	U.S. Department of the Interior
ITAs	Indian Trust Assets
km	kilometer
LOS	level of service
M&I	municipal and industrial
MFP	Middle Fork Project
mgd	million gallons per day
MOA	Memorandum of Agreement
msl	mean sea level
NEPA	National Environmental Policy Act
NID	Nevada Irrigation District
NMFS	National Marine Fisheries Service
NO_X	nitrogen oxides
NWD	Northridge Water District
P.L.	Public Law
PCWA	Placer County Water Agency
PG&E	Pacific Gas and Electric Company
$PM_{2.5}$	particulate matter (up to 2.5 microns in size)
PM_{10}	particulate matter (up to 10 microns in size)
ppt	parts per thousand
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RM	River Mile
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SWP	State Water Project
SWRCB	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
VELB	valley elderberry longhorn beetle
WTP	water treatment plant
WWTP	wastewater treatment plant
WWTRF	wastewater treatment and reclamation facility
X2	2 ppt isohaline in Delta



American River Pump Station Project

Final Environmental Impact Statement/ Environmental Impact Report

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

June 2002

SCH# 1999062089

Final
Environmental Impact Statement/Environmental Impact Report
American River Pump Station Project
Placer County, California

Lead Agencies:

U.S. Department of the Interior
Bureau of Reclamation
(NEPA Lead Agency)

Placer County Water Agency
(CEQA Lead Agency)

CEQA Responsible Agencies:

California Department of Parks and Recreation

California Department of Fish and Game

Regional Water Quality Control Board

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This Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is prepared in compliance with the National Environmental Policy Act (NEPA) and U.S. Bureau of Reclamation (Reclamation) NEPA procedures and the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Reclamation and PCWA are pursuing the development of a year-round water diversion facility capable of diverting up to 35,500 acre-feet annually (AFA) of PCWA's water entitlements from its Middle Fork Project (MFP) on the American River. The project purpose includes providing PCWA with the year-round access to its MFP water entitlements from the American River, as it had before its pumps were removed in 1972 by Reclamation. Three alternatives, including the No Action/No Project, Mid-Channel Diversion, and Upstream Diversion, are evaluated in this EIS/EIR. With the exception of the No Action/No Project Alternative, the project alternatives all consist of constructing a diversion and intake structure, pump station, and associated facilities including pipelines, access roads, power lines and safety features in the American River Canyon within the Auburn Dam construction area. Reclamation and PCWA are presently negotiating a contract that will define the terms and conditions upon which the ownership of the facilities would be transferred to PCWA, including responsibilities for operation, maintenance, and related activities for the project.

The Mid-Channel Diversion Alternative is the proposed action. This alternative includes closure of the Auburn Dam construction bypass tunnel and restoration of the currently de-watered river segment near Auburn. Additional improvements would be implemented under this alternative to ensure public safety access near the project area.

The EIS/EIR analyzes the direct, indirect, and cumulative impacts to the physical and natural environment that may result from construction, operation, and maintenance of the pump station project. Reclamation and PCWA have incorporated best management practices and other conservation measures as recommended by resource agencies to minimize impacts, which may occur due to implementation of a year-round pump station alternative.

The EIS/EIR evaluates impacts to the regional area watercourses associated with PCWA's proposed increased diversion of its American River water entitlement. Hydrologic impact analyses consider the effects of the project under varying hydrologic conditions and the impacts of the diversions on the potentially affected hydrologic system, including the North Fork American River, Folsom Reservoir, lower American River, and other Central Valley Project system components. The cumulative impacts to water supplies, fisheries and other aquatic species, wetland and riparian communities, including special-status species, recreational activities, and flood control are assessed as well as land use issues associated with PCWA's exercise of its existing entitlements.

The EIS/EIR will serve environmental review and consultation requirements pursuant to the Endangered Species Act (section 7c), the Fish and Wildlife Coordination Act, Executive Order 11988 (Floodplain Management), Executive Order 11990 (Wetlands Protection), and the National Historic Preservation Act (Section 106).

American River Pump Station Project

Final
Environmental Impact Statement/
Environmental Impact Report

Prepared For:

U.S. Bureau of Reclamation

Placer County Water Agency

Placer County
Water Agency

Prepared By:

SWRI SURFACE WATER RESOURCES, INC.

June 2002

AF	acre-feet
AFA	acre-feet annually
AFRP	Anadromous Fish Restoration Program
Ag	agricultural
APCD	Air Pollution Control District
APE	Area of Potential Effect
AQMD	Air Quality Management District
ARD	Auburn Recreation District
ATF	Bureau of Alcohol, Tobacco and Firearms
ATSP	Automated Temperature Selection Procedure
Auburn SRA	Auburn State Recreation Area
BACT	Best Available Control Technology
Bay-Delta	San Francisco Bay-Sacramento-San Joaquin River Delta Estuary
BLM	Bureau of Land Management
BMPs	Best Management Practices
BO	Biological Opinion
CAAWC	California American Water Company
Cal/OSHA	California Occupational, Safety, and Health Administration
Cal-EPA	California Environmental Protection Agency
CALTRANS	California Department of Transportation
CAR	Coordination Act Report
CARB	California Air Resources Board
CAWC	California-American Water Company
CCR	California Code of Regulations
CCWD	Contra Costa Water District
CD	compact disk
CDF	California Department of Forestry
CDFFP	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CHP	California Highway Patrol
CNDDB	California Natural Diversity Data Base
$CNEL_C$	C-Weighted Community Noise Equivalent Level
CNPS	California Native Plant Society
COA	Coordinated Operations Agreement
Corps	U.S. Army Corps of Engineers
CSC	California Species of Concern
Cumulative Report	American River Basin Cumulative Impact Report
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
dB	decibel
dBA	A-weighted decibels
dBC	C-weighted decibels
DEH	California Department of Environmental Health
Delta	Sacramento-San Joaquin River Delta
DTSC	Department of Toxic Substance Control
DWR	California Department of Water Resources
EA/IS	Environmental Assessment/Initial Study
EBMUD	East Bay Municipal Utility District
EDCWA	El Dorado County Water Agency
EFH	Essential Fish Habitat
EID	El Dorado Irrigation District
EIS/EIR	Environmental Impact Statement/ Environmental Impact Report
EPA	Environmental Protection Agency
ERPP	Ecosystem Restoration Program Plan
ESA	Endangered Species Act (federal)
ESU	Evolutionary Significant Unit
F	Fahrenheit
FERC	Federal Energy Regulatory Commission
Folsom SRA	Folsom State Recreation Area
fps	feet per second
ft/day	feet per day
FR	Federal Register
FWCA	Fish and Wildlife Coordination Act
GDPUD	Georgetown Divide Public Utility District

GWh	gigawatthours
HWCL	Hazardous Waste Control Law
Interior	U.S. Department of the Interior
IRMP	Interim Resources Management Plan
ITAs	Indian Trust Assets
km	kilometer
kW	kilowatts
kWh	kilowatthours
L_{Cdn}	C-Weighted Day-Night Average Sound Level
L_{dn}	24-Hour Average Sound Level
L_{eq}	Average Noise Level
LOS	level of service
M&I	municipal and industrial
m/day	meters per day
MFP	Middle Fork Project
mgd	million gallons per day
Mitigation Plan	Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSDS	Materials Safety Data Sheets
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
msl	mean sea level
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NID	Nevada Irrigation District
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
NWD	Northridge Water District
O_3	ozone
OES	Office of Emergency Services
O&M	Operation and maintenance
OSHA	Occupational, Safety, and Health Administration
P.L.	Public Law
PAM	Planning Aid Memorandum
PCWA	Placer County Water Agency
PEIS	Programmatic Environmental Impact Statement
PG&E	Pacific Gas and Electric Company
$PM_{2.5}$	particulate matter (up to 2.5 microns in size)
PM_{10}	particulate matter (up to 10 microns in size)
POU	place of use
ppm	parts per million
ppt	parts per thousand
PRC	Public Resources Code
PROSIM	Project Simulation
PST	Parr-smolt transformation
RCRA	Resource Conservation and Recovery Act
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RM	River Mile
ROD	Record of Decision
ROG	reactive organic gases
RWMP	Regional Water Master Plan
RWQCB	Regional Water Quality Control Board
SARA	Save the American River Association
SEL	Sound Exposure Level Used
SC	Species of Concern (federal status)
SHPO	State Historic Preservation Office
SJWD	San Juan Water District
SRA	Shaded Riverine Aquatic Habitat
SSWD	South Sutter Water District
SWD	Sacramento Suburban Water District
SVAB	Sacramento Valley Air Basin
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
TCD	temperature control device

TDS	total dissolved solids
UARM	Upper American River Model
UBC	Uniform Building Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VELB	valley elderberry longhorn beetle
WWTRF	wastewater treatment and reclamation facility
WAPA	Western Area Power Administration
WQCP	Water Quality Control Plan
WTP	water treatment plant
WWTP	wastewater treatment plant
X2	2 ppt isohaline in Delta

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Chapter 1.0
Introduction

This Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) describes the potential beneficial and adverse effects of alternatives for a proposed pump station project to replace the seasonal American River pump station near Auburn, California. The EIS/EIR evaluates the potential environmental effects of three alternatives: No Action/No Project, Mid-Channel Diversion, and Upstream Diversion. The Mid-Channel Diversion Alternative is the Proposed Project and includes: (1) construction and operation of a year-round pumping facility for PCWA which would divert water from the North Fork American River in the vicinity of the Auburn Dam construction site near Auburn, California (**Figure 1-1**); (2) closure of the Auburn Dam bypass tunnel; and (3) restoration of the three-quarter mile reach of the river that was dewatered and otherwise impacted by activities associated with Auburn Dam construction. As a project-specific EIS/EIR, the impact analysis addressed the direct and indirect impacts of the alternatives as well as cumulative impacts associated with increased use of American River water supplies and regional service area impacts.

Potential environmental effects resulting from construction and long-term operation, and maintenance of the alternatives are described in this document in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Reclamation is the lead agency under NEPA and PCWA is the lead agency under CEQA.

Public and agency comments on the Draft EIS/EIR and descriptions of how the comments were considered in preparing this Final EIS/EIR also are presented in this document. Revisions to the Draft EIS/EIR have been incorporated into this document and are summarized later in this chapter.

1.1 PROJECT PURPOSE

The purpose of the project is threefold: (1) to provide facilities to allow PCWA to convey its Middle Fork Project (MFP) water entitlement to the Auburn Ravine Tunnel (also referred to locally as the Ophir Tunnel) to meet demands within its service area; (2) to eliminate the safety issue associated with the Auburn Dam bypass tunnel; and (3) to allow for all pre-construction beneficial uses of water in what is now the dewatered river channel, including recreation, navigation, and other instream beneficial uses. Each of these elements is discussed in Section 1.3, Project Needs and Objectives.

1.2 PROJECT HISTORY

In 1965, Congress authorized the construction of Auburn Dam on the North Fork American River near the City of Auburn. Construction began in 1967 and included a cofferdam, a tunnel through a ridge to bypass the river around the construction area (referred to as the bypass tunnel), excavation for the Auburn Dam foundation (also referred to as the keyway), and removal of a permanent

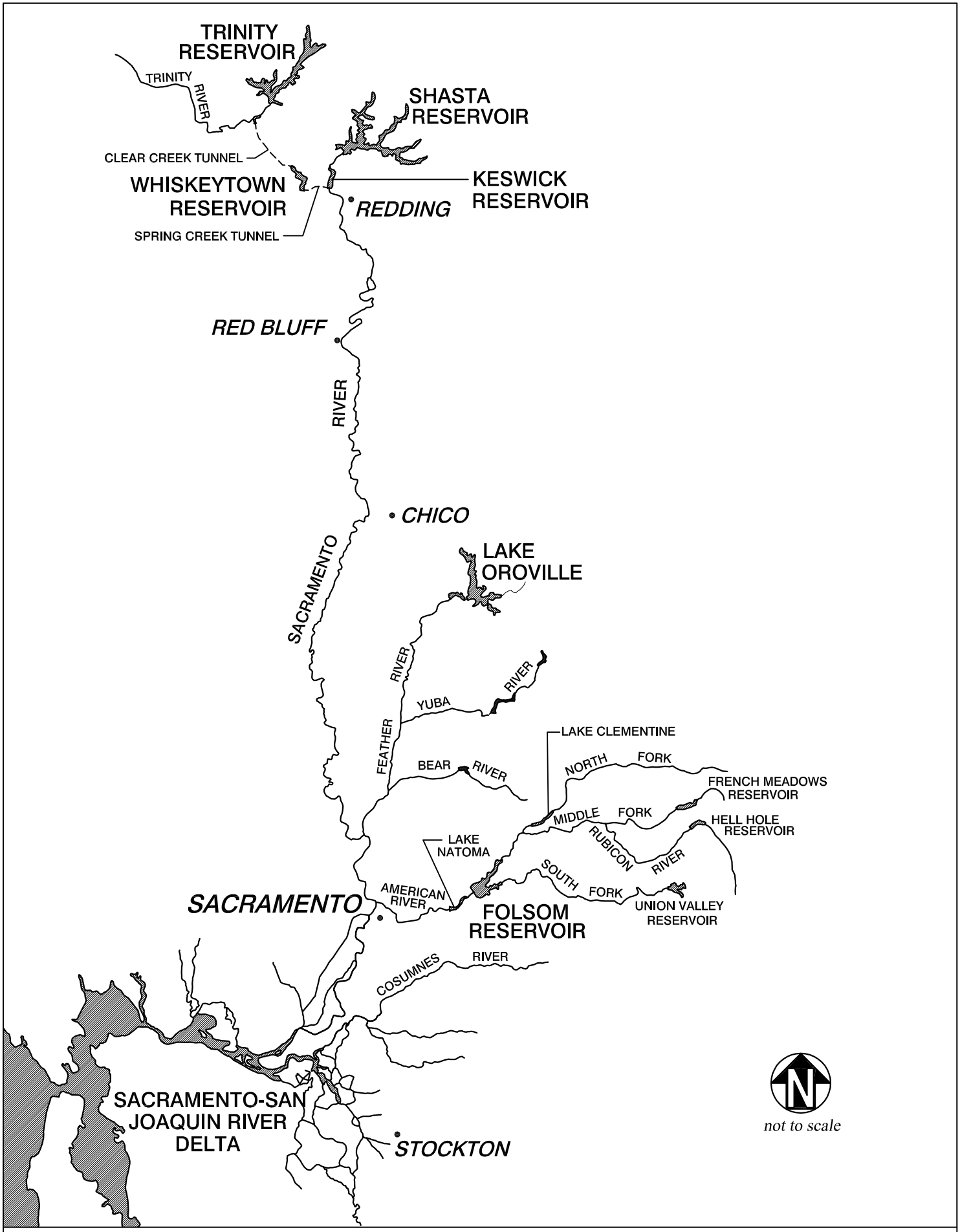


Figure 1-1 Regional Setting

pump station owned by PCWA. Because of concerns over seismic safety, heightened by the 5.7 magnitude (Richter scale) Oroville earthquake of August 1, 1975, construction of Auburn Dam was suspended in 1977.

1.2.1 PCWA ORIGINAL PUMP STATION

Prior to the initiation of construction of Auburn Dam, PCWA built a 50 cubic feet per second (cfs) pump station on the North Fork American River to convey PCWA water supplies from its MFP to the Auburn Ravine Tunnel for delivery to PCWA's service area. However, before PCWA's operations began, the pump station was removed by Reclamation to facilitate construction of Auburn Dam. Pursuant to a Land Purchase Agreement with PCWA described below, Reclamation has since installed a seasonal pump station annually as needed by PCWA to meet water supply demands.

1.2.2 LAND PURCHASE AGREEMENT

Before suspending Auburn Dam construction, Reclamation sought a Land Purchase Agreement with PCWA to acquire canyon lands needed for the Auburn Dam Project. PCWA entered into a Land Purchase Agreement in 1972 with Reclamation under the threat of condemnation. As part of the Land Purchase Agreement, PCWA's 50 cfs pump station was removed to facilitate construction of Auburn Dam subject to Reclamation's provision of an interim pumping facility or alternative water supply until Auburn Dam was completed. As the Auburn Dam Project was designed at that time, water from the reservoir was to flow by gravity into the Auburn Ravine Tunnel to provide PCWA its water entitlements, thereby eliminating the need for a pump station. As stipulated in the Land Purchase Agreement:

> [Article 11] A *"...the United States will provide a temporary pumping facility in the event the Vendor [PCWA] demonstrates a need for water, to be delivered into the existing tunnel intake structure at the intake portal of the Auburn Ravine Tunnel, or at its option, the United States may provide water from an alternative source, provided delivery is made at a point suitable for its intended use."*

The Land Purchase Agreement obligated Reclamation to deliver up to 25,000 acre-feet annually (AFA) at a rate of up to 50 cfs.

1.2.3 OPERATIONS UNDER THE LAND PURCHASE AGREEMENT

Pursuant to the Land Purchase Agreement, the United States, through Reclamation, has delivered water through the installation and removal of a seasonal pump station on an as-needed basis. The first time PCWA required access to its MFP water rights to meet system demands was during the drought of 1977. In response to PCWA's request for water under the Land Purchase Agreement, Reclamation constructed a pump station capable of delivering approximately 50 cfs using pumps salvaged from PCWA's original pump station.

Beginning in 1990, PCWA has required access to its MFP water annually to meet its system demands under a variety of operating conditions. Reclamation has responded with the seasonal re-

installation and removal of PCWA's original pumps at the same location as the 1977 installation. Due to the location of the installation, the pumps have to be removed before winter each year to prevent damage due to inundation from high river flows. As discussed below, the seasonal pumps do not fully meet PCWA's water supply requirements, are not reliable, and have become increasingly expensive to install and maintain.

Reclamation can deliver the MFP water supply to PCWA only from approximately April to November. Late-fall, winter, and spring MFP water supplies are not accessible due to the potential for high river flows that can inundate the seasonal pump station. Further, because of limitations on the pumping capacity of the existing facilities (50 cfs) and the timing of seasonal diversions as compared to the pattern of demands, the maximum annual diversion for the seasonal pump station is approximately 19,300 acre-feet (AF). The seasonal pump station no longer permits Reclamation to provide PCWA with a reliable water supply when and where required to meet PCWA's system demands in accordance with the Land Purchase Agreement.

The annual installation and removal of the seasonal pump station has become increasingly expensive for Reclamation. In recent years, the minimum cost for annual installation and removal has been approximately $250,000. The record high flows of the American River during January 1997 destroyed both the access road to the seasonal pump station and the pipeline connecting the pumps to the Auburn Ravine Tunnel. Reinstallation of the seasonal pump station in the summer of 1997 required new foundation work for the access roads and the pipeline, costing Reclamation nearly $1 million (W. Sanford, pers. comm. 1997).

1.2.4 U.S. BUREAU OF RECLAMATION MANAGEMENT OF AUBURN DAM CONSTRUCTION SITE

Auburn Dam remains an authorized federal project and is considered by some to be feasible. In 1992 and 1996, there were unsuccessful Congressional initiatives to modify and restart the Auburn Dam Project.

Since suspension of Auburn Dam construction in 1977, Reclamation has been managing the Auburn Dam site on an interim basis. Existing site conditions present Reclamation with several resource management issues and opportunities, including public safety, access, and recreation management.[1] In 1994, Reclamation undertook a study to address these issues, together with the installation of a year-round pump station for PCWA. The results were published in a report entitled *Preliminary Concept Plan, Restoration and Management of the Auburn Dam Site* (Reclamation 1996) (1996 Concept Plan).

Reclamation's 1996 Concept Plan identified several interests and options related to improving public safety, access, and recreation at the Auburn Dam construction site. The options identified included closure of the bypass tunnel, restoration of the river through the dewatered channel, and recreational access at the site. Upon completion of the 1996 Concept Plan, Reclamation initiated a concerted engineering and environmental planning effort to implement the findings of the report.

[1] California Department of Parks and Recreation (CDPR), through an agreement with Reclamation, provides management of Auburn State Recreation Area (Auburn SRA) activities, including the project area.

Early in the planning effort, members of the public and certain interest groups supported inclusion of the 1996 Concept Plan site restoration and river bypass tunnel closure measures. In late 1997, Reclamation (1997) undertook a Value Planning Study to further evaluate the options for a year-round pump station, restoration of the Auburn Dam construction site, and tunnel safety consistent with the 1996 Concept Report. However, following publication of the results of the 1997 study, it appeared that critical Congressional support for the project would not be forthcoming if the project included blocking the bypass tunnel or restoring the river channel. Therefore, during 1998 and into 1999, Reclamation and PCWA concentrated on designing a pump station that would not require the bypass tunnel to be closed or the channel restored.

1.2.5 STATE OF CALIFORNIA INTEREST

In September 1999, the State of California's Attorney General sent the Secretary of the Interior a letter indicating legal obligations by the United States to close the diversion tunnel and restore the American River to its natural channel. In March 2000, Reclamation replied that it was ready to address the issues of tunnel closure and river restoration and was willing to enter into a more formal partnership with California to explore alternatives. The Attorney General responded affirmatively and Reclamation and the state entered into a Memorandum of Agreement (MOA) in January 2001 (California Resources Agency and Reclamation 2001) (Appendix A of the Draft EIS/EIR).

The MOA obligates the state to provide funding towards the work needed to complete the EIS/EIR and design plans and specifications in connection with efforts to restore the dewatered portion of the North Fork American River. The MOA also obligates Reclamation to include incidental public access to the river in the vicinity of the Auburn Dam construction site for public health and safety, resource protection and emergency purposes, and any other purposes necessary as a foreseeable result to returning water to the dewatered portion of the river under the Proposed Project. Reclamation's agreement with California Department of Parks and Recreation (CDPR) for management of the Auburn State Recreation Area (Auburn SRA) would be updated to reflect responsibilities associated with river access at the Auburn site and at Oregon Bar.

1.3 PROJECT NEEDS AND OBJECTIVES

1.3.1 PCWA NEEDS FOR WATER SUPPLY AND CONVEYANCE

1.3.1.1 PCWA Existing Water Entitlements

Pacific Gas and Electric Company's (PG&E) Drum-Spaulding Project on the Yuba and Bear rivers and PCWA's MFP on the American River are two sources of water currently available to PCWA to serve areas in western Placer County. PCWA has a contract with PG&E for 100,400 AFA of Drum-Spaulding Project water, at a maximum delivery rate of 244 cfs, to serve Zone 1, encompassing the communities of Auburn, Loomis, Rocklin, Lincoln, Newcastle, Penryn, and parts of Roseville. PCWA also holds existing appropriative rights to divert 120,000 AFA from the MFP under Water Right Permits numbers 13856 and 13858, as authorized by the State Water

Resources Control Board (SWRCB). PCWA uses Drum-Spaulding Project water supplies first to meet service area demands. PCWA then uses MFP water supplies from the American River to satisfy demands not met by the Drum-Spaulding Project, or as needed to provide back-up supplies when the Drum-Spaulding Project is not operating.

A third PCWA water entitlement is through a water service contract most recently amended in February 2002 with Reclamation. The February 2002 amendment to the contract modified the original maximum water allotment of 117,000 AFA and limits the amount of water available to PCWA to 35,000 AFA prior to completion of Auburn Dam.

The project evaluated in this EIS/EIR involves only PCWA's proposed increased diversion of its existing American River MFP water entitlement at the pump station site near Auburn. Separate environmental documentation will be required to evaluate the effects of PCWA's diversion of water under its CVP water service contract with Reclamation.

1.3.1.2 PCWA Water and Conveyance Needs

Since the mid 1980s, Placer County has been one of the fastest growing regions in California. The resulting increased water demands have steadily pushed the limits of PG&E's Drum-Spaulding Project to meet the needs of PCWA customers adequately.

Since 1990, PCWA has needed to rely on the seasonal pump station to supplement the Drum-Spaulding Project water supply with PCWA's MFP supplies during scheduled maintenance outages. Since 1994, PCWA's service area needs for water have exceeded the maximum delivery rate and annual supply available from the Drum-Spaulding Project; again, requiring use of the seasonal pump station to meet the total demand of PCWA's system. In 2000, PCWA's service area demands exceeded the current available delivery amounts from the combined Drum-Spaulding Project and seasonal pump station and PCWA obtained approximately 5,000 AF of surplus surface water through a contract with South Sutter Water District for Nevada Irrigation District (NID) water. However, this surplus supply is only temporarily available until needed within the NID service area and would not be available to PCWA in the future. The present procedure of installing and removing the seasonal pumps does not allow Reclamation to meet its full obligations under the Land Purchase Agreement to fulfill PCWA's needs, nor does it allow PCWA to meet its need for a reliable back-up water supply.

Surface water supply projections through 2030 indicate demand for an additional 92,100 AFA to serve planned buildout of Placer County and other communities within the Auburn pump station service area of PCWA Zones 1 and 5 (PCWA 2001). The determination of these demands assumed continued commitment and implementation of water use efficiency measures throughout the service area. While PCWA has sufficient water entitlements to meet these increasing demands, they require the ability to access the MFP supply beyond the historic seasonal pump station operating period and capacity. This supply also would serve as a critical year-round back-up source to the Drum-Spaulding Project. PCWA has determined that 35,500 AF would provide the necessary back-up supply reliability and meet increasing service area demands for the immediate and near-term (up to 10-year) timeframe.

If the existing seasonal pumps could operate year-round, the 50 cfs capacity would provide an annual diversion of about 35,500 AFA of water. However, PCWA's MFP is a multi-purpose project designed to conserve and control water for irrigation, domestic and commercial purposes, and for hydroelectric generation. To meet these multiple objectives, PCWA's annual diversion pattern is seasonally limited according to Federal Energy Regulatory Commission (FERC) hydroelectric power generation license (Federal Power Commission 1963) and PG&E water contract (PG&E 1968) conditions. These restrictions, in effect until 2013, include specified minimum and maximum monthly diversions as shown in **Table 1-1**.

Table 1-1
Minimum and Maximum Monthly Diversions of Middle Fork Project Water Supplies
(Percent of Total Annual Diversions)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	0	0	2	5	9	12	13	13	12	4	0	0
Maximum	5	5	6	10	16	19	19	16	13	8	6	5

The net effect of the above is that, even though a year-round 50 cfs diversion could physically provide about 35,500 AFA, operational limitations of the FERC license and PG&E water contract conditions make this annual diversion unattainable. Furthermore, even if a continuous 50 cfs diversion were possible, PCWA's customer demands require that the majority of supplies be delivered in the late-spring through late-fall. Consequently, a larger capacity pump station is needed that would comply with FERC license and PG&E contract conditions, and deliver water to PCWA's customers on its demand pattern. PCWA has determined that a 100 cfs capacity pump station would meet these needs into the 2005 to 2010 period. Water supply needs beyond 2010 would be met through a combination of sources, including PCWA's CVP water contract recently negotiated with Reclamation, by a reduction over time in the amount of MFP water supplied to Sacramento Suburban Water District (formerly Northridge Water District), and/or the potential expansion of the Auburn pump station (see Section 1.3.6, Expandable Conveyance Facility). These conditions and agreements are described further in Chapter 3.0, Section 3.4, Water Supply and Hydrology.

1.3.2 AUBURN DAM BYPASS TUNNEL SAFETY

As part of the original Auburn Dam construction work, a 257-foot high cofferdam and 33-foot diameter bypass tunnel were constructed. The cofferdam was breached by high flows in 1986, depositing millions of cubic yards of debris in the downstream channel. The bypass tunnel remains open and passes the entire flow of the American River at normal flow rates. Due in part to the sediment deposition from the eroded cofferdam, it is common for the downstream end of the tunnel to be submerged while the upper end is open. Although the river portion of the construction site is officially closed to the public, it is known that some people enter the area, and could be seriously injured or killed if they enter the bypass tunnel. Both Reclamation and the state believe this safety issue needs to be corrected.

1.3.3 RIVER RESTORATION

Reclamation and the State of California wish to restore the dewatered reach of the river channel, and to manage the site in a safe and environmentally sound way. Their objectives include restoring the river to a condition that would provide the same biological, hydrologic, and recreation functions, including public use, as it did prior to Auburn Dam construction.

1.3.4 PUBLIC RIVER ACCESS FOR HEALTH AND SAFETY, RESOURCE PROTECTION, AND EMERGENCY PURPOSES

Presently, there is public vehicular access to the North Fork American River at the North/Middle fork confluence on Highway 49 in the Auburn SRA and at Rattlesnake Bar in the Folsom State Recreation Area (Folsom SRA). When Folsom Reservoir is full, the nine-mile reach between these two points is comprised of four miles of moving water and five miles of still water in Folsom Reservoir. When the reservoir is drawn-down for flood control in the winter, the reach of moving water is increased to six miles, or more depending on flood control operations. PG&E will continue to release flows from MFP facilities to provide adequate river conditions for whitewater boating in the Middle Fork American River, as is currently done under agreement with PCWA. Morning release of such flows provides an opportunity for mid- to late-afternoon boating upstream of the project area. Under the Proposed Project, these conditions could result in use of the river in such a way that boaters may become stranded either in the project area, or downstream closer to Rattlesnake Bar, because of the flat water conditions described above. From the perspective of public health and safety, the state believes that the public needs vehicular access to the river near the Folsom Reservoir high-water location to prevent people from being stranded in the canyon and for providing emergency services and resource protection. The provision of public river access features in the project area also would reduce the potential for non-motorized boating use in Folsom Reservoir where motorized boating activity occurs.

1.3.5 LAND PURCHASE AGREEMENT

An overall objective specific to Reclamation is to completely satisfy its obligations to PCWA under the Land Purchase Agreement. This would include alleviating Reclamation of any and all obligations for water delivery, management, operation and maintenance activities of the intake, pumps, and pump station site following completion of construction and start-up of the Proposed Project. PCWA proposes to enter into a contract accepting ownership of such new facilities, and operate them for water supply purposes, thereby relieving Reclamation of its obligation under the Land Purchase Agreement.

1.3.6 EXPANDABLE CONVEYANCE FACILITY

Demand projections for PCWA water supplies into the future show a need for an additional 35,000 AFA, above the capacity of the proposed year-round alternatives, by 2030. To maintain an option to meet this projected demand by diverting water from the American River at Auburn, PCWA has identified the objective of designing the project so that it could be expanded from 100 cfs to 200

cfs when, and if, needed in the future. Consistent with its negotiations within the Water Forum[2], PCWA is currently engaged in various engineering studies and contract negotiations designed to advance the option of diverting water from the Sacramento River to meet a portion of its projected future demands as an alternative to the expansion of the pump station. However, since a Sacramento River diversion alternative is not currently consistent with PCWA's water rights or CVP entitlements, preserving the opportunity to expand this project (which would be consistent with PCWA's existing water rights) with minimal local environmental disruption appears to be prudent planning. Any future expansion (from 35,500 AFA to about 70,500 AFA) would require prerequisite environmental regulatory review and approvals before PCWA could modify the facilities and operate at that level.

An additional future water demand consideration for the project involves the Georgetown Divide Public Utility District (GDPUD). Public Law (P.L.) 101-514 authorizes and directs Reclamation to enter into a long-term water service contract with the El Dorado County Water Agency (EDCWA) for up to 15,000 AFA, of which up to 7,500 AFA is planned to be subcontracted to GDPUD. Planning efforts have been initiated and public notices have been issued for the water service contract with EDCWA (*Federal Register* Notice dated June 14, 1998). Although GDPUD will not need additional water supplies for many years, it has requested that PCWA design its intake and pump station so its capacity could be expanded by up to 25 cfs to accommodate GDPUD's future needs. Additionally, GDPUD requested construction of water delivery facilities (pipelines) to allow transmission of water to the El Dorado County side of the river without further construction in the river.

1.4 USES OF THIS DOCUMENT

This Final EIS/EIR, and information and analyses contained herein, will be used to meet the statutory requirements for environmental review prior to constructing, operating, and maintaining the pump station; to execute a contract between Reclamation and PCWA to transfer certain facilities to PCWA, to provide PCWA easements for use of federal lands, and to delineate the responsibilities of the two agencies; and to secure necessary approvals and permits from responsible federal and state agencies. The laws, ordinances, regulations, and standards applicable to this project, as well as permits and approvals that are required from responsible federal and state agencies, are identified in Chapter 2.0, Description of Alternatives, Section 2.6, Table 2-9 and described within the resource discussions in Chapter 3.0, Affected Environment and Environmental Consequences.

Following lead agency consideration of the comments received during public review of the Draft EIS/EIR, a decision will be made as to whether or not to approve the Proposed Project or an alternative. PCWA's Board will hold a meeting to consider certification of the Final EIR and

[2] The Sacramento Area Water Forum is a diverse group of business and agricultural leaders, citizen groups, water managers, and local governments in Sacramento, Placer, and El Dorado counties. The Water Forum Agreement includes provisions for each of the participating agencies to achieve the plan's two coequal objectives -- provide a reliable and safe water supply for the region's economic health and planned development to 2030; and to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. The elements of the Water Forum Agreement address key regional issues including surface water diversions, groundwater management, dry year water supplies, water conservation, and protection of lower American River resources.

make a decision whether to approve a project alternative and adopt Findings of Fact, a Statement of Overriding Considerations, and the Mitigation Plan.

Reclamation will accept additional public and agency comments on the Final EIS prior to taking action on the project and publishing its Record of Decision (ROD). The ROD will identify the agency's decision regarding the project and address substantive comments received on the Final EIS. The public and agencies have 30 days from the release of the Final EIS to provide their comments to Reclamation.

1.4.1 DOCUMENT ORGANIZATION

This Final EIS/EIR includes the Draft EIS/EIR and its appendices, an Executive Summary, and the Mitigation Plan. The complete list of environmental compliance documents prepared for this project is provided below:

Draft EIS/EIR

- Executive Summary
- Draft EIS/EIR
- Technical Appendices to the Draft EIS/EIR

Appendix A	Memorandum of Agreement Between the State of California and U.S. Bureau of Reclamation
Appendix B	Notice of Intent and Notice of Preparation
Appendix C	Draft Negotiated Agreement Between U.S. Bureau of Reclamation and Placer County Water Agency
Appendix D	American River Basin Cumulative Impact Report
Appendix E	Hydrologic Modeling Technical Memorandum
Appendix F	U.S. Fish and Wildlife Service Coordination and Consultation
Appendix G	National Marine Fisheries Service Coordination and Consultation
Appendix H	Figures and Tables Cited in Chapter 3.0
Appendix I	Modeling Output (CD)

Final EIS/EIR

- *Executive Summary* provides an overview of the project background, purpose and objectives, and identifies resource issues and impacts. The Executive Summary is a separate document distributed to individuals, parties, and agencies expressing an interest in the project.

- *Chapter 1.0* describes the pump station history, PCWA water entitlements, the Land Purchase Agreement between PCWA and Reclamation, the purpose of and need for the project and project objectives identified by the lead agencies, and provides a summary of public involvement and scoping conducted for the EIS/EIR.

- *Chapter 2.0* describes the Proposed Project and alternatives considered in the EIS/EIR, the alternatives considered but eliminated from detailed study, and provides a summary comparison of alternatives and environmental impacts.

- *Chapter 3.0* describes the affected environment and analyzes the direct, indirect, and cumulative environmental impacts of each alternative considered in detail.

- *Chapter 4.0* describes public involvement, coordination, and consultation efforts with interested members of the public, federal, state, and local agencies and private organizations that occurred during preparation of the EIS/EIR, and provides the document distribution list.

- *Chapter 5.0* lists the individuals involved in preparation of the EIS/EIR, their expertise and education, and role on the project.

- *Chapter 6.0* provides a list of references and personal communications.

The appendices to this Final EIS/EIR include:

- *Appendix A* Auburn State Recreation Area Prefire Management Plan

- *Appendix B* Contract Between the United States and Placer County Water Agency Related to American River Pumping Plant and Associated Facilities

- *Appendix C* Responses to Comments on the Draft EIS/EIR

- *Appendix D* Mitigation Monitoring and Reporting Program/Environmental Commitments Plan

1.4.2 SCOPING SUMMARY

Reclamation and PCWA have been involved in ongoing environmental evaluation of the Proposed Project and alternatives, including numerous agency and public involvement opportunities, since July 1995. These activities included five public and agency stakeholder meetings and a formal public scoping meeting for the Draft EIS/EIR which are described below and in Chapter 4.0, Consultation and Coordination, Section 4.2, Public Involvement.

Formal scoping for the EIS/EIR began with publication of the Notice of Intent (NOI) to prepare an EIS and notice of a public scoping meeting in the June 18, 1999 *Federal Register*. Concurrently, a Notice of Preparation (NOP) of an EIR was filed with the California State Clearinghouse, distributed, and a corresponding news release was published. Copies of the NOI and NOP are included in Appendix B of the Draft EIS/EIR.

A scoping meeting was held the evening of July 8, 1999 at PCWA's offices in Auburn to receive public input on the appropriate scope of the EIS/EIR, consistent with NEPA and CEQA requirements and implementing regulations. Attendees were encouraged to prepare written comments for consideration in the EIS/EIR scoping process.

The public comment period for the NOI and NOP extended from June 18, 1999 through July 30, 1999. The lead agencies received comment letters from 89 interested parties during this period. In response to these comments, the lead agencies prepared a Scoping Summary Report. The Scoping Summary Report identifies all comments received during the public comment period. The Scoping Summary Report is available at the lead agency offices (refer to the Cover Page for agency contact information).

1.4.2.1 Summary of Public Concerns

During all public and agency stakeholder meetings, participants were provided with a brief presentation concerning the project and particular challenges associated with each of the project alternatives, including a No Action/No Project Alternative. A summary listing of issues and comments identified by the public, resource agencies, and project proponents is presented below. These comments, consultations with agencies, and professional judgment of the preparers of this document defined the impact issues that are addressed in Chapter 3.0.

Water Supply and Hydrology

- Commitment to Water Forum purveyor-specific agreement elements
- River channel stability – cofferdam debris movement
- Long-term stability of the diversion structure
- Backwater effect at Tamaroo Bar
- Flood event effects on project facilities
- Meet increased demand by conservation or water exchanges with other purveyors
- Instream flow/diversion effect
- Discuss possible use of pump station facilities by GDPUD, identify any rate increase associated with facility construction
- Consistency of this project with the Central Valley Project Improvement Act PROSIM 99 model
- Groundwater supplies

Fish Resources and Aquatic Habitat

- Special-status species – chinook salmon, steelhead (flow, diversion structure)
- Instream flow requirements for fisheries
- Water chemistry changes – effects on special-status fish species migration (Auburn Ravine)
- Restoration of coho salmon to the north and middle forks of the river (otters and eagles)
- Restore the river channel
- Restore fish runs upstream of Folsom Dam
- Protection of fish from injury at the pump station
- Auburn Ravine impacts from increased flows

Terrestrial Resources

- Wildlife migration corridors and flyways
- Riparian habitat protection/enhancement
- Restore the river channel to improve the ecosystem

Water Quality

- Sedimentation/turbidity
- Water temperature
- Auburn Ravine – when the water leaves the Auburn Ravine Tunnel – where does it go?
- Groundwater quality

Recreation

- Public access – hiking, equestrian, bicycle trails, and access to the river for water-based activities
- Public use of roads constructed by the project
- Project consistency with the Auburn SRA Interim Resource Management Plan
- Cost-benefit comparison of recreation opportunities between alternatives
- Diversion tunnel safety hazard to recreation
- Restore the river channel for water-based activities
- Attract Olympic events

Visual Resources

- Pump station aesthetics

Land Use

- Growth-inducement aspects of increased diversion/water supply (traffic, loss of habitats, public service burden)
- Agriculture impacts
- Placer County General Plan – what does "build-out" look like; will the project serve build-out; and will other facilities need to be constructed?
- Public utilities and services – energy consumption by pump station

Air Quality

- Short-term construction emissions
- Long-term operational emissions

Public Health and Worker Safety

- Diversion tunnel safety
- Structures as potential attractive nuisance (safety issue)
- Fire safety

Alternatives Analysis

- Upstream location poor choice – silt settling basin requires frequent dredging or special effort to maintain
- Cost-benefit analysis between alternatives – particularly related to recreation opportunities

Other Issues

- Political support
- Funding/use of tax dollars
- Auburn Dam – future construction/waste of resources
- Future planned changes to Folsom Dam (height)
- Relationship of project to other local and regional projects (cumulative analysis)
- Public Trust Doctrine
- Unreasonable methods of diverting water prohibited by Article X, Section 2 of the California Constitution and Section 100 of the California Water Code

1.4.3 PUBLIC REVIEW OF DRAFT EIS/EIR

Reclamation and PCWA distributed the Draft EIS/EIR to federal and state resource and regulatory agencies, legislative representatives, water districts, environmental organizations, and other interested parties on September 10, 2001. Reclamation's NEPA policy requires a 60-day review period for the Draft EIS and CEQA Guidelines Section 15205(d) requires a 45-day review period for the Draft EIR. The Draft EIS/EIR was available for review and comment 63 days following filing of the Notice of Availability (NOA) of the EIS with the Environmental Protection Agency and the Notice of Completion (NOC) of the EIR with the California State Clearinghouse. The NOA and notice of public hearing on the EIS were published in the *Federal Register* on September 10, 2001. The NOC was filed with the California State Clearinghouse and posted at the Placer, El Dorado, and Sacramento county clerk offices. In response to public comments and other requests, the public comment period was extended another 30 days and closed on December 13, 2001. The lead agencies provided public notice of the review period extension as required by CEQA and NEPA. In summary, the Draft EIS/EIR public review comment period, therefore, extended for a total of 93 days, from September 10, 2001 to December 13, 2001.

1.4.4 FINAL EIS/EIR

The purpose of public review of the Draft EIS/EIR was to receive comments from interested parties on its completeness and adequacy in disclosing the environmental impacts of the Proposed Project. Following the close of the Draft EIS/EIR public review period, this Final EIS/EIR has been prepared containing the comments received on the Draft EIS/EIR and responses to those

comments, and clarifications or further explanations of information provided in the Draft EIS/EIR. Reclamation is responsible for determining that the EIS is adequate and in compliance with NEPA and PCWA is responsible for certifying the EIR as adequate in compliance with CEQA. After making this determination and certification, the agencies will use the EIS/EIR in making their decisions on whether to approve a year-round pump station project.

The Draft EIS/EIR (September 2001) has been modified to reflect revisions and corrections made in response to public and agency comments received during the public review and comment period. These changes to the document do not alter the impact conclusions that were presented in the Draft EIS/EIR. **Table 1-2** presents a summary of these revisions. These changes to the report are presented in the Final EIS/EIR to clarify project design, construction and operation features, incorporate additional detail regarding proposed project features or mitigation measures and to correct typographical errors found during preparation of the final documents. The revisions and corrections included in the Final EIS/EIR have also been incorporated into the material presented in this Executive Summary, as appropriate to the level of detail in each section.

Table 1-2
Revisions and Corrections Made to the Draft EIS/EIR

List of Acronyms

- ❑ Updated and corrected list of acronyms to include all acronyms used in Final EIS/EIR and supporting documentation

Chapter 1.0 - Introduction

- ❑ Updated discussion of Public Review of Draft EIS/EIR to reflect extended public review comment period
- ❑ Added List of Revisions and Corrections to the Draft EIS/EIR
- ❑ Added section regarding Final EIS/EIR Process

Chapter 2.0 - Description of Alternatives

- ❑ Expanded discussion regarding selection of alternatives explaining infeasibility of land conservation easements
- ❑ Updated Table 2-2 to correct summary of major features of the alternatives
- ❑ Added new figure depicting major features of the No Action/No Project Alternative
- ❑ Provided cost estimate breakdown for the Proposed Project pump station, bypass tunnel closure, and river channel excavation and public river access features
- ❑ Revised reference to fish screen to reflect change to California Department of Fish and Game (CDFG)-approved design, not Coanda-based design
- ❑ Removed references to use of a standby diesel generator which is no longer proposed
- ❑ Revised description of Public River Access Features to indicate modifications of riverside parking area to include only a turnaround and 3 handicap-accessible spaces, not 20 spaces
- ❑ Revised references to total number of public river access parking area spaces from 70 to 53
- ❑ Provided revised Public River Access Features graphic to show parking area changes
- ❑ Updated description of No Action/No Project Alternative, Proposed Project, and Upstream Diversion Alternative operation and maintenance to explain proposed double-pump operations using the Auburn Ravine Tunnel pump station to avoid potential impacts to Auburn Ravine fish and terrestrial resources
- ❑ Revised discussion of Ralston Afterbay reoperation to clarify nature of activity
- ❑ Made corrections to Table 2-8, Summary of Alternatives Considered and Eliminated from Further Analysis to explain infeasibility of land conservation easements and other suggested alternatives
- ❑ Updated Table 2-9, Anticipated Permits and Approvals for the Proposed Project to reflect project permitting needs based upon coordination with regulatory agencies since release of Draft EIS/EIR

Table 1-2 (Continued)
Revisions and Corrections Made to the Draft EIS/EIR

Chapter 3.0 - Affected Environment and Environmental Consequences

General Revisions and Corrections

- Updated references to Northridge Water District (NWD) to reflect recent name change to Sacramento Suburban Water District (SSWD)
- Updated references to Citizen's Utilities Water Company to reflect recent name change to California-American Water Company (CAWC)
- Corrected discussion of SSWD (formerly NWD) water supply sources
- Updated discussion of Auburn Recreation District proposed American River campground area
- Provided additional explanation regarding placement of model output table and graphic results in Appendix H to the Draft EIS/EIR (also provided in all resource sections containing diversion-related analyses)

Water Supply and Hydrology

- Updated information pertaining to PCWA's Water Conservation Program

Fish Resources and Aquatic Habitat

- Revised description and evaluation of Auburn Ravine fish resources
- Deleted references to National Marine Fisheries Service (NMFS) critical habitat designations for Central Valley steelhead and spring-run chinook salmon due to recent withdrawal of such designations by NMFS
- Updated discussion of backwater effects at Tamaroo Bar
- Updated and revised mitigation measures to reflect individual agency responsibilities and in response to changes related to (1) project construction no longer requires use of cofferdam, therefore related measures would not be needed; and (2) updated method to evaluate fish screen performance based on further consultation with CDFG fish screen experts

Terrestrial Resources

- Provided additional information regarding non-listed species at the project site, per request of U.S. Fish and Wildlife Service (USFWS) Draft Coordination Act Report recommendations
- Added account of potential areas of habitat affected by the Proposed Project, per request of USFWS Draft Coordination Act Report recommendations
- Incorporated findings of recent Red-Legged Frog Habitat Assessment and Site Survey performed at request of USFWS as part of federal Endangered Species Act (ESA) consultation
- Updated and revised mitigation measures to reflect individual agency responsibilities

Recreation

- Included additional detail regarding existing project area recreation uses as supplied by the California Department of Parks and Recreation (CDPR)
- Revised description and analyses related to modification of the Public River Access Features incorporated into the Proposed Project by the lead agencies and CDPR
- Developed revised recreation trail map for project area
- Updated discussion of recreation trail access impact during construction due to changed approach in mitigation
- Revised discussion of Auburn-to-Cool Trail impact and responsibilities for mitigation of impact under Proposed Project
- Incorporated additional information related to backwater effects at Tamaroo Bar rapid
- Provided further clarification of the Middle Fork American River whitewater boating impact under all alternatives
- Updated and revised mitigation measures to identify individual agency responsibilities and in response to changes in project features

Table 1-2 (Continued)
Revisions and Corrections Made to the Draft EIS/EIR

Visual Resources

- Updated impact discussion in response to changes in Public River Access Features
- Revised mitigation measures to identify individual agency responsibilities and to reflect change in construction materials of pump station housing

Cultural Resources

- Updated discussion of cultural resources laws and regulations applicable to the project to reflect priority of federal laws
- Updated mitigation measures to identify individual agency responsibilities and in response to recent efforts related to Programmatic Agreement with the State Historic Preservation Office (SHPO)

Power Supply

- Corrected errors in text in response to comments

Land Use

- Incorporated discussion of growth issues and description of lead agencies responsibilities

Geology and Soils

- Updated discussion of mitigation measures to incorporate recommended measures under Public Health and Worker Safety program

Transportation and Circulation

- Incorporated information from supplemental Traffic Study and additional coordination with City of Auburn Public Works Department to evaluate potential impacts at Maidu Drive/Burlin Way intersection
- Updated discussion of mitigation measures to identify individual agency responsibilities and incorporate recommendations for Construction Traffic Management Plan and payment of mitigation fees to City of Auburn

Air Quality

- Updated analysis of public river access-related traffic based on new emission evaluation information from Placer County and El Dorado County air pollution control districts
- Added information describing particulate matter less than 2.5 microns in size ($PM_{2.5}$), as requested by U.S. Environmental Protection Agency (EPA)
- Provided discussion of project alternatives' compliance with federal general conformity requirements, as requested by U.S. EPA
- Incorporated additional information and explanation of analysis approach of sensitive receptors related to El Dorado County and the community of Cool, as requested by El Dorado County Air Pollution Control District (APCD) and others
- Removed references to diesel generator as one is no longer included in project alternative activities
- Updated and revised discussion of mitigation measures to identify individual agency responsibilities

Noise

- Updated discussion of public river access traffic-related noise sources
- Revised mitigation measures to identify individual agency responsibilities

Table 1-2 (Continued)
Revisions and Corrections Made to the Draft EIS/EIR

Public Health and Worker Safety

- Added new information relative to Fire Management
- Incorporated geology and soils mitigation measures relative to slope stability, worker safety during construction and public safety during use of project area under Proposed Project
- Revised mitigation measures to identify individual agency responsibilities

Other Impact Considerations

- Corrected information presented under Essential Fish Habitat (EFH) to more specifically identify discussion relative to fall-run chinook salmon
- Expanded discussion of Short-term Uses of the Environment Versus Long-Term Productivity
- Added discussion of Climate Change, per request of U.S. EPA
- Revised ESA Compliance section to reflect (1) NMFS retraction of steelhead and spring-run chinook salmon critical habitat designations; (2) correction of inadvertent reference to incidental take; (3) update to summary of consultation to date; (4) addition of PCWA's proposed Auburn Ravine monitoring program as a conservation measure; and (5) incorporation of corrections to conclusion and determination

Chapter 4.0 - Consultation and Coordination

- Updated discussions of resource agency ESA consultations and other coordination

Chapter 5.0 - List of Preparers

- Added additional names and updated area of participation to reflect efforts undertaken to complete the Final EIS/EIR and related activities

Chapter 6.0 - References

- Incorporated additional references cited and personal communications held during preparation of the Final EIS/EIR

Chapter 2.0
Description of Alternatives

This chapter presents a description of the alternatives considered in the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR), the alternatives eliminated from detailed study, a summary comparison of the alternatives and their impacts, and a list of the permits and approvals that likely will be needed for project construction and operation. **Figure 2-1** illustrates the regional setting extending from the upper Sacramento River and upper American River, south to the Sacramento-San Joaquin River Delta (Delta). **Figure 2-2** depicts the project study area relative to cities, counties, transportation corridors, and waterways of the region. **Figure 2-3** shows the local project area and site.

2.1 DEVELOPMENT OF ALTERNATIVES

Chapter 1.0, Introduction, describes the early planning for the project. These efforts included development of preliminary alternatives that would meet the project objectives and lead agency management goals for the project site described in Section 1.1, Project Purpose, and Section 1.3, Project Needs and Objectives. The first alternatives considered included siting the diversion structure at several different locations upstream of the bypass tunnel inlet, downstream of the bypass tunnel outlet, or within the dewatered portion of the river channel. The diversion alternatives downstream of the bypass tunnel outlet were determined to be substantially inferior to the others. The U.S. Department of the Interior (Interior) Bureau of Reclamation's (Reclamation) *Preliminary Concept Plan – Restoration and Management of the Auburn Dam Site* (1996 Concept Plan) (Reclamation 1996a) describes the details and results of this early planning study.

Then, in 1997, a Value Planning Study (Reclamation 1997) was conducted to reevaluate the preliminary alternatives described in the 1996 Concept Plan as well as new alternatives or features not previously considered. The new alternatives and features were formulated as a result of public involvement and scoping activities that occurred in 1996 and 1997 (Section 1.4.2, Scoping Summary and Section 4.2, Public Involvement). Based on the 1997 study, a range of reasonable alternatives was developed for analysis, and others were considered and eliminated from detailed study. The eliminated alternatives include a wide range of possibilities such as off-stream storage, increased conservation, a diversion with pumping and pipeline conveyance facilities from Folsom Reservoir, and water purchases from other purveyors (Section 2.5, Alternatives Considered and Eliminated). These alternatives were dismissed from detailed consideration because they were not feasible based on engineering, public safety, and environmental considerations, or did not meet the provisions of the project purpose, needs, or objectives (Section 1.1 and Section 1.3).

The alternatives presented in this EIS/EIR represent a range of reasonable actions and include a No Action/No Project Alternative (continue seasonal pump station installation and operation) and two new pump station project alternatives that would construct new facilities for diversion of

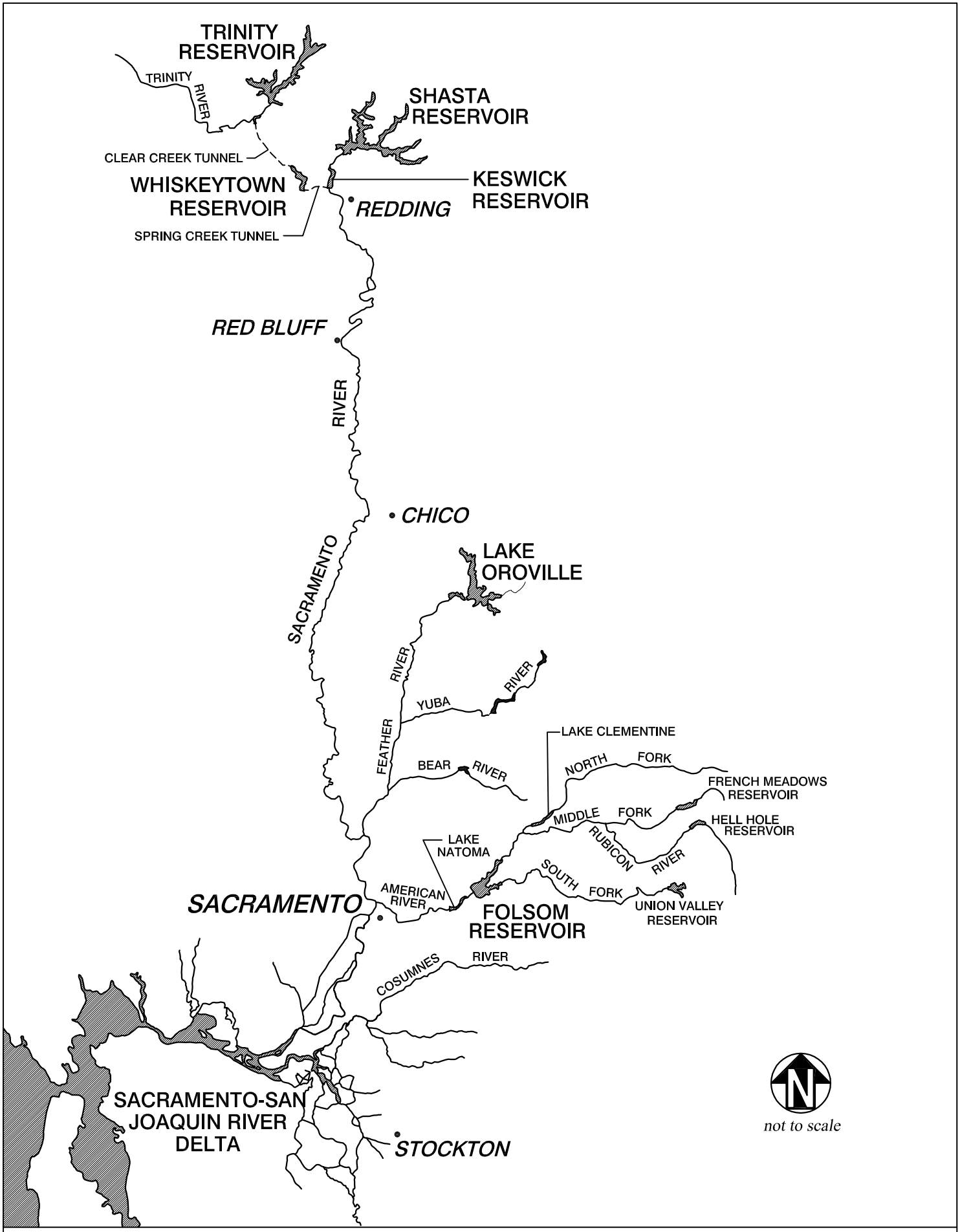


Figure 2-1 Regional Setting

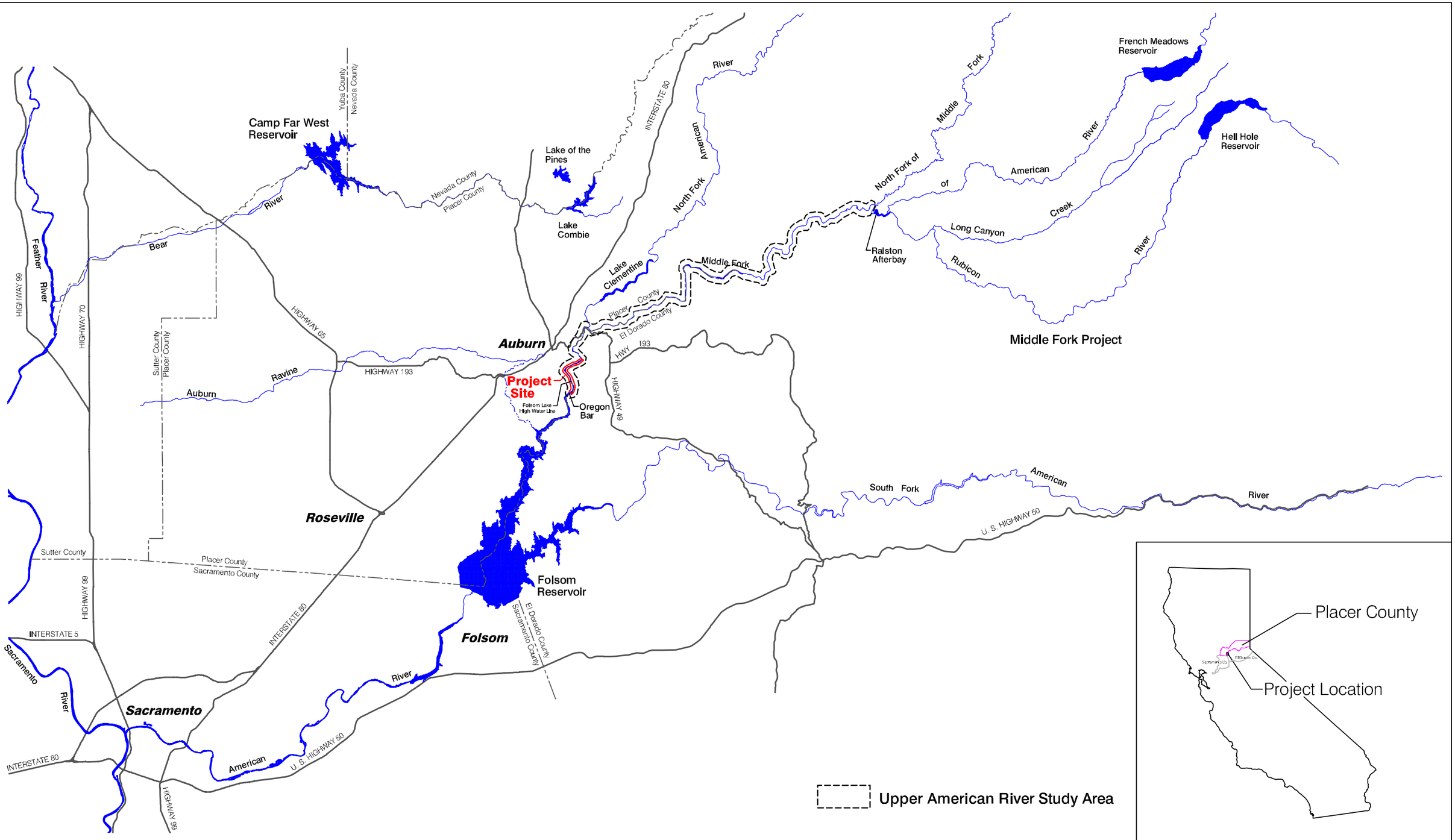


Figure 2-2 Project Area Setting

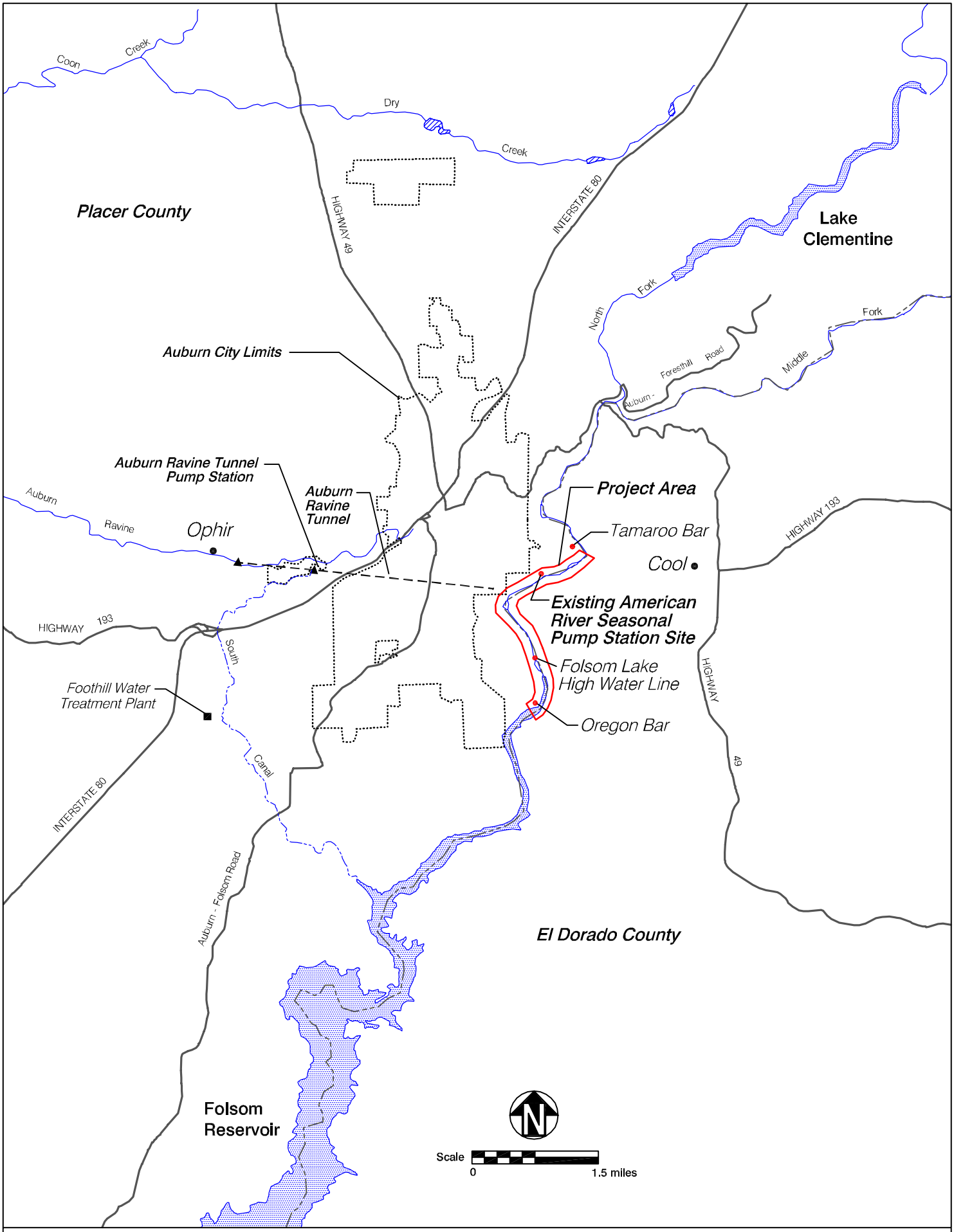


Figure 2-3 Project Area

water at the Auburn site: the Mid-Channel Diversion Alternative and the Upstream Diversion Alternative. Each of these alternatives is described in detail in this chapter.

The Mid-Channel Diversion Alternative is being considered for approval and implementation by Placer County Water Agency (PCWA) and Reclamation and is referred to as the Proposed Project. This alternative differs from three proposals put forward in the Value Planning Final Report (Reclamation 2000) but is consistent with the project objectives and continues to meet the preliminary design restrictions, requirements, and special criteria determined through the value planning efforts. The Mid-Channel Diversion Alternative, as currently proposed, was developed through further site-specific considerations and refinement of preliminary design concepts. Key modifications include the intake/diversion location and pump station site. The intake/diversion structures remain situated on the outside curve of the natural channel, but were moved upstream of the former mid-channel location to take advantage of the narrowed portion of the river channel created by the northwestern bank cofferdam remnant. Siting the intake/diversion structures in this area would require smaller in-river control structures as the width of the river channel is shorter in this area than in other locations. Additionally, the narrow channel formed by the cofferdam remnant creates a natural pooling of the river flow and permits more control for the diversion. The pump station also was relocated to keep the facilities together, thereby minimizing the distance and length of pipeline and associated construction activity required between the intake and pump station. The proposed pump station site is considered to have more suitable soil conditions and would require less excavation than other possible locations.

The pump station and associated facility locations evaluated in this EIS/EIR represent the preliminary footprint for the project at this stage in the design process. It is noted that the design continues to be refined and construction of individual facilities would be modified, based on actual site conditions at the time of construction. However, it as anticipated that such adjustments would be minor and the analysis of the project area provided in this EIS/EIR adequately addresses site-specific resource issues that would be affected by construction and operation of the pump station facility. Any substantial change in the size or placement of project facilities would warrant reconsideration of environmental impacts in a separate document.

2.2 ALTERNATIVES CONSIDERED IN DETAIL

The three alternatives considered in detail are described below, beginning with the No Action/No Project Alternative followed by the Proposed Project and then the Upstream Diversion Alternative. The Proposed Project and Upstream Diversion Alternative are referred to as the "Action Alternatives" as selection of either one would result in development of the year-round pump station facilities. Differences between the two Action Alternatives include the location of the diversion/intake structure, whether or not the Auburn Dam construction bypass tunnel is closed, and implementation of a restoration plan for the existing dewatered segment of the American River channel at the project site. The Proposed Project would locate a new pump station and diversion/intake facility in the dewatered reach of the river channel, close the bypass tunnel, and restore the river channel. The Upstream Diversion Alternative would locate the pump station at the same site as the Proposed Project, but place the diversion/intake facilities upstream of the bypass tunnel inlet; the bypass tunnel would remain open, and the dewatered river segment would not be restored. Both Action Alternatives propose facilities that would

provide a year-round Middle Fork Project (MFP) water supply to PCWA with a design capacity of 100 cubic feet per second (cfs) for an annual supply of up to 35,500 acre-feet (AF).

Upon completion of the Proposed Project or Upstream Diversion Alternative, there would be a full transfer of pump station project ownership, operation and maintenance responsibilities, and grant of land rights from Reclamation to PCWA. PCWA would enter into a contract accepting ownership of the new water supply facilities, and operate them for water supply purposes, thereby relieving Reclamation of its obligations under the Land Purchase Contract. Reclamation would retain responsibility for all other operation and maintenance activities associated with the authorized Auburn Dam Project, and would have certain of those responsibilities performed by the California Department of Parks and Recreation (CDPR) under its agreement with Reclamation to manage the Auburn State Recreation Area (Auburn SRA). Under the No Action/No Project Alternative, Reclamation would maintain responsibility for the annual installation, operation and maintenance, and removal of the seasonal pump station.

Table 2-1 provides a comparison of each alternative to the purpose, needs and objectives for the project. As shown, the ability of each alternative to accomplish these purposes and objectives varies. For example, although the Upstream Diversion Alternative would meet PCWA's water supply objectives and alleviate Reclamation from its obligations to PCWA under the Land Purchase Agreement (Contract), it would not satisfy the river restoration or public river access objectives of the federal and state stakeholders. However, the Upstream Diversion Alternative is evaluated in this EIS/EIR as a viable option because the bypass tunnel and dewatered reach of the river remain part of an authorized federal action. These issues are considered in the evaluation of the alternative impacts (Chapter 3.0, Affected Environment and Environmental Consequences). **Table 2-2** lists the major features and activities associated with each alternative. **Figure 2-4** shows existing site conditions. **Figure 2-5** shows the No Action/No Project Alternative features. **Figures 2-6** and **2-7** show the major water supply facilities and public river access sites/safety features of the Proposed Project, respectively. **Figure 2-8** presents the major features of the Upstream Diversion Alternative.

2.2.1 NO ACTION/NO PROJECT ALTERNATIVE

If the lead agencies do not construct a new year-round diversion and pump station facility for the American River diversion, the No Action/No Project Alternative would occur. Under this alternative, Reclamation would continue annual installation and removal of the seasonal pumps at the existing location (Figure 2-4) and maintain responsibility for the operation and maintenance of the facilities. The seasonal pump station facility includes an inlet pipeline that draws water from a small sump pond approximately 750 feet upstream of the bypass tunnel inlet, four pump canisters (12.5 cfs capacity each), and 2,800 feet of steel pipeline placed above ground from the pump station connected to the Auburn Ravine Tunnel portal (Figure 2-5).

Beginning in 2000, Reclamation's California Department of Fish and Game (CDFG) Streambed Alteration Agreement required installation of a fish screen on the inlet pipeline. A Geotextile fabric screen was used at the onset of the 2000 diversion season but eventually was removed due to operational failure. During the 2001 diversion season, Reclamation used a Smith-Root portable electric barrier to discourage fish from entering the inlet channel/sump pond. The

Table 2-1
Comparison of the Alternatives to Project Purpose, Needs, and Objectives

	No Action/ No Project Alternative	Proposed Project	Upstream Diversion Alternative
Project Purpose [a]			
Provide facilities to allow PCWA to convey its MFP water entitlement to the Auburn Ravine Tunnel to meet demands within its service area.	No	Yes	Yes
Eliminate the safety hazard associated with the Auburn Dam bypass tunnel.	No	Yes	Partially
Restore the dewatered portion of the North Fork American River at the Auburn Dam bypass tunnel.	No	Yes	No
Project Needs and Objectives [b]			
PCWA Water and Conveyance Needs			
Restore PCWA's ability to divert its MFP water supply year-round.	No	Yes	Yes
Provide reliable, year-round diversion capacity of up to 100 cfs.	No	Yes	Yes
Auburn Dam and Bypass Tunnel Safety			
Alleviate public safety hazards from Auburn Dam construction site.	No	Yes	Partially
River Restoration			
Open the American River to water-based recreation from Highway 49 to Folsom Reservoir.	No	Yes	No
Public Safety River Access			
Provide public safety river access at the Auburn pump station site and at Oregon Bar.	No	Yes	No
Land Purchase Agreement			
Alleviate Reclamation of obligations to PCWA under the Land Purchase Agreement.	No	Yes	Yes
Expandable Conveyance Facility			
Provide potential to add future diversion capacity of 25 cfs for Georgetown Divide Public Utility District (GDPUD) and an additional 100 cfs for PCWA.	No	Yes	Yes

[a] See Section 1.1, Project Purpose
[b] See Section 1.3, Project Needs and Objectives

Table 2-2
Summary of Major Features and Activities for the Alternatives [a]

Facility	No Action/No Project Alternative	Proposed Project	Upstream Diversion Alternative
Pump Station			
Pump Station Location	At the existing site, approximately 750 feet upstream of bypass tunnel inlet	Approximately 600 feet northwest of bypass tunnel inlet	Same as Proposed Project
Pump Station Elevation (feet mean sea level (msl))	525	560 (above 100-year flood level)	Same as Proposed Project
Pump Station Configuration: PCWA	4 12.5 cfs pumps (50 cfs)	5 pumps: 2 at 38 cfs and 2 at 17 cfs, one standby pump at 38 cfs	Same as Proposed Project
Expansion Planning: PCWA	None	Additional 100 cfs for a total of 200 cfs	Same as Proposed Project
GDPUD	None	25 cfs	Same as Proposed Project
GDPUD Pipeline to East Side of Canyon	No	Yes	Same as Proposed Project
Diversion/Intake Structure			
Diversion Location	At the existing site, approximately 750 feet upstream of bypass tunnel inlet	Approximately 600 feet northwest of bypass tunnel inlet	Approximately 100 feet upstream of bypass tunnel inlet
Intake Structure Design	Coarse screen diversion from sump pond	Intake structure with fish screens	Intake structure with trash rack and fish screens
Fish Screen	CDFG-approved screen or fish barrier to be placed at mouth of inlet channel	Installation of a CDFG-approved fish screen on the water supply intake structure	Same as Proposed Project
Hydraulic Gradient Control Structures	None	Series of structures constructed from rock, grouted rock, and concrete to create low-gradient hydraulic drop resulting in a rapid navigable by watercraft	V-notch weir
Extent of River Channel Modification	100 feet annually	4,000 feet	200 feet

[a] The pump station and associated facility locations evaluated in the EIS/EIR represent the preliminary footprint for the project at this stage in the design process. It is noted that the design continues to be refined and construction of individual facilities would be modified, based on actual site conditions at the time of construction. However, it is anticipated that such adjustments would be minor and the analysis of the project area provided in the EIS/EIR adequately address site-specific resource issues that would be affected by construction and operation of the pump station facility. Any substantial change in the size or placement of project facilities would warrant reconsideration of environmental impacts in a separate document.

Table 2-2 (Continued)
Summary of Major Features and Activities for the Alternatives

Facility	No Action/No Project Alternative	Proposed Project	Upstream Diversion Alternative
River Channel Restoration			
Bypass Tunnel Closure	No	Yes	No
Restoration of the Dewatered River Channel	No	Yes	No
Public River Access Improvements	None	Parking, road, and trail improvements, CDPR entrance station, sanitation facilities	None
Construction and Restoration Excavation			
River Channel Excavation Depth	N/A	Up to 20 feet	N/A
Volume of Excavation Material to be Removed	N/A	700,000 to 1 million cubic yards	72,000 cubic yards
Excavation Material Disposal Volume by Location	N/A		
East of Auburn Dam Keyway		90,000 cubic yards	72,000 cubic yards
Bypass Tunnel Inlet		30,000 cubic years	
Bypass Tunnel Outlet		20,000 cubic yards	
Bench, South of Keyway		560,000 cubic yards	
Pipelines			
Pipeline(s) From Intake Diversion to Pump Station			
Length	16 feet	150 feet	550 feet
Diameter	Two at 8 feet each	One at 7 feet	Same as Proposed Project
Pipeline from Pump Station to Auburn Ravine Tunnel			
Length	2,800 feet	1,670 feet	Same as Proposed Project
Diameter	2.5 feet	6 feet	Same as Proposed Project
Pump Station Construction and Facility Access Roads			
Access Road Improvements	Annual re-grading and rehabilitation of all roads	All-weather road improvements:	
Entrance to Pump Station Site		1,460 feet	Same as Proposed Project
To Auburn Ravine Tunnel		1,430 feet	Same as Proposed Project
Pump Station to Diversion		150 feet	600 feet
Power Lines			
Length of New Power Lines to be Installed to the Pump Station and Intake Structure	None	Approximately 650 feet	Approximately 1,050 feet

Table 2-2 (Continued)
Summary of Major Features and Activities for the Alternatives

Facility	No Action/No Project Alternative	Proposed Project	Upstream Diversion Alternative
Safety Features			
Safety Features to Warn and Discourage the Public from Entering the Bypass Tunnel	Signs	Tunnel closed, low gradient structures to reduce hazards to in-river users	Buoys, signs, and ropes
Project Design and Construction Cost			
Project Cost	$250,000 to $1 million annually	$31 million	$17 million
Management Responsibility			
Project Ownership, Operation and Maintenance Responsibilities	Reclamation - continued role with seasonal facilities	PCWA - pump station and related facilities Reclamation/CDPR - public river access site maintenance and management	PCWA - pump station and related facilities



Figure 2-4 Existing Project Area Conditions

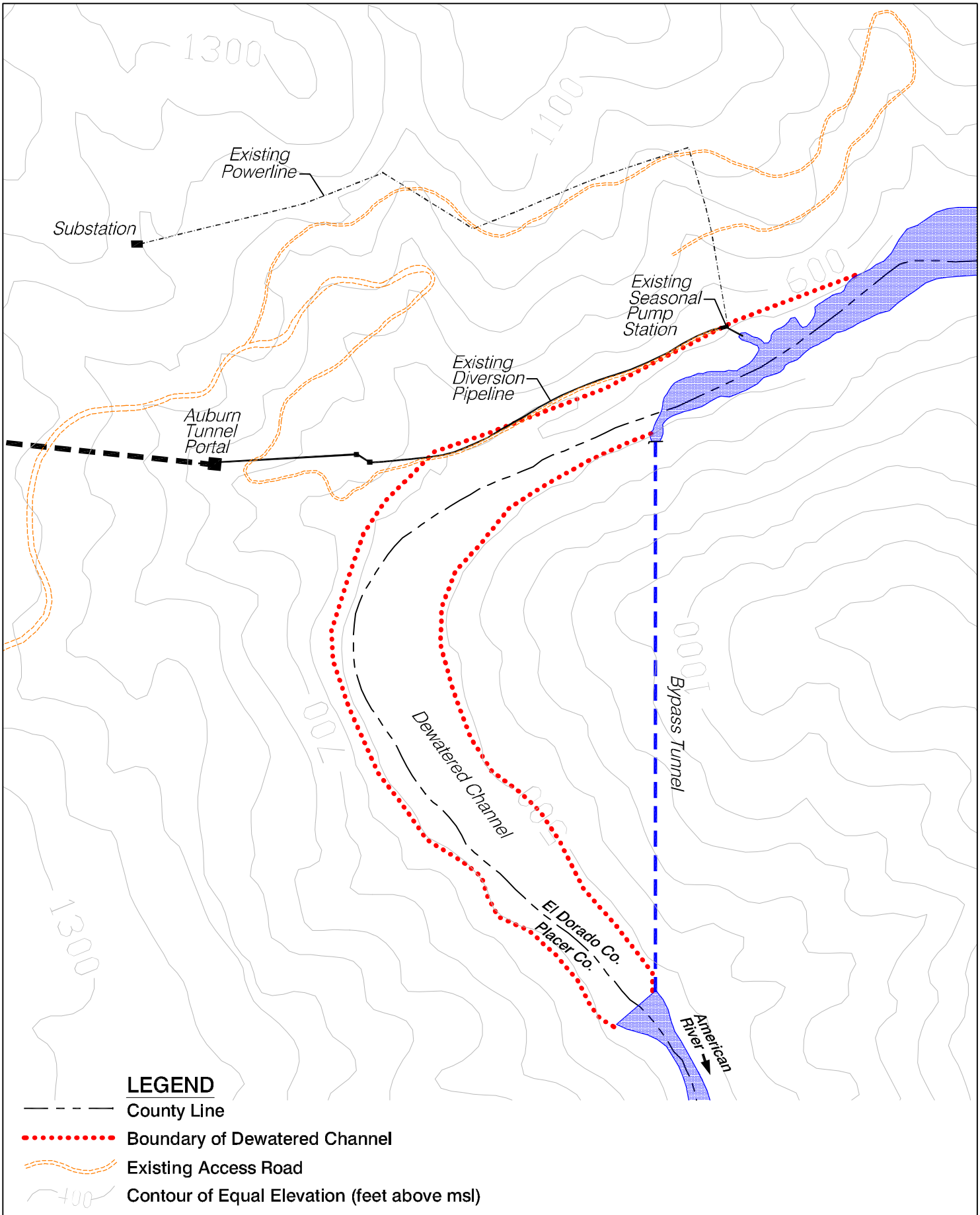


Figure 2-5 Major Features of the No Action/No Project Alternative

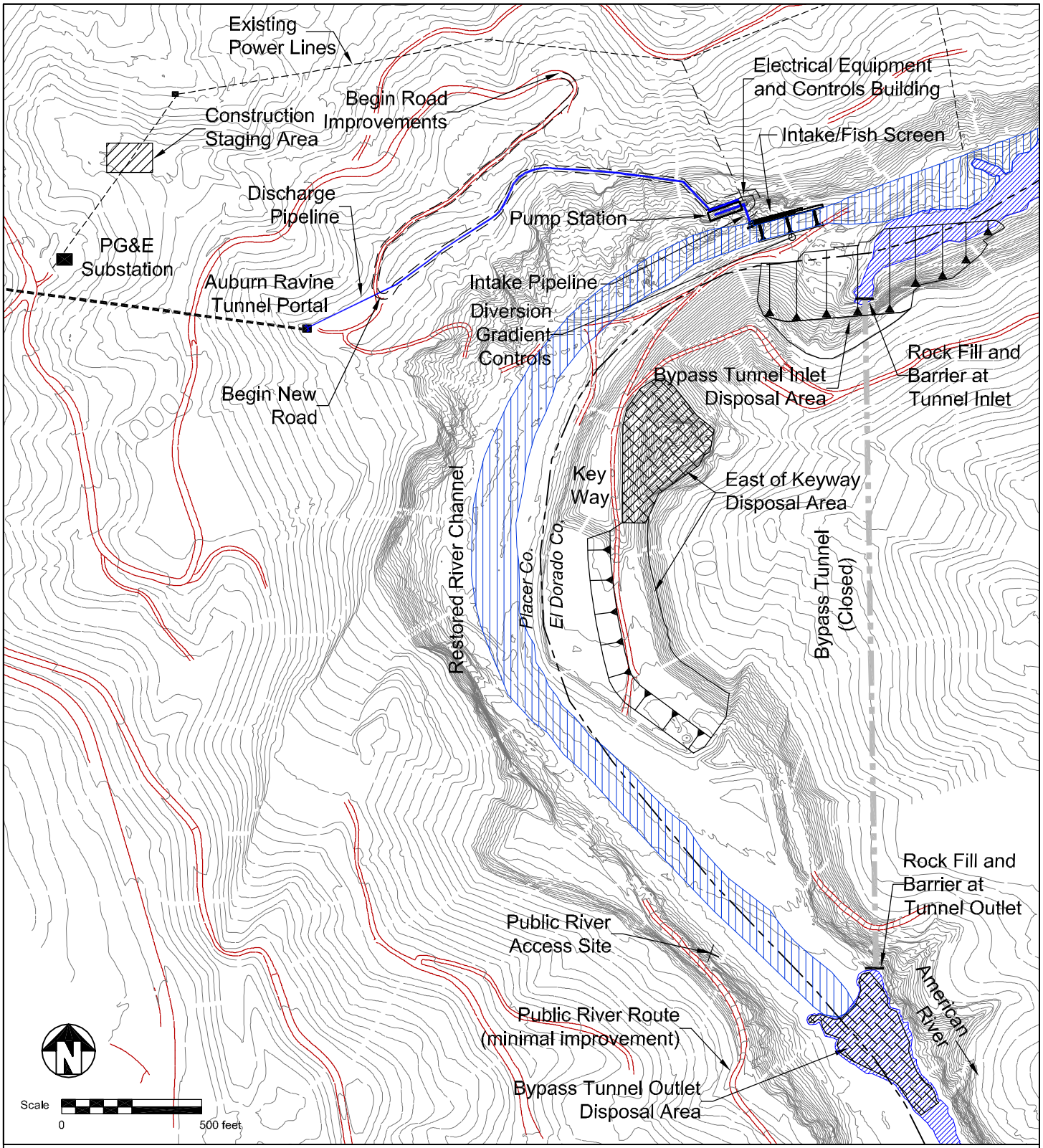


Figure 2-6 Major Features of the Proposed Project (Mid-Channel Diversion)



Figure 2-7 Public River Access Facilities at Auburn Dam Site and Oregon Bar (Proposed Project-revised)

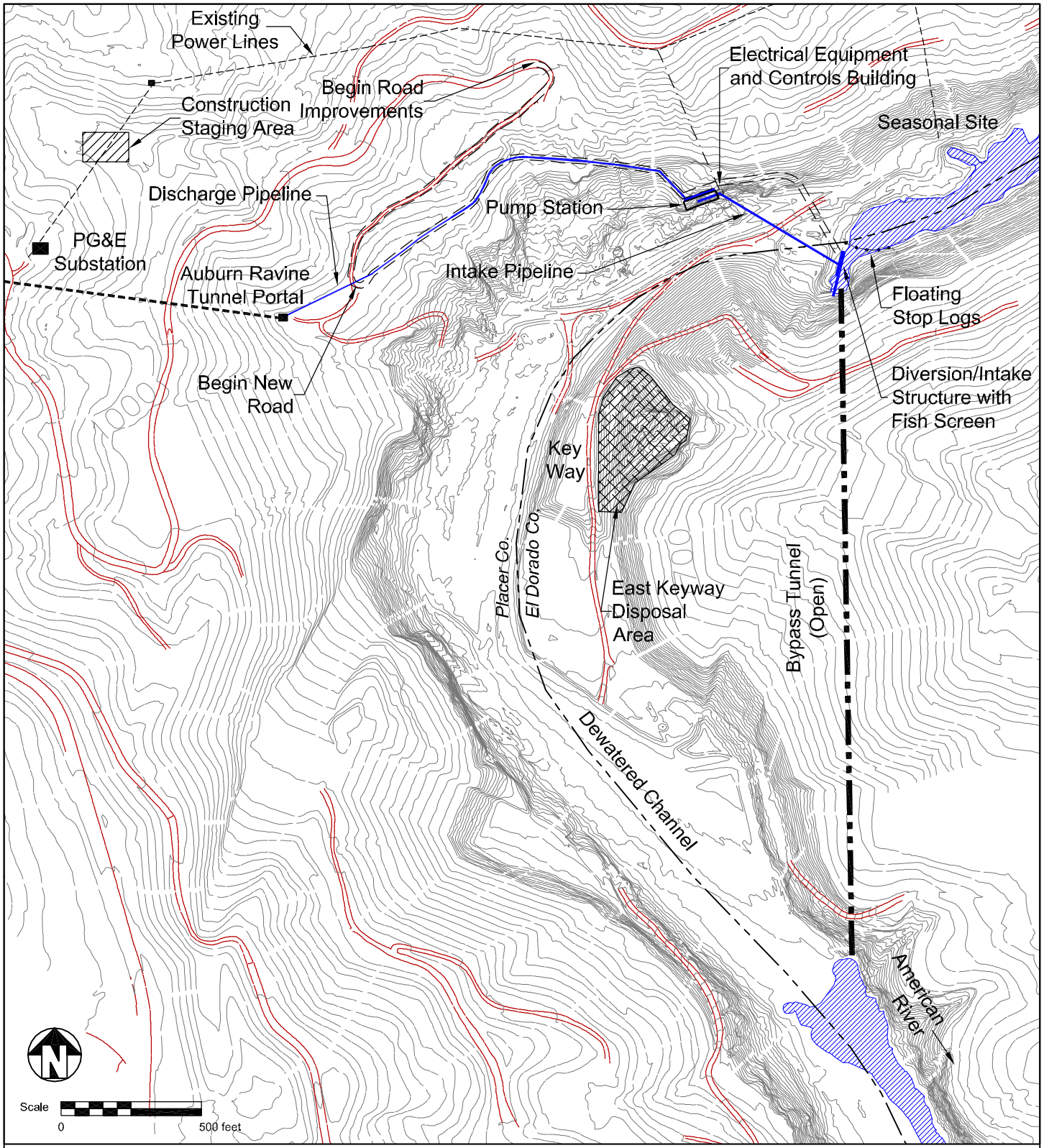


Figure 2-8 Major Features of the Upstream Diversion Alternative

30-foot barrier was placed at the entrance to the inlet, parallel to the river flow. CDFG determined that this method satisfied the requirements of the 2001 Streambed Alteration Agreement. The fish screen method for the seasonal pump station will need to be re-evaluated every one to five years as part of the Streambed Alteration Agreement. The screening method selected for implementation at the site would be assumed adequate to meet CDFG's permit requirements.

Under the No Action/No Project Alternative, PCWA would rely upon operation of the seasonal pumps for its MFP water supply; however, within the next few years, PCWA would request that Reclamation install the pumps earlier in the year as PCWA customer demands and overall reliance on the pump station increase. For purposes of analysis in this EIS/EIR, the seasonal pump station under the No Action/No Project Alternative would operate for eight months of the year, April through November, as shown in **Figure 2-9** and **Table 2-3**. This operational period was selected because it excludes the normal high river flow months of December, January, February, and March, when facilities would be at the greatest risk of flood-related damages.

Table 2-3
Diversion Pattern at the Seasonal Pump Station Under the No Action/No Project Alternative

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Thousand acre-feet (TAF) [a]	0	0	0	1.9	3.0	3.0	3.1	3.1	2.5	1.5	1.2	0
Annual Percent [b]	0	0	0	10.0	15.8	15.4	15.9	15.9	13.0	8.0	6.0	0

[a] Maximum TAF in a given month. Diversions would vary annually based on water supply, demand, and water delivery system operations.

[b] Approximate percent of total annual diversions. Diversions would be in compliance with existing agreements and permits governing upstream storage, water rights, minimum instream flow, and other conditions.

Reclamation and PCWA recognize that there may be years when river flows at the site would preclude installation of the pump station facilities as early as April and require removal of the facilities prior to November. The limitations of seasonal pump station operation would affect the reliability and amount of water supply available. These issues are discussed further in the evaluation of water supply issues in Section 3.4, Water Supply and Hydrology.

2.2.1.1 No Action/No Project Alternative Construction Schedule and Activities

Annual construction activities for the No Action/No Project Alternative generally would be unchanged from the existing condition, with the exception of the earlier installation and later removal of the facilities. Installation of the seasonal pump station facilities occurs over a four- to six-week period while removal of the structures is typically completed within two weeks. General construction activities include those associated with installing the pumps and above-ground transmission pipelines, dredging accumulated sediment from the intake pond and trench from the river to the pump plant, installation of a floating debris barrier across the entrance to the

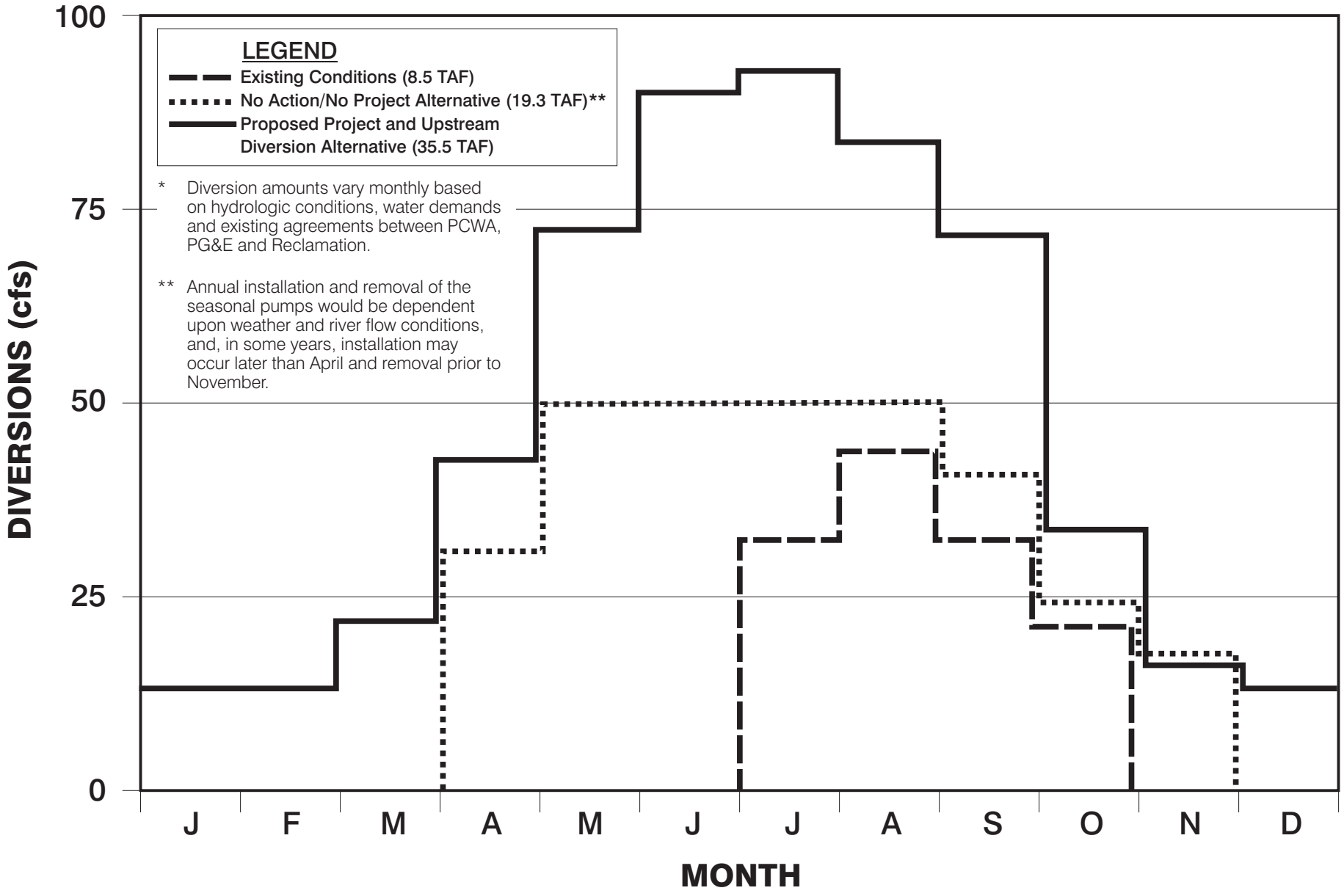


Figure 2-9 Estimated Diversion Patterns for Alternatives*

inlet channel, and rehabilitation of project site access roads. These activities include implementation of construction Best Management Practices (BMPs) and terms and conditions of project permits, including a CDFG Streambed Alteration Agreement, Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification, and U.S. Army Corps of Engineers (Corps) 404 Permit (Nationwide Permit No. 3). Turbidity levels are monitored twice daily during installation of the facilities per the 401 Water Quality Certification. Up to 200 cubic yards of material are removed from the sump pond and intake trench each year. These materials are typically placed above the high-water mark on a bench on the inside curve of the dewatered channel. Installation and removal of the seasonal facilities require few deliveries as the equipment and materials are either stored on-site or nearby at the PCWA maintenance yard (Maidu Drive). Typically, seasonal pump station facility placement and removal involves up to 15 construction workers at the site daily.

Table 2-4 shows the type and duration of construction equipment associated with annual construction for the No Action/No Project Alternative. Although the actual timing of installation and removal of the facilities would be influenced by weather and river flow conditions, it is assumed that installation generally would begin in March and removal would take place in late November or early December. It is expected that construction activities (equipment use and storage) would continue to occur in areas already disturbed either by the Auburn Dam-related construction activities or by previous seasonal pump station activities.

Table 2-4
Estimated Type and Duration of Construction Equipment and Activities for the No Action/No Project Alternative

Construction Equipment	Operating Hours		Number of Vehicles (Maximum)	Duration (Number of Weeks)
	Average Week	Maximum Week		
Bull Dozer	20	20	1	8
Loader	20	20	1	8
Backhoe	20	20	1	8
Pick-up Truck/Haul Truck	20	20	1	8
Crane	20	20	2	8

As presented in Table 2-2, under the No Action/No Project Alternative, the location of the seasonal pump station, intake/diversion, and associated facilities (pipelines, power lines, access roads), and configuration of the pumps would not change from the existing condition. There would be no provisions for future expansion by PCWA or GDPUD. There would be no removal of the cofferdam debris from the dewatered channel reach, and the bypass tunnel would remain open. Restrictions upon public river access would remain in place.

2.2.1.2 No Action/No Project Alternative Operation and Maintenance

Under No Action/No Project Alternative operations, PCWA would divert up to 50 cfs during April through November, following the diversion pattern in Table 2-3 and Figure 2-9, for a total volume of up to 19,300 acre-feet annually (AFA). Generally, No Action/No Project Alternative operation and maintenance activities would be similar to current activities.

For purposes of impact analyses, certain assumptions were identified for the No Action/No Project Alternative. These include earlier installation and later removal of the seasonal pump station facilities. Maintenance activities would include a daily site visit by the operator to inspect the pump station and diversion structure, and regular maintenance of the fish barrier.

The extended operational period would require some monitoring of river flows so that Reclamation would be prepared to remove the pump station facilities when the river approaches flows of 10,000 cfs. If river flows increase too rapidly and Reclamation is unable to remove the facilities in time, the pump station may be damaged by flood flows. High flows or flooding may require rebuilding of the sump pond and/or re-installation of the pump station facilities. Under these circumstances, the decreased reliability of the seasonal pump station would affect PCWA's ability to provide water supply within its service area.

2.2.2 PROPOSED PROJECT - MID-CHANNEL DIVERSION ALTERNATIVE

The Proposed Project would integrate the water supply intake features and river restoration components into the project design, thereby meeting all stated objectives (Table 2-1). The major features that would be constructed for the Proposed Project are summarized in Table 2-2 and shown on Figures 2-6 and 2-7. The estimated cost for construction of the Proposed Project would be $31 million. The pump station facility would cost approximately $18.1 million, bypass tunnel closure would cost approximately $1 million, and river channel excavation, including development of the public river access features would cost approximately $11.9 million. The following sections provide descriptions of the major features, construction activities, and operation and maintenance practices for the Proposed Project. These descriptions are based on preliminary design information evaluated in the Draft EIS/EIR as well as additional details developed in response to comments for the Final EIS/EIR. It is anticipated that further refinements would continue to be made during final design and in response to actual on-site conditions. However, it is anticipated that such adjustments would be minor and the analysis of the project area provided in the EIS/EIR adequately address site-specific resource issues that would be affected by construction and operation of the pump station facility. Any substantial change in the size or placement of project facilities would warrant reconsideration of environmental impacts in a separate document.

2.2.2.1 Major Features of the Proposed Project

The major features and activities associated with construction of the Proposed Project include:

- Construction of a new pump station, placed above the 100-year flood level;
- Construction of a water diversion/intake structure;
- Installation of a CDFG-approved fish screen;
- Closure of the Auburn Dam construction bypass tunnel;
- Restoration of flow to the American River channel;
- Installation of water conveyance pipelines;
- Improvement and development of all-weather access roads for project construction and operation;

- Extension of power supply lines; and
- Creation of public river access sites/safety features and related improvements at the Auburn Dam site and near Oregon Bar.

The Proposed Project evaluated in this EIS/EIR consists of increasing diversions from the American River from 50 cfs up to 100 cfs. Consistent with the project objectives (Chapter 1.0, Section 1.3), the design of the individual facilities would provide capacity for a future potential expansion diversion of up to 225 cfs. Sizing the facilities to accommodate the potential expanded diversion amount minimizes environmental effects and costs associated with meeting project objectives. The future expansion would involve installation of higher capacity pumps and increased diversion from the river, the details of which remain undetermined at this time. Expansion of the pump station and any increase of diversions above 100 cfs, including extension of infrastructure to GDPUD, would be subject to additional environmental review and resource agency approvals and permitting.

Pump Station

The pump station would be located on a stabilized bedrock bench, approximately 40 feet northwest of the intake structure (Figure 2-6). This structure would include an aboveground pump house and underground pump shafts connected to the intake pipeline (**Figure 2-10**). The pump house would be approximately 120 feet long, 30 feet wide, and 30 feet tall. The exterior would be composed of split-face concrete block of a neutral/earthtone color to blend with the surrounding environment and minimize glare. The structure also would insulate and reduce operational noise levels to 45 decibels (dB) at the nearest residential property lines, in accordance with the City of Auburn noise ordinance.

The pump station would contain five vertical turbine pumps on a raised steel platform. These pumps meet the operational criteria, require minimal underground construction and permit easy access for maintenance. The configuration would include four regular duty pumps (two at 38 cfs and two at 17 cfs capacity ratings) and one standby pump (38 cfs capacity).

The pump shafts would extend from the base of the pump house downward, through concrete-encased steel casing, to the intake pipeline at an approximate invert elevation of 478 feet msl. The pumps would lift water diverted to the intake pipeline and convey it to the discharge pipeline to the Auburn Ravine Tunnel.

Diversion/Intake Structures

The diversion structures provide the link between the water supply function and the river restoration elements of the Proposed Project. The diversion/intake structures would be located approximately 600 feet northwest of the bypass tunnel inlet, on the northern bank of the dewatered American River channel (Figure 2-6). This location was chosen because of its close proximity to the pump station, the relatively narrow channel width between the canyon wall and the cofferdam remnant, and hydraulic conditions that would minimize the accumulation of debris and sediment at the intake. The narrow channel formed by the cofferdam remnant creates a natural pooling of the river flow and permits control for the diversion. Creation of the diversion

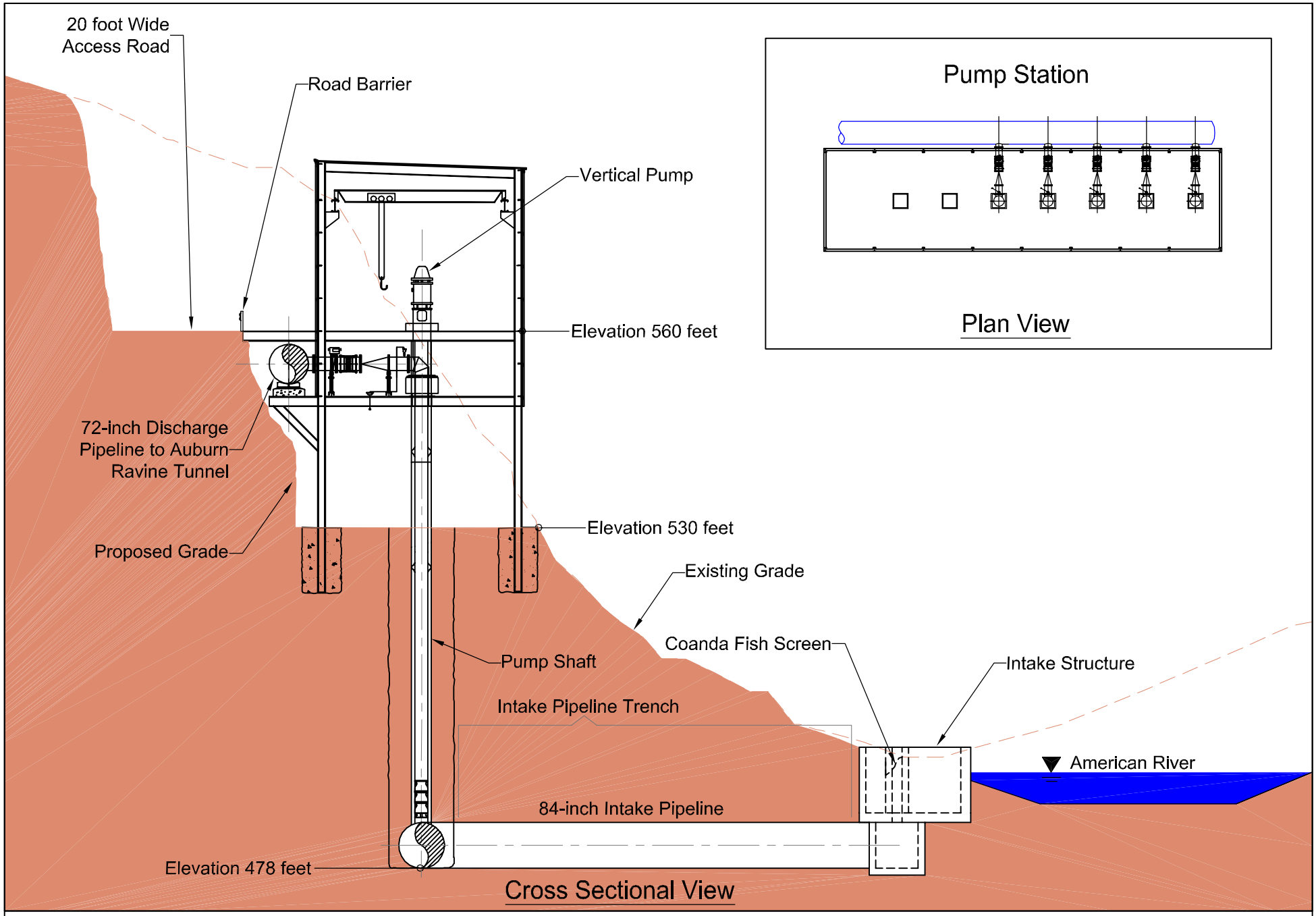


Figure 2-10 Relationship of Proposed Project Intake and Pump Station Facilities

structures would require excavation of breached cofferdam debris from the dewatered river channel and reshaping (grading) the base and sides of the channel to accommodate design flows. The structures would be constructed from a combination of boulders, grouted rock (possibly including cofferdam remnant materials), and possibly faux rock (concrete or other substance molded to look like natural rock formations). The structure would be approximately 1,000 feet in length and would provide the hydraulic drop required for proper functioning of the intake and safe passage of watercraft, even under low-flow conditions.

The main (river right) channel would contain the water diversion intakes. These intakes would be integrated into boat chutes whose geometry creates favorable hydraulics for recreational boating, such as standing wave and mild hydraulic jumps. The total drop of the secondary channel would be roughly 8 feet over a distance of approximately 400 feet. This would produce a bottom gradient of little more than two percent. The bypass channel would be separated by a berm (a rock divider), which would be overtopped during high water (about 4,000 cfs), thereby joining the two channels. The river left (east) bank adjacent to the diversion would be graded at a slope of 5:1 (or less) for some distance above the anticipated high water level of 4,000 cfs.

The primary water intakes would be located on the invert of the boat chutes. These intakes would be appropriately screened to prevent trapping boaters; the intake screening also would be approved by CDFG fish screen experts. A third boat chute would be constructed below grade, downstream of the two other boat chutes. Construction of this structure anticipates the lowering of the riverbed with time and would provide a variable transition for the diversion structure to the downstream riverbed.

The fish screen on the intake structure would prevent fish from entering the intake structure and protect them from injury or death. The design of the fish screen will be completed in coordination with CDFG fish screen experts. The final fish screen design would be subject to approval by the fish screen design experts at CDFG and would be designed to function over a range of stream flows and pumping rates and constructed to satisfy appropriate agency screening requirements.

River Channel Restoration

During construction of the Auburn Dam foundation, the river channel and canyon in the vicinity of the Proposed Project were drastically altered. A temporary earthen dam (cofferdam) measuring 257 feet high, 1,400 feet long, 30 feet wide at the crest, and 1,400 feet wide at the base, was constructed across the canyon. The Auburn Dam bypass tunnel (33 feet in diameter and 2,400 feet in length) was installed to route normal river flows around the dam construction zone. During the floods of 1986, water overtopped the cofferdam and, as designed, eroded the northwest section of the cofferdam, depositing millions of cubic yards of sediment and debris in the dewatered channel and in the river reach downstream of the bypass tunnel outlet (Reclamation 1996a). Except during high-flow conditions, when river flows exceed approximately 20,000 cfs, the entire flow of the river travels through the bypass tunnel and the dewatered reach of the channel remains dry.

The river channel restoration component of the Proposed Project incorporates several design elements with the overall goal of joining the dewatered segment of the river channel with the upstream and downstream river reaches to create, to the extent possible, a naturally functioning river system. The objectives of river restoration include:

- Development of a stable foundation for water supply diversion;
- Restoration of dewatered channel to appear and function like a natural river environment;
- Enhancement of fish and wildlife habitat; and
- Provision of recreational opportunities.

Implementation of the Proposed Project would satisfy the immediate need for water supply purposes. Within the near-term, the Proposed Project also would improve conditions for fish and wildlife and provide interim recreational benefits. Further enhancement of fish and wildlife habitat would occur over time as the channel and the surrounding environment respond to the returned river flows.

Water Supply Diversion

Location of the water supply diversion/intake within the dewatered river reach requires creation of a stable foundation for these structures and restoration of the channel to convey year-round flows and obtain predictable water elevations in this segment of the river. To accomplish this, approximately 700,000 cubic yards of cofferdam debris, alluvium, and large rocks would be excavated from the dry river channel. This material would be placed in various locations in the project area (Table 2-2 and Figure 2-6) to build and reshape the channel. Once the channel is re-formed, the bypass tunnel inlet and outlet would be closed and the river re-directed through the excavated channel. The bypass tunnel closure would prevent access to the tunnel and would be designed to blend into the surrounding landscape. Preliminary considerations for the closure involve placing sheet piles, sheet plates, reinforced concrete, and large rock across the face of both the inlet and outlet. These materials could be removed and the tunnel re-opened in the event the Auburn Dam Project becomes re-authorized.

Natural River System Functions

A key design goal for the restoration component of the Proposed Project is to imitate, to the extent possible, the appearance and form of a natural river channel, including the banks and floodplain benches. Placement of the excavation material (Figure 2-6) would be engineered and designed to accommodate anticipated natural processes and be visually and functionally compatible with river reaches up and downstream of the project site. Preliminary site-specific considerations that would be incorporated into the final design and implementation of the river channel restoration include:

- Sediment transport due to both past Auburn Dam activities and proposed river restoration;
- Bed and bank stability in light of the natural variability of erosion in the project area; and
- Range of flow conditions characteristic of the upper American River.

Fish and Wildlife Habitat Recovery and Enhancement

The premise for the recovery and enhancement of the project area ecosystem is that construction of channel, bank, and floodplain features that emulate, to the extent possible, the natural morphology and hydrology of a natural system would ultimately lead to recovery of the ecosystem. Therefore, design of the channel foundation features emphasizes physical non-uniformity to result in diverse water depths, velocities, and substrate complexity. The resultant physical and aquatic environment would eventually support a varied natural river and riparian ecosystem, including integrated fish passage.

The return of river flows to the historic riverbed would, over time, result in establishment of fish and aquatic resource and wildlife habitat thereby creating more favorable ecosystem conditions. The restored channel segment design would incorporate features to blend the project area segment with upstream and downstream reaches of the North Fork American River enhancing the existing degraded or "scarred" visual qualities of the area. Restoration of natural river functions, including growth of native vegetation species, is considered a long-range goal of the river restoration component. The river would be expected to scour pools and side channels and deposit finer sediments in localized backwater areas and overbank depressions. These areas eventually would be expected to provide suitable growing sites for willows, alders, and cottonwoods that occur in the canyon. It is assumed that vegetation would establish through natural seed recruitment as has been observed in certain areas of the project site.

Bank and slope erosion would be common for annual flows much less than the 100-year flood event, and passive restoration according to site potential would occur naturally once the disturbed areas within the project area stabilize in response to natural processes associated with channel formation and seasonal fluctuations in river levels. However, until the extent of floodplain inundation and other channel characteristics have been established, it would not be practical to implement a revegetation program because the benefits of these efforts may be lost during high water events. Reclamation, through implementation of the environmental commitments included in the Mitigation Monitoring and Reporting Program/Environmental Commitments Plan (Mitigation Plan) (Appendix D to the Final EIS/EIR), would monitor the area for natural vegetation growth and habitat establishment to determine whether adaptive resource management actions would be appropriate or needed in the project study area.

Recreation Opportunities

Restoration of the river channel would provide an opportunity for non-motorized boating (canoe, kayak, raft) through the project area. Design considerations for channel restoration would include the incorporation of diverse hydraulic features to enhance this part of the river, including drops, waves and eddies, similar to a natural river, and consistent with the character of the upstream and downstream river reaches. The diversion intake structures for the water supply intake would be integrated boat chutes (see Diversion/Intake Structures). Additionally, riverbank formation would include placement of materials to create eddies or gradual point bar slopes near access points for safe boat put-in and take-out (see Public River Access/Safety Features below). Generally, any features that would create hazardous conditions for recreationists would be avoided (such as uniform barriers across the entire channel).

Pipelines

The Proposed Project involves placement of large diameter pipelines between the intake structure on the riverbank to the pump station and from the pump station to the Auburn Ravine Tunnel portal. Construction of the pipelines would involve excavation of vertical-walled trench, placement of suitable pipe bedding material (i.e., gravel), and installation of the pipe. The pipeline routes would all be within or adjacent to proposed road alignments and are depicted on Figure 2-6.

Diversion/Intake Structure to Pump Station

A concrete pipeline would be constructed underground from the intake structure to the pump station. The concrete pipeline would be approximately 150 feet long and 7 feet in diameter. The pipeline invert would be set at an elevation of 478 feet.

Pump Station to Auburn Ravine Tunnel

A steel discharge pipeline would be installed in a trench under the project access road from the pump discharge manifold at the pump station to the Auburn Ravine Tunnel portal. This pipeline would be approximately 1,670 feet long and 6 feet in diameter. A reinforced concrete connection structure would be constructed to transition the pipeline into the tunnel.

Construction Access Roads and Project Operation and Maintenance Roads

Access to the site from the City of Auburn is by either Maidu Drive or Pacific Avenue. Both of these roads end at locked gates at the entrance to the Auburn Dam construction area. As depicted on Figure 2-6, the Proposed Project would create new roads and stabilize existing ones to provide year-round access to the project facilities, including the pump station, intake/diversion structures, and Auburn Ravine Tunnel portal. Maidu Drive would be the primary access route. (Please refer to Appendix C, Volume 1, Master Response 3.1.10, Project Access, for additional information.) Construction activity would include pavement of existing dirt and gravel roads. For new roads, extensive earthwork may be required in some places to remove existing debris or erosion spoils and stabilize the hillside.

Improvement of the routes for the public river access components would be through placement of crushed rock road base, rather than pavement (see Public River Access/Safety Features below and Figure 2-7).

Power Supply

Figure 2-6 shows both the existing and proposed power lines for the Proposed Project. Approximately 650 feet of new power line would be connected to existing lines to serve the project facilities. The power line would be designed in accordance with *Suggested Practices for Raptor Protection on Power Lines* (Olendorff et al. 1981). Line voltage would operate at distribution levels (i.e., 12 kilovolts).

Construction and River Restoration Excavation Material Disposal

The cofferdam debris and other earth and rock material removed during construction and river channel restoration excavation would be used in the project area. It is estimated that up to approximately one million cubic yards of material could be generated by these activities. The excavated materials would be placed to fill holes created during the original construction for Auburn Dam, close the tunnel, and along the river (Figure 2-6).

Past disturbances of the project site created a 75-foot deep hole near the Auburn Dam keyway, just west of the bypass tunnel inlet (Figure 2-6). The base elevation of the hole is estimated to be approximately 498 feet msl, which would be filled to an elevation of 575 feet msl, making the grade consistent with the surrounding ground surface. Approximately 90,000 cubic yards of material would be accommodated in this location.

Closure of the bypass tunnel inlet and outlet would include placement of excavated material in front of each sealed portal. At the inlet, approximately 30,000 cubic yards of material would be used to cover the sheet metal or stop-logs used to close the tunnel. The fill in this location would be graded and compacted to form a stable slope. At the outlet, another hole would be filled and material graded and compacted to seal the tunnel outlet. Approximately 20,000 cubic yards of material would be placed in this location.

The remaining excavated material, approximately 560,000 cubic yards, may be placed to form a bench along the east bank of the proposed river channel, south of the dam keyway. Preliminary design indicates that the face of the bench would be graded at an approximate 2:1 slope and the bench would have a top elevation of 670 feet msl.

Public River Access/Safety Features

The project area falls within the Auburn SRA, which is managed by CDPR under an agreement with Reclamation. Currently, to protect public health and safety, CDPR limits recreation use in the Auburn Dam construction area including one-half mile upstream and one-half mile downstream from the Auburn Dam foundation (Order #318-02-91). The order primarily restricts boating and other water-based activities due to the safety hazard of the bypass tunnel but permits equestrian use, hiking, and biking on selected trails that pass through the site.

Under the Proposed Project, closure of the bypass tunnel and restoration of river flows through the area would result in increased recreational demand and use in the immediate project vicinity and elsewhere within the Auburn SRA. In response to the anticipated increase in public use of the project area, the Proposed Project includes development of two limited public river access areas, one near Oregon Bar and one just upstream of the bypass tunnel outlet, as a temporary solution to permit safe public passage to and from the river. CDPR and Reclamation would develop long-term management plan alternatives as part of their update to the *Auburn State Recreation Area Interim Resource Management Plan* (CDPR and Reclamation 1992) to address other activities in the Auburn SRA. These efforts would take place over the next two to three years and include comprehensive management planning for the Auburn SRA. The planning effort would address the full range of resource use and management issues. This planning

process would include public involvement and environmental impact evaluations that are outside of the scope of this project.

Proposed Project river access amenities include a gated entrance booth, road and trail improvements, a parking area at the Auburn Dam former batch plant site, a river-side parking area designated handicap-accessible, and sanitation facilities (restrooms and trash containers). The proposed facilities, consistent with management objectives for the area (CDPR and Reclamation 1992) would be relatively rustic and improved only to the level necessary to serve interim management needs including emergency vehicle access and public use of the immediate area. Figure 2-7 depicts the preliminary layout of these features.

The staffed entrance booth and gate would be located off of Maidu Drive, at the start of the existing main construction road. CDPR personnel would staff this station and provide oversight and management of recreation uses at the Auburn site and at Oregon Bar. Park rangers, aids, and volunteers would patrol the area and enforce park rules, control the hours of operation, and provide emergency assistance, as needed. Use of the area would be limited by the maximum capacity of the parking areas (up to 53 spaces). Hours of operation would be limited to daylight hours, but would permit afternoon boating associated with summer low-flow releases from the Oxbow Powerhouse. It is also a possibility, that initially, this river access may only be available on a seasonal basis.

Roads from Maidu Drive and to the proposed parking areas would be improved to permit travel by two-wheel drive vehicles. Generally, this would require grading, widening in some areas, including engineered cuts into side slopes, and placement of crushed rock road base to stabilize the surface and minimize erosion. Development of the roads would include stabilization of eroded slopes and installation of appropriate drainage control improvements (e.g., culverts, ditches) and creation of shaded fuel breaks for fire prevention purposes.

The existing road from the Auburn Dam former batch plant site to the river near the tunnel outlet would be improved as needed for access to the riverside turnaround and handicap-accessible parking spaces. The existing dirt road from the batch plant parking area to Oregon Bar would be improved as well. A vehicle turnaround would be created just east of the creek that empties into the North Fork American River at Oregon Bar to permit loading/unloading of boats and gear and space for vehicle movement to return up to the access road. This existing dirt road is currently the route of the Pioneer Express equestrian/pedestrian trail. This section is also called the Cardiac Hill Bypass Trail. To minimize potential trail and road user conflicts, a separate single-tack equestrian/pedestrian trail would be constructed from the turnaround near Oregon Bar to the former Auburn Dam batch plant. Wooden, metal, or rock barriers would be placed at the end of the turnaround to prevent vehicular travel on the pedestrian trail to the river (Figure 2-7). The distance from the river at Oregon Bar to the turnaround is approximately 500 feet. The section of new trail, from the turnaround at Cardiac Hill Bypass to the batch plant parking area, would be approximately 1,600 feet, or one-third mile. This trail would be available to river users to access vehicles parked at the batch plant. (It is noted that some of the improvements to the route between Oregon Bar and the former Auburn Dam batch plant parking area may be addressed through a remediation plan currently being prepared and implemented by the California

Department of Forestry and Fire Protection (CDFFP) and Reclamation to address environmental damage from fire-fighting related activities performed in 1999.)

Specific trail improvements would be provided to encourage and allow mixed recreation uses. The route from the Oregon Bar parking area to the turnaround location is currently used by equestrians. This use would continue to be accommodated along this route by widening of the trail and designation of the inside portion of the route for equestrian use only. A separate pedestrian trail would be provided from the form Auburn Dam batch plant parking area down to the river (Figure 2-7) to further minimize user conflicts. Minimal trail improvements also may be required for the portion of the path extending from the Oregon Bar turnaround to the river. Trail improvements would be made with hand tools to minimize the use of construction equipment in these areas.

In total, the two proposed parking areas would accommodate up to 53 vehicles at one time. CDPR staff would monitor use of the lots and limit entrance into the area based on parking space availability. If needed, a sign indicating that the parking areas are at capacity would be placed at the Maidu Drive/Auburn-Folsom Road intersection to minimize the number of vehicles that approach the facilities and then must immediately turn around. Parking enforcement also would include prohibiting roadside parking along project area roads or trails and a sweep of the parking areas prior to gate closure to determine whether all cars had exited the area.

The large parking area would be located at the upper flat area created by the former Auburn Dam concrete batch plant and storage yard (Figure 2-7). Preliminary plans for this location include designation of up to 50 parking spaces, animal-proof trash containers and restroom facilities. This location is approximately one-half mile from the bypass tunnel outlet access site and three-quarter of a mile from the river at Oregon Bar. Construction of this parking area would involve minimal grading and possibly placement of crushed rock. Signs or other guideposts also would be placed to clearly designate parking spaces. Large rock barriers would be placed around the perimeter of the parking area to designate boundaries and prevent off-road travel.

The second parking area for handicapped river users would be created just upstream of the bypass tunnel outlet, within the Auburn Dam construction site (Figure 2-7). This parking area would consist of three handicapped-accessible parking spaces, one of which would be van accessible. Development of this site may be through use of excavated material removed during channel restoration or other materials to build-up a flat bench area adjacent to the north bank of the river. Large boulders would be placed around the perimeter of the area to clearly mark the parking area and prevent motorists from driving into the river channel. Because this area would be subject to flooding during periods of high river flows, it would be designed to withstand periodic flooding. Extreme flooding events occasionally may result in the need to rebuild the parking area.

As part of the entrance gate development, CDPR would make improvements to the existing small parking area outside of the gate/entrance booth to provide limited parking for trail users who want to access the trails when the river access area is closed. This provision would better accommodate existing trail use parking and minimize the potential for roadside parking along the lower portion of Maidu Drive or other neighborhood streets.

Concrete slabs and animal-proof trash containers would be placed at the entrance station, batch plant parking area, tunnel outlet turnaround and Oregon Bar turnaround. Restroom facilities would be placed at the batch plant parking area and at the riverside and Oregon Bar turnaround areas.

Management of the public river access features would only provide day-use and would include enforcement of all rules and regulations to provide a safe, enjoyable experience for all recreationists as well as to minimize potential impacts to adjacent residential areas. Such activities include, but are not limited to, the following: (1) limited hours of operation; (2) prohibition of alcohol; (3) prohibition of open fires; (4) no overnight camping/parking or nighttime recreational vehicle use; and (5) enforcement of parking, speed limits, noise levels and litter regulations. Cars left unattended would be ticketed and then towed from the site if not removed or claimed.

Remnants from construction activity (e.g., pipe, wire and cables, and pieces of metal) would be removed from the site before it is opened for public use. The piles of rock would remain on site. Barriers and signs would be placed to discourage climbing. Existing wetland and associated drainages in this area would be protected and preserved as part of CDPR's resource management efforts within the Auburn SRA.

Georgetown Divide Public Utilities District Facilities

The design of the pump station accommodates future expansion to provide GDPUD up to a 25 cfs water diversion from this location. These facilities include a pipeline casing from the pump station, under the riverbed, to the east side of the restored river channel where it would be capped off and allow sufficient space within the pump station for a 25 cfs capacity booster pump. Initial construction would include a concrete pad for the booster pump, a take-off valve from the discharge pipeline, and the capped pipeline casing to the east side of the river. These facilities would be constructed as part of this project to avoid future and further disruption of the project area and riverbed after the river has been restored. GDPUD's ability to take water from this location would be dependent upon various "water exchange" agreements with PCWA and Reclamation. The details of such exchanges have not been worked out at this time. Additional environmental analysis and regulatory agency review would be required prior to installation of the booster pump facility and connection and transmission of water to GDPUD.

2.2.2.2 Proposed Project Construction Schedule and Activities

The Proposed Project would involve construction of all the major features described under Section 2.2.2.1. Construction of the Proposed Project would involve two phases over approximately 22 months. Phase I activities would begin in late 2002 and extend into spring 2004. Phase II construction would be initiated in spring 2003 and extend through summer 2004. Phase I construction would include access roads, initial site preparation, dry streambed excavation (rough grading) and construction of the pump station. Phase II would involve construction of the intake/diversion structure, fish screen, pump station sediment facilities, river gauging stations, standby power facilities, final channel grading, closure of the bypass tunnel and rerouting of river flows, and public river access improvements.

Table 2-5 shows the type and duration of construction equipment associated with construction of the Proposed Project.

Table 2-5
Estimated Type and Duration of Construction Equipment and Activities for the Proposed Project and Upstream Diversion Alternative

	Proposed Project				Upstream Diversion Alternative			
	Operating Hours		Number of Vehicles (Maximum)	Duration (Number of Weeks)	Operating Hours		Number of Vehicles (Maximum)	Duration (Number of Weeks)
Construction Equipment	Average Week	Maximum Week			Average Week	Maximum Week		
Compactor	50	120	6	42	25	60	2	17
Bull Dozer	182	300	8	45	42	140	4	20
Loader	80	80	2	29	20	20	1	4
Motor Grader	70	80	2	33	35	40	1	8
Paver	20	20	1	2	20	20	1	2
Pick-up Truck/Haul Truck	120	250	7	56	58	120	3	18
Roller	48	72	4	10	48	72	4	5
Scraper	480	600	15	13	120	240	6	7
Off-Highway Truck	320	360	9	35	20	20	1	17

2.2.2.3 Proposed Project Operation and Maintenance

Upon completion of construction and testing of the pump station, Reclamation would transfer the ownership of the facilities to PCWA, in accordance with the contract between PCWA and Reclamation to be executed prior to construction. PCWA would assume full responsibility for all operation, maintenance, and related activities associated with the pump station and operate such new facilities for the purpose of water supply. Reclamation would retain responsibility for all other operation and maintenance activities associated with the authorized Auburn Dam Project, and would have certain of those responsibilities performed by CDPR under its agreement to manage the Auburn SRA.

Operation

Under the Proposed Project, PCWA could divert up to 100 cfs for a total volume of 35,500 AFA following the diversion pattern in Figure 2-9 and in **Table 2-6**. Higher diversions would occur during summer and early fall months, May through September to meet customer demands, with lower diversions occurring during October through April.

Table 2-6
Diversion Pattern at Year-Round Pump Station Proposed Project and Upstream Diversion Alternative

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TAF[a]	0.9	0.9	1.5	2.7	4.5	5.5	5.7	5.2	4.4	2.2	1.1	0.9
Annual Percent[b]	2.6	2.6	4.1	7.6	12.6	15.6	16.0	14.6	12.5	6.1	3.1	2.6

[a] Maximum TAF in a given month. Diversions would vary annually based on water supply conditions, demand, and water delivery system operation conditions.

[b] Approximate percent of total annual diversions. Diversions would be in compliance with existing agreements and permits governing upstream storage, water rights, minimum instream flow, and other conditions.

In response to the public and agency comments on the Draft EIS/EIR, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine as under the existing conditions instead of releasing additional North Fork American River water into Auburn Ravine in exchange for Yuba/Bear River water. Water diverted from the North Fork American River would now be conveyed to the PCWA water supply distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within the Auburn Ravine Tunnel, and from the tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station. The water would then flow within the South Canal where it would be delivered to the Foothill Water Treatment Plant (WTP) (**Figure 2-11**). The American River water currently delivered to Auburn Ravine would remain within the limits of recent historical monthly maximum delivery rates, but there would be no increase or exchange with the PG&E Yuba/Bear River source.

Implementation of the Proposed Project would result in minor changes in PCWA's water releases from the MFP at Ralston Afterbay (Section 2.2.2.3), which must divert water from storage in the summer and, therefore, must increase the amount of water released at Ralston Afterbay in order to do so. Such changes include an increase (compared to existing conditions) in the amount of water released from Ralston Afterbay to meet the minimum 75 cfs bypass flow at the pump station and to ensure effective operation of the diversion/intake during low-flow conditions. Preliminary design information indicates that a minimum flow of 175 cfs may be required for optimum operation and maintenance of the pump station/intake system under the Proposed Project. The unregulated flows from the North Fork of the American River provide sufficient volume to meet this anticipated project requirement for most of the year; however, it is projected that PCWA may increase the minimum Ralston Afterbay releases in late summer months (June through October), relative to existing conditions. The net result during low-flow months would be that flows downstream of the diversion would be reduced by less than the diversion amount.

Additionally, as part of its commitment to the Water Forum Agreement (CCOMWP 1999), during dry years PCWA has agreed to release water from its MFP reservoirs to replace water to the American River (replacement water). As stated in its Water Forum purveyor-specific

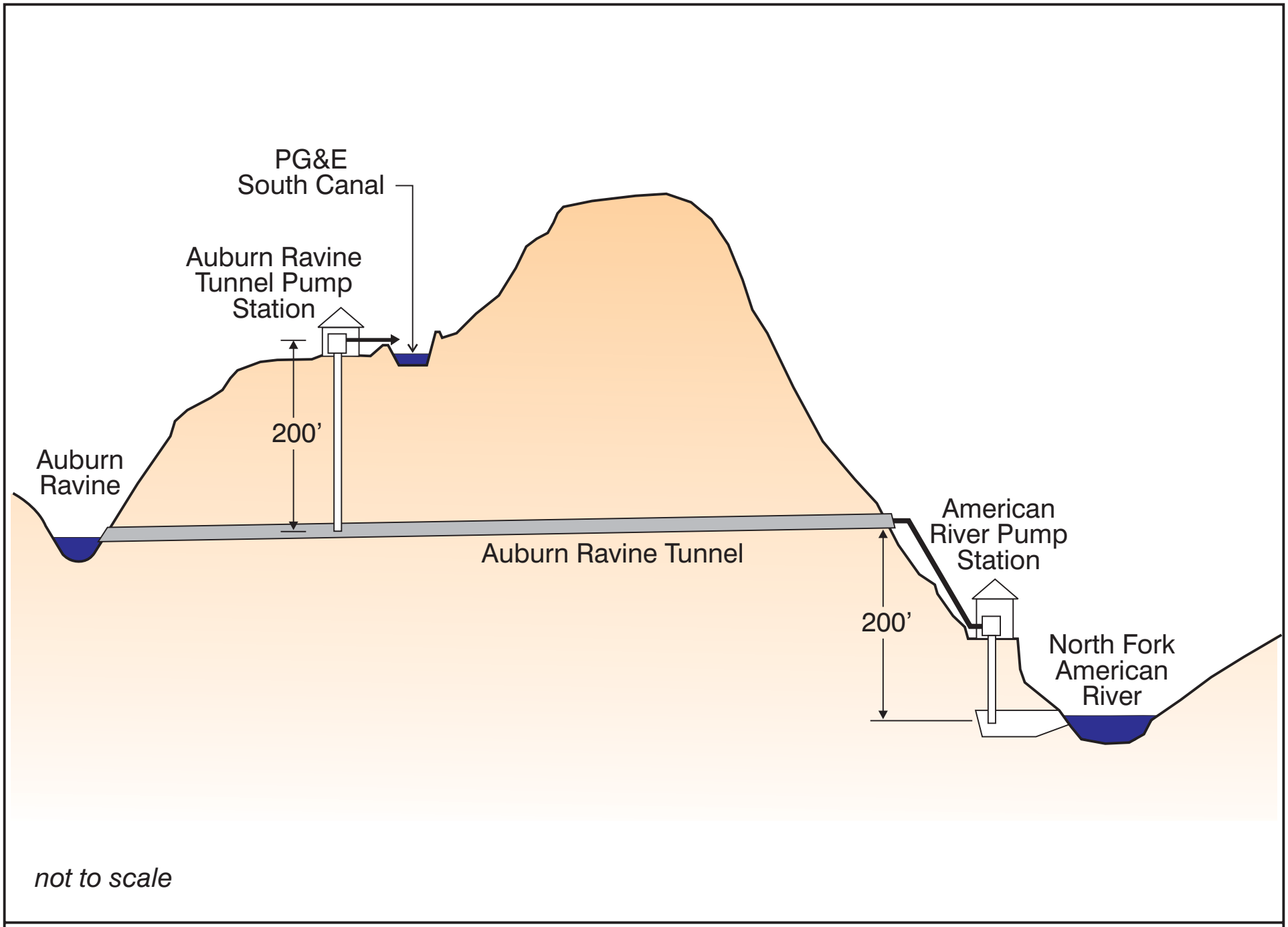


Figure 2-11 Hydraulic Profile of Water Deliveries from the American River Pump Station

agreement, release of the replacement water would be contingent upon certain agreements with Pacific Gas and Electric Company (PG&E) and purchase of the water by a downstream entity. Arrangements related to these agreements are currently underway.

Dry years are defined as years when the projected March through November unimpaired inflow to Folsom Reservoir is less than 950,000 AF. The amount of replacement water released to the river is based on a linearly proportional amount with a maximum release of 27,000 AF when unimpaired inflow to Folsom Reservoir is at 400,000 AF. The Water Forum Agreement defines years when unimpaired inflow is less than 400,000 AF as conference years. In those years, PCWA and other Water Forum participants would meet to determine how the available water would be managed. The replacement water would be released for downstream use to meet environmental requirements and/or for use by other water purveyors, in accordance with their specific Water Forum agreements.

Facility Maintenance

Maintenance activities associated with the Project fall into three categories: basic; annual; and periodic or as needed. Basic maintenance includes daily visual inspection of the pump station and diversion structure to make sure they are operating properly. Annual maintenance includes seasonal inspection of the fish screen and diversion structures and removal of any objects that may interfere with proper operation of the diversion structure. Periodic, or as-needed, maintenance includes major maintenance activities such as inspections/removal of pump(s), clearing the river diversion inlet structure, and removal of any material that may be deposited against the diversion structure as a result of a major flood event.

Public River Access Maintenance

CDPR, through an agreement with Reclamation, would be responsible for maintaining the public river access features. Maintenance activities would include removal of trash and cleaning of restrooms on a regular basis; repair of damaged signs, as needed; and servicing of trails and access routes, as required. Road and trail maintenance may include regrading or placement of additional gravel on traveled surfaces, correction of erosion problems, clearing drainage ditches and culverts, and trimming of vegetation that encroaches upon the path, as needed.

2.2.3 UPSTREAM DIVERSION ALTERNATIVE

The Upstream Diversion Alternative would provide PCWA with a reliable, year-round diversion of its MFP water supply from the North Fork American River while alleviating Reclamation of its obligations to PCWA under the Land Purchase Agreement (Section 1.2.2). Additionally, the Upstream Diversion Alternative would provide the potential for future increased diversion capacity for PCWA as well as GDPUD (Section 1.3.6).

The major features that would be constructed for the Upstream Diversion Alternative include the water diversion/intake structures, including a fish screen to be designed in consultation with CDFG fish screen experts; water conveyance pipelines; a new pump station, placed above the 100-year flood level; all-weather access roads; power lines; and safety features. The Upstream

Diversion Alternative would site the diversion intake structure upstream of the bypass tunnel inlet. Locating the diversion upstream of the bypass tunnel would not require channel restoration or tunnel closure. The project area would remain closed to the public, except for authorized designated trail use. No additional public access facilities would be developed. The pump station location and associated facilities would be the same as proposed for the Proposed Project. These features are shown on Figure 2-8 and discussed below. The estimated cost for construction of the Upstream Diversion Alternative would be approximately $17 million.

2.2.3.1 Major Features of the Upstream Diversion Alternative

Many of the major features and activities for the Upstream Diversion Alternative would be as described for the Proposed Project (Section 2.2.2.1). Those features that are different for the Upstream Diversion Alternative, as compared to the Proposed Project, are described below.

Diversion and Intake Structure

The diversion and intake structure would be constructed approximately 100 feet upstream of the bypass tunnel, on the north river bank (Figure 2-8). The diversion structure would be constructed from earth and rock and extend between a natural high point in the river gradient and the proposed intake structure. During low-flow periods, the structure would create a pool in the vicinity of the intake allowing continued water diversion. A V-notch weir would be installed immediately upstream of the diversion structure, parallel to river flow for hydraulic gradient control. The intake structure would be constructed out of concrete and constructed along the west riverbank.

Pipelines

A seven-foot diameter pipeline would extend approximately 490 feet between the intake structure and pump station.

Excavated Material Disposal

Construction of the Upstream Diversion Alternative would result in the excavation of approximately 72,000 cubic yards of material. Under this alternative, all excavated material would be placed in the pit at the base of the eastern side of the Auburn Dam keyway (Figure 2-8).

Safety Features

The water-based safety hazards of the bypass tunnel are described in Chapter 1.0. The Upstream Diversion Alternative would include the placement of additional signs and buoys with cables across the river channel upstream of the bypass tunnel to warn people from entering the tunnel. The buoy line would direct recreationists to a flat location on the riverbank to exit the water. In addition to this feature, as part of the diversion structure, a flat-water pool area would be created in front of the bypass tunnel to provide one more opportunity for boaters or swimmers to exit the

water rather than enter the tunnel. These features would reduce, but not eliminate, the potential safety hazard posed by the bypass tunnel.

2.2.3.2 Upstream Diversion Alternative Construction Schedule and Activities

Construction of the Upstream Diversion Alternative diversion intake structure, pump station, pipelines, roads, and associated activities would take approximately 21 months beginning in 2002 and ending by spring 2004. Table 2-5 shows the type and duration of construction equipment associated with construction of the Upstream Diversion Alternative.

Construction of the major project features would be similar to the methods described under the Proposed Project (Section 2.2.2.2), with the exception of treatment of the bypass tunnel and associated river restoration and public river access sites. Public river access sites would not be developed under the Upstream Diversion Alternative.

2.2.3.3 Upstream Diversion Alternative Operation and Maintenance

As described for the Proposed Project (Section 2.2.2.3), upon completion of construction and testing of the pump station facilities, Reclamation would transfer the ownership of the project facilities to PCWA. PCWA, in turn, would assume full responsibility for all operation, maintenance, and related activities for the project. The diversion amount and timing would be the same under the Upstream Diversion Alternative as described for the Proposed Project (Figure 2-7 and Table 2-6).

Overall, PCWA's operation and maintenance of the pump station facilities would be the same under the Upstream Diversion Alternative as described for the Proposed Project (Section 2.2.2.3).

2.3 ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

Implementation of the Proposed Project or alternatives would result in temporary construction-related impacts upon terrestrial resources, water quality, recreation activities, slope stability, ambient noise levels, air quality, and public health and worker safety. Additionally, operation and maintenance activities have the potential to affect wetlands vegetation and associated habitat, water quality, and cultural resources. Through the evaluation of potential impacts associated with the Proposed Project or Upstream Diversion Alternative, PCWA and Reclamation have identified several design considerations, features, practices, or plans that have been incorporated into the Mitigation Plan for the project (Appendix D to the Final EIS/EIR). The Mitigation Plan would be adopted by the lead agencies in accordance with regulatory requirements. The Mitigation Plan identifies compliance responsibilities, timing, documentation, responsible agency contacts, and reporting requirements to ensure that design and mitigation measures or other environmental commitments are successfully implemented.

Under the No Action/No Project Alternative, Reclamation would continue the annual installation of the seasonal pump station. Construction, operation, and maintenance-related impacts of the seasonal pump station activities would generally be the same as under the existing condition, with some exceptions, as noted in the analysis of Chapter 3.0. No formal environmental protection or mitigation measures have been identified for the No Action/No Project Alternative; however, it is assumed that Reclamation would continue to obtain the appropriate regulatory agency permits for the seasonal pump station and to implement appropriate terms and conditions to minimize environmental disturbances.

Construction activities would be conducted using standard BMPs to minimize environmental disturbances and impacts. The construction contractor would implement these measures with oversight by Reclamation, PCWA, and regulatory agencies, as appropriate. Reclamation, PCWA, and/or CDPR would be responsible for implementing operational and maintenance-related measures. PCWA and Reclamation, as the lead agencies for the project, would be responsible for ensuring compliance with the specific measures and related monitoring and reporting requirements.

In developing a final design, plans and construction specifications for project-specific construction-related environmental protection measures would be identified as the responsibility of the construction contractor to ensure environmental protection. The measures would be made part of the construction contract and would include provision for reporting and monitoring as appropriate for each measure.

The environmental protection measures identified and incorporated into the Action Alternatives' design, construction, implementation procedures, and ongoing management actions are identified below in **Table 2-7**. These measures are described in detail in the individual resource sections of Chapter 3.0 and in the Mitigation Plan (Appendix D to the Final EIS/EIR).

Table 2-7
Environmental Protection and Mitigation Measures

Fish Resources and Aquatic Habitat	3.1-1	Prevent Fish Entrainment and Impingement at the Water Supply Intake/Point of Diversion
	3.1-2	Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources
Terrestrial Resources	3.2-1	Establish Buffer Zone to Avoid Disturbance of and Prevent the Permanent Loss of Riparian, Wetland and Pond Vegetation and Associated Habitat
	3.2-2	Minimize Impacts Upon State and Federal Special-Status Species in the Project Area
	3.2-3	Measures for Entrapped, Injured or Dead Special-Status Animal Species
	3.2-4	Restoration of Permanent Riparian, Wetland and Pond Vegetation/Habitat Loss

Table 2-7 (Continued)
Environmental Protection and Mitigation Measures

Water Quality	3.3-1	Removal of Construction Litter and Debris
	3.3-2	Construction-Related Water Quality Protection Measures
	3.3-3	Project Operation and Maintenance Water Quality Protection
	3.3-4	Minimize Water Quality Impacts From Increased Public Access
Recreation	3.4-1	Maintain Public Recreation Trail Access During Construction
	3.4-2	Avoid Recreation Trail Closures That Affect the Western States Endurance Run, Tevis Cup Western States Trail Ride or the American River 50-Mile Endurance Run
	3.4-3	Auburn-to-Cool Trail
	3.4-4	Minimize Trail User Conflicts Due to Increased Public Access
	3.4-5	Minimize Littering at Public River Access Locations
	3.4-6	Provide Disabled Access Parking Area
Visual Resources	3.5-1	Blend Project Features with Surrounding Landscape
Cultural Resources	3.6-1	Stop Construction Activities if Cultural Resources or Human Remains are Uncovered
	3.6-2	Develop and Implement Programmatic Agreement with State Historic Preservation Officer Regarding Potential Impacts at Shasta Reservoir
Transportation and Circulation	3.7-1	Develop and Implement a Construction Traffic Access Management Plan
	3.7-2	Provide Information Regarding New Public River Access
Air Quality	3.8-1	Minimize Ozone Precursor Emissions During Project Construction
	3.8-2	Minimize PM_{10} Emissions During Project Construction
	3.8-3	Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction
Noise	3.9-1	Minimize Noise During Project Construction
	3.9-2	Minimize Operational Noise Levels by Enclosing Pumps
	3.9-3	Minimize Noise Levels Associated With Public Use of River Access Features
Public Health and Worker Safety	3.10-1	Minimize the Potential for Increased Erosion and Slope Instability During Project Construction
	3.10-2	Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction
	3.10-3	Remove All Construction-related Materials From Project Site Prior to Opening for Public Use
	3.10-4	Minimize the Risk of Public Exposure to Fire Hazards During Project Operations
	3.10-5	Prevent Vehicular Access in Undesignated Areas
	3.10-6	Minimize Inappropriate or Illegal Activities at Public River Access Locations
	3.10-7	Limit Public Access to Water Supply Facilities and Structures

2.4 SUMMARY OF THE ALTERNATIVES AND IMPACTS

The Executive Summary to the Final EIS/EIR, Table S-5, provides a summary of impacts identified in this EIS/EIR organized by resource topic and presents the results of the assessment of potential environmental impacts and mitigation measures of the Proposed Project and alternatives. Environmental impacts are grouped as either Facilities-Related Impacts or Diversion-Related Impacts. Facilities-related impacts are typically land-based and described as the direct, short- and long-term effects of constructing, operating and maintaining the facilities associated with each alternative. These effects generally are limited in geographic scope to the immediate project site footprint and, for some topics, portions of nearby communities. Diversion-related impacts are the direct, long-term water resource-based effects associated with PCWA's operation of a year-round pump station project and the associated increased diversion of MFP water rights water from the North Fork American River near Auburn, and the indirect, long-term effects associated with Reclamation's operation of certain CVP system facilities. Throughout the table, Cumulative Condition refers to the cumulative potential effects resulting from several reasonably foreseeable federal actions that over the next 25 years, would result in substantial changes in the CVP system operations and an increase of American River or Sacramento diversions for M&I and agricultural water supplies for use in the American River Basin. This includes providing increased water supplies to the lands within the service boundaries of water purveyors and includes lands within Placer, El Dorado, Sacramento, Alameda and Costa Contra counties impacts to environmental resources that could result from the collective actions associated with future planned urbanization.

The environmental setting and potential consequences of implementation of the Proposed Project and alternatives are presented and analyzed in detail in Chapter 3.0.

The No Action/No Project Alternative refers to continued installation of the seasonal pump station, as described in Section 2.2.1. The use of the term "Action Alternatives" in Table S-5 refers to an evaluation that applies to both the Mid-Channel Diversion and Upstream Diversion alternatives, where the consequences of either action would generally be the same. The Proposed Project is the Mid-Channel Diversion Alternative, as described in Section 2.2.2. The Upstream Diversion Alternative is described in Section 2.2.3.

The impact summaries are presented in comparison to both existing conditions and to the No Action/No Project Alternative to satisfy both CEQA and NEPA requirements. Additionally, an evaluation of the Cumulative Condition and the Action Alternatives' Incremental Contribution to the Cumulative Condition is provided. The Cumulative Condition represents a future scenario considering the timeframe of the Proposed Project and other local or regional projects that would have similar environmental effects within the project study area over the next 25 years. Assumptions regarding future probable actions within the regional and local areas of study were developed and are described in greater detail in Chapter 3.0, Section 3.3, Impact Assessment Framework and Methodology.

The American River Basin Cumulative Report (Appendix D to the Draft EIS/EIR) evaluates Reclamation's reasonably foreseeable CVP American River Division actions that, over the cumulative study period (2000 to 2025) potentially would result in substantial changes to CVP

system operations and increased diversion from the American and Sacramento river basins for M&I and agricultural water uses within the American River Basin. This includes providing increased water supplies to the lands within the service area boundaries of water purveyors and includes Placer, El Dorado, Sacramento, Alameda, and Contra Costa counties. The Cumulative Report evaluation includes an assessment of potential water service area impacts upon terrestrial and other land resources within the regional study area. Refer to Appendix D of the Draft EIS/EIR for additional detailed information.

2.5 ALTERNATIVES CONSIDERED AND ELIMINATED

Table 2-8 summarizes alternatives considered and eliminated from further analysis. Potential alternatives were eliminated based on two primary criteria: (1) the alternative did not meet most of the project objectives; and/or (2) the alternative was technically, economically, or environmentally infeasible.

Table 2-8
Summary of Alternatives Considered and Eliminated from Further Analysis

Alternative	Reason for Elimination
Diversion Location	
❑ Diversion from an Auburn Reservoir/Dam	❑ Could not be completed within timeframe to meet PCWA's water supply needs.
❑ Bypass tunnel diversion variations using an underground intake tunnel or an intake pipe	❑ Economically and technically infeasible. Confined access to the intake structure could create safety hazards for maintenance personnel.
❑ Diversion from the western bank of the dewatered channel, approximately 3,200 feet downstream of the bypass tunnel inlet	❑ No environmental advantage. Wider channel reach would require larger in-river gradient structures and potentially less control of diversion flows; potentially higher sediment load and greater maintenance requirements.
❑ Diversion from a point upstream of the Auburn Dam construction site near Tamaroo Bar	❑ No environmental advantage. Nearly 8,000 feet of discharge pipeline would be needed for this alternative; site access would be more difficult.
❑ Sites other than Folsom Dam or Auburn Dam	❑ Economically infeasible. Additional costs make alternate location impractical.
❑ Diversion from Folsom Reservoir at various locations	❑ Economically infeasible; no environmental advantage. Excessively high costs for new pump station, intermediate booster pumps and pipeline.
Pump Station Location	
❑ Location on the western canyon wall, at elevation 705, down slope from the Auburn Ravine Tunnel	❑ Technically infeasible. This location has many spoil materials from construction of the Auburn Ravine Tunnel that could prove unstable.
❑ Location on top of the existing easterly remnant of the cofferdam at elevation 720, above the bypass tunnel	❑ Technically infeasible. Access to the site is difficult, and the pump station configuration for this site could lead to operational problems for pump equipment and would make maintenance difficult.
❑ Location above Tamaroo Bar	❑ No environmental advantage. Site access would be difficult and could present operational or maintenance difficulties.

Table 2-8 (Continued)
Summary of Alternatives Considered and Eliminated from Further Analysis

Alternative	Reason for Elimination
Pump Type	
❑ Submersible Pumps – Non-Clog, Deep Well, or Dry Pit Centrifugal	❑ No environmental advantage. These types of pumps are more costly than the selected pump type and have no environmental advantage.
❑ Vertical Mixed Flow Propeller	❑ Technically infeasible. This type of pump could not generate the lift necessary to move water from the intake to the Auburn Ravine Tunnel.
Safety Features	
❑ Create grated or fenced closure of the bypass tunnel inlet and outlet	❑ Technically infeasible; no environmental advantage. This could increase the safety hazard. During most flows, people and boats could become trapped against the grate/fence. It would be difficult to keep the structure free of debris.
❑ Excavate debris downstream of the tunnel to lower the tailwater on the bypass tunnel	❑ No environmental advantage. Risk of becoming trapped in the tunnel is not completely removed.
Other Water Supply Considerations	
❑ Reduce water demand through conservation metering	❑ Inapplicable. PCWA already implements 100 percent metering.
❑ Reduce water demand through aggressive fixture (shower head, toilet) replacement	❑ Does not meet most of project objectives. Limited potential for demand reduction. Not a reliable short- or long-term solution.
❑ Purchase replacement water from another source; including surplus water from neighboring districts	❑ Does not meet most of project objectives. Not a reliable (continuous) source of supply. Additionally, there are few available sources, lack of delivery systems, and would be costly to develop.
❑ Land fallowing or land retirement	❑ Excessive economic, social and environmental impacts because land converted from agricultural land would likely be converted for urban development, would represent a loss of open space and habitat (and, potentially endangered species habitat), and would displace farmers economically and socially.
❑ Use surplus Zone 3 contract supply	❑ Does not meet most of project objectives. Not a reliable (continuous) source of supply.
❑ Pump groundwater	❑ Does not meet most of project objectives. Not a reliable (long-term) source of supply.
❑ Use reclaimed water from City of Lincoln Wastewater Treatment Plant	❑ Does not meet most of project objectives. Not a short-term source of supply, and volume would be insufficient.
❑ Reduce water system losses	❑ Does not meet most of project objectives. Not a reliable (continuous) source of supply.
❑ Improve efficiency of water delivery system (pre- and post-customer delivery (e.g., pipe canals, increase raw water connection charges, restrict the maximum purchase amount, increase raw water rates for certain uses or for large quantities, provide technical assistance to customers regarding efficient water use))	❑ Does not meet most of project objectives. Not a short-term source of supply, and volume would be insufficient.

Sources: MW et al. 1998; Reclamation 2000

2.6 PERMITS AND APPROVALS

Several laws and regulations that apply to the project require permits. Agencies and related permits or other environmental requirements are identified in **Table 2-9**. Final permitting requirements for the project were determined through agency review of the Draft EIS/EIR and other agency procedures.

Table 2-9
Anticipated Permits and Approvals for the Proposed Project

Agency	Permit or Other Environmental Requirements
California Department of Fish and Game	California Endangered Species Act [Fish and Game Code Section 2050 et. seq.] [a] Streambed Alteration Agreement (FGC S. 1601 et seq.)[b]
State Water Resources Control Board	Board approval to grant change in point of diversion under Water Rights Permits 13856 and 13858
Regional Water Quality Control Board	NPDES General Permit for Stormwater Discharges [Section 401 Water Quality Certification], [Section 402 Clean Water Act (33 U.S.C. § 1344)] [b]
U.S. Army Corps of Engineers	Section 10 of River and Harbor Act [33 U.S.C. 401-413] [a] Section 404 of Clean Water Act Nationwide Permit No. 27 [33 U.S.C. 1251 et seq.] [a]
U.S. Fish and Wildlife Service	ESA Section 7 requirements for fish, wildlife, and plants [PL 93-205; 16 U.S.C. § 1536] - Biological Opinion and Incidental Take Permit [a] Fish and Wildlife Coordination Act [P.L. 85-624; 16 CFR § 661-667] [a] - Fish and Wildlife Coordination Act Report
National Marine Fisheries Service	ESA Section 7 requirements for fish, wildlife, and plants [PL 93-205; 16 U.S.C. § 1536] - Biological Opinion and Incidental Take Permit [a] Magnuson-Stevens Fishery Conservation and Management Act. Consultation regarding potential project effects upon Essential Fish Habitat
Office of Historic Preservation	Reviews project for possible impacts to state and federal registered historical resources [Section 106 of the National Historic Preservation Act] [b] - Programmatic Agreement regarding mitigation of potential effects to unknown cultural resources.

[a] Permits or approvals that are expected to be required.

[b] Permits or approvals that could be required depending on final project design, construction methods, and other considerations.

Since publication of the Draft EIS/EIR, it has been determined that some of the permits preliminarily identified in the Draft EIS/EIR would not be required as a condition of project implementation. A Land Use Lease has been removed from Table 2-9 because the project area does not fall under the jurisdiction of the State Lands Commission pursuant to Section 6327 of the Public Resources Code which states that if a facility is for the "procurement of freshwater

from and construction of drainage facilities into navigable rivers, streams, lakes and bays," and if the applicant obtains a permit from the local reclamation district, the Reclamation Board, Department of Water Resources, the California Debris Commission, or the Corps of Engineers of the United States, then an application is not required by the State Lands Commission. Similarly, according to the El Dorado County Grading Ordinance (Ordinance 3983), an El Dorado County Grading Permit is not required if the project is carried out by a public agency and/or the project is on federal land. Additionally, the project no longer foresees the need for a Placer County Air Pollution Control District Permit to Operate (Generator), as the design engineers have indicated that a diesel generator would not be used as part of the construction or operation of the alternatives.

Chapter 3.0
Affected Environment and Environmental Consequences

3.1 INTRODUCTION

This chapter of the Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) describes the affected environment and the environmental consequences of implementing the Proposed Project or other alternative as presented in Chapter 2.0, Description of Alternatives. This chapter also describes the analysis methodology, impact indicators, significance criteria, and results of the analyses used to determine the potential direct, indirect and cumulative environmental impacts associated with construction, operation, and maintenance of the Proposed Project or alternatives. Potential secondary effects that would occur due to urban development and growth within the water service study area is described in the Cumulative Report, Chapter 4.0, American River Basin Water Service Analysis (Appendix D of the Draft EIS/EIR) and incorporated by reference.

3.1.1 ENVIRONMENTAL ANALYSIS SECTIONS

The resource topics addressed by the Draft EIS/EIR were initially identified by the project team engineers, planners, and facility operators, through public and agency scoping meetings, and during preliminary consultations with regulatory and resource agencies. Sections 3.4 through 3.17 of this chapter provide an evaluation of the following resource topics:

- Water Supply and Hydrology
- Fish Habitat and Aquatic Resources
- Terrestrial Resources
- Water Quality
- Recreation
- Visual Resources
- Cultural Resources
- Power Supply
- Land Use
- Geology and Soils
- Transportation and Circulation
- Air Quality
- Noise
- Public Health and Worker Safety

Each resource section is organized into four subsections: Affected Environment, Environmental Consequences/Impact Analysis, Environmental Protection and Mitigation Measures, and Summary of Resource Impacts. The summary provides a comparison of the potential impacts of the alternatives and the net effect of the alternative considering incorporation of environmental protection measures. Section 3.18, Other Impact Considerations, provides an analysis and summary of additional impact considerations including:

- Indian Trust Assets (ITAs)
- Environmental Justice
- Essential Fish Habitat (EFH)
- Irreversible and Irretrievable Use of Resources
- Short-term Uses of the Environment Versus Long-term Productivity

In response to comments on the Draft EIS/EIR, Section 3.18 also includes a discussion of Climate Change. This, and other revisions or corrections made to the Draft EIS/EIR and incorporated into this Final EIS/EIR, are identified in Chapter 1.0, Section 1.4.4, Final EIS/EIR.

Section 3.19, Endangered Species Act (ESA) Compliance, provides information and analyses necessary for federal ESA consultations with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). This section details how together the Draft EIS/EIR and Cumulative Report satisfy the ESA biological assessment requirements for use in the consultation and determination of effects on listed species.

3.1.1.1 Affected Environment

The Affected Environment discussions (Sections 3.4 through 3.17) provide a description of and characterize resource features of the regional and local environmental study area that may be affected by implementation of the Proposed Project or alternatives. The boundaries and considerations in determining these settings are described under Section 3.2, Project Study Area. Generally, the regional setting defines the indirect effect study area and the project area setting encompasses the local, direct effect study area.

The resources are described to characterize the affected environment and to serve as the California Environmental Quality Act (CEQA) basis for evaluation of potential impacts of the alternatives. The conditions described for the No Action/No Project Alternative provide the National Environmental Policy Act (NEPA) basis of impact analysis. The information is based on the best available information to describe historical, existing, and where appropriate, No Action/No Project Alternative conditions. Information was obtained through literature review, agency correspondence and consultations, and field data collection.

In addition to the research efforts, computer modeling was performed to establish the existing and No Action/No Project Alternative hydrologic and water resources conditions for the evaluation of potential effects due to the proposed increased surface water supply diversion. The models used include those developed by the U.S. Department of the Interior (Interior) Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR), as described in Section 3.3, Impact Assessment Framework and Methodology. The hydrologic conditions under these simulations provide the basis of comparison and are described in the impact discussions.

3.1.1.2 Environmental Consequences/Impact Analysis

The Environmental Consequences/Impact Analysis sections describe the methods and results of the analyses used to determine the potential facilities- and diversion-related direct, indirect, and cumulative environmental impacts resulting from implementation of the Proposed Project or alternatives. The section is divided into several subsections including: Methodology; Applicable Laws, Ordinances, Regulations, and Standards; Impact Indicators and Significance Criteria; Impact Analysis; and Environmental Protection and Mitigation Measures. The summary of resource impacts and mitigation measures is provided in the Executive Summary (Table S-5).

Throughout the Chapter 3.0 diversion-related analysis, references are made to the hydrologic modeling results. Certain tables and graphs have been prepared to provide additional representation of the modeling results and comparison of simulated conditions. These figures and tables are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and sequence of occurrence in the discussion. For example, Table H-3.5-6 refers to a table presented in Appendix H of the Draft EIS/EIR in Section 3.5, Fish Resources and Aquatic Habitat, and is the sixth one indicated in that section. Appendix I to the Draft EIS/EIR is a CD that includes all of the modeling output used in the diversion-related impact analyses.

Methodology

The methodology discussion explains the process used to determine the resource condition, develop impact indicators and significance criteria, and evaluate the alternatives' influence on the resource. The methodology section also provides an explanation of how modeling results were interpreted for the assessment of potential impacts specific to the resource topic.

Applicable Laws, Ordinances, Regulations, and Standards

The regulatory framework, plans and policies, if any, under which the selected alternative would be implemented are described under this heading.

Impact Indicators and Significance Criteria

This section defines the indicators and criteria used to determine significant effects on the environment in the impact analysis. The significance criteria provide the basis for the EIS/EIR conclusions as to whether impacts would be significant. Impacts that do not exceed or violate the stated significance criteria described for each resource were assumed to be less than significant.

Impact Analysis

The impact analysis presents results of the assessment of potential environmental impacts of the Proposed Project and alternatives. The impact analysis is presented in two subsections: Facilities-Related Impacts and Diversion-Related Impacts. Facilities-related effects are typically land-based and described as the direct, short- and long-term effects of constructing, operating, and maintaining the facilities associated with each alternative. These effects generally are limited in geographic scope to the immediate project site footprint and, for some topics, portions of nearby communities. Section 3.3.1 describes the analysis framework and presentation of impacts for facilities-related aspects.

Diversion-related effects are the direct, long-term water resource-based effects associated with Placer County Water Agency's (PCWA) operation of a year-round pump station project and the associated increased diversion of Middle Fork Project (MFP) water rights water from the North Fork American River near Auburn, and the indirect, long-term effects associated with Reclamation's operation of certain Central Valley Project (CVP) system facilities. These effects

are analyzed based on the results of the hydrologic modeling performed for the project. Fish and aquatic resources are further evaluated through the use of temperature and salmon mortality modeling. The diversion-related framework and modeling simulation comparisons made to evaluate existing and future conditions with and without the alternatives are described in Section 3.3.2 and in Appendix E, Hydrologic Modeling Technical Memorandum, to the Draft EIS/EIR.

Within each section of this chapter, the environmental impacts are numbered sequentially. For example, impacts in Section 3.4 are numbered Impact 3.4-1, Impact 3.4-2, Impact 3.4-3, etc. Each impact statement identifies the potential impact issue and area of concern. The discussion that follows the impact statement describes the substantial evidence upon which a conclusion is made as to whether the impact would be less than significant, potentially significant, or significant.

Environmental Protection and Mitigation Measures

The impact analyses indicate that the alternatives have the potential to result in potentially significant impacts to one or more resource categories. Environmental protection measures, including construction Best Management Practices (BMPs), considered feasible means of reducing potential resource impacts were incorporated into the design, construction and operation practices for the project. For some resources, additional mitigation measures have been identified to further reduce potentially significant effects to less than significant. These measures are summarized under this heading. Where no feasible protection or mitigation measures could be identified, impacts are identified as unavoidable. The Mitigation Monitoring and Reporting Program/Environmental Commitments (Mitigation Plan) has been completed and is included as Appendix D to this Final EIS/EIR. The Mitigation Plan would be included as part of the construction contractor specification package for the selected alternative.

Summary of Resource Impacts

Table S-5 in the Executive Summary of the Final EIS/EIR summarizes and compares potential impact issues and resultant significance of the impact for each alternative after incorporation of standard and feasible environmental protection and mitigation measures.

3.2 PROJECT STUDY AREA

The study area includes the following subareas: regional setting, project area setting, PCWA water service area, and American River Basin service area. These areas are described below. The full service area analysis is provided in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.2.1 REGIONAL SETTING

The regional setting area encompasses the Sacramento River and American River basin CVP and State Water Project (SWP) reservoirs and waterways, including the Sacramento-San Joaquin River Delta (Delta), that could be affected by Reclamation's changes in operation of the CVP or the Department of Water Resources' (DWR) changes in operation of SWP facilities. Changes in operations would primarily be due to annual water supply conditions as affected by system hydrology and increased demands. The resources within the regional setting area would not be affected directly by the construction, operation, or maintenance of the pump station project, and are therefore also considered to define the indirect effect study area. PCWA's increased diversion from the North Fork American River would, under certain conditions (water years), contribute to a reduction of inflow volume to Folsom Reservoir. Reclamation operates Folsom Reservoir as part of the CVP to meet water supply and environmental flow requirements within the American and Sacramento river watersheds. Folsom and Shasta reservoirs also are operated to meet water needs of the Delta. For these reasons, the Sacramento River (from the Trinity and Shasta reservoir facilities down to the Delta) is included in the regional study area. Changes in CVP operations as well as increased demands by SWP customers would potentially influence operations of Oroville Reservoir affecting resources there and in the Feather River below Oroville. Figure 2-1 shows the regional setting.

It was determined that Reclamation's reasonably foreseeable actions would not influence the management or operations of facilities of the Yuba or Bear rivers, or of the Cosumnes River. Additionally, no direct or indirect changes to the San Joaquin River would be expected due to changes in American River Division operations. Within the American River watershed, it was determined that PCWA's changes in operation of the MFP generally would not influence conditions at Hell Hole or French Meadows reservoirs or related waterways (i.e., Rubicon River, Long Canyon Creek), and that reoperation at Ralston Afterbay would be within historic operating ranges. Therefore, these water bodies, although within the study area, were not evaluated in any further detail.

The water-related resources that may be influenced by these operations (changes to reservoir releases, in-stream flows and water temperature) include water supply, fish and aquatic resources, riparian vegetation and backwater ponds, water quality, water-based and water-enhanced recreation, cultural and visual resources, and power supply. The resource descriptions for the water system components and associated waterways in the regional setting are provided in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.2.2 PROJECT AREA SETTING

The project area setting represents the direct effect study area and encompasses all areas where the direct effects of construction, operation, and maintenance of the Proposed Project or alternatives would occur for a particular resource topic. Figure 2-2 shows the project area setting. Direct diversion-related effects on the upper American River (changes in river hydrology) would occur within the area between Ralston Afterbay and downstream to the Folsom Reservoir high-water line. At and downstream of Folsom Reservoir, changes within the CVP system are considered and discussed as part of the regional setting due to the indirect nature of these effects.

For land-based resource topics, such as geology and soils, the project area setting involves only the project construction zone and footprint of the project facilities. Figure 2-3 shows the project site boundaries. For other topics, such as visual resources and noise, the direct effect study area incorporates areas nearby and adjacent to the project site that may be affected by construction, operation, or maintenance activities. The extent of the direct effect study area is defined within the project area setting introduction for each topic.

3.2.3 PLACER COUNTY WATER AGENCY WATER SERVICE AREA

PCWA will continue to convey and deliver the MFP water diverted from the pump station to Service Area Zones 1 and 5 **(Figure 3.2-1)**. This water would be used to meet current needs, serve as back-up to the Drum-Spaulding Project water, and accommodate growth as projected in approved general, specific, and community planning documentation adopted for these areas of western Placer County. Water served to Zone 5 is primarily untreated and used to support agriculture. It is noted that American River raw water deliveries to Zone 5 (via Auburn Ravine) would not change from existing conditions. PCWA's proposed operational change, referred to as "double-pumping" is described in greater detail in Section 3.5, Fish Resources and Aquatic Habitat. Zone 1 includes the cities of Rocklin, Loomis and Auburn, and portions of the City of Lincoln, as well as the communities of Bowman, Horseshoe-Bar, Penryn, Newcastle, Ophir, Sabre City, and Granite Bay.

Implementation of the Proposed Project or alternatives would not directly result in land use changes within the PCWA water service study area. The Proposed Project or alternatives, however, would result in an increased availability of water supply that would support some level of planned growth within the service area and so is considered to be growth-accommodating. The secondary indirect effects of the provision of the MFP water supply within these zones is included in the Cumulative Report (Appendix D of the Draft EIS/EIR). The potential impacts associated with the supply of water from the Proposed Project or alternatives are evaluated at a program-level; a project-level analysis would follow as specific future facilities and developments are contemplated for construction. The land use decisions necessary to permit future urbanization in Placer County are made by city and county government authorities. PCWA has no land use authority over its service area and, therefore, does not have any jurisdiction over land use planning processes or development.

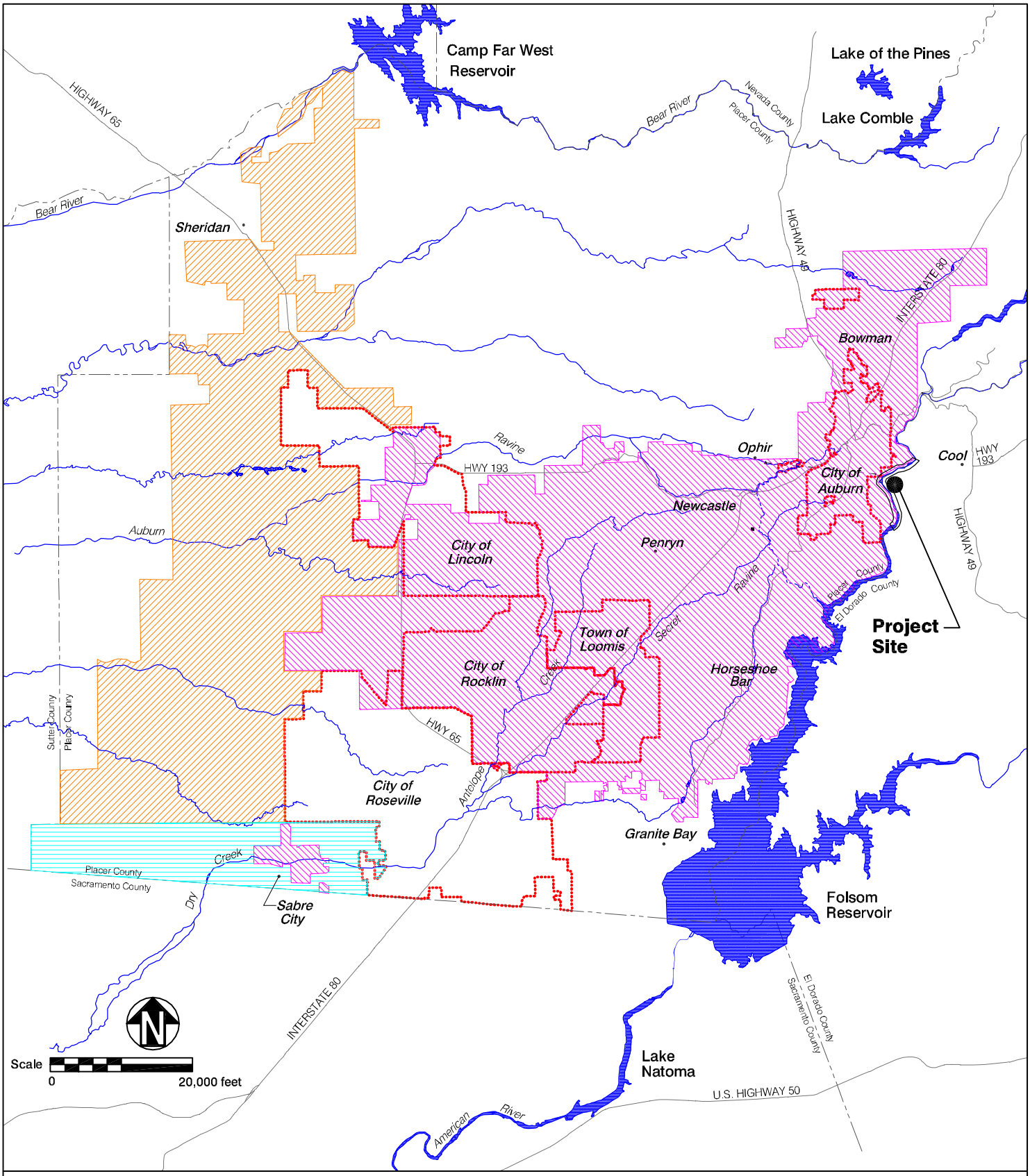


Figure 3.2-1 PCWA's Water Service Area to be Served by the American River Pump Station Project

3.2.4 WATER SERVICE AREA FOR U.S. BUREAU OF RECLAMATION'S FUTURE CENTRAL VALLEY PROJECT ACTIONS IN THE AMERICAN RIVER BASIN

Reclamation has identified several reasonably foreseeable federal actions that, over the next 25 years, would result in substantial changes in CVP system operations and an increase of American River or Sacramento River diversions for municipal and industrial (M&I) and agricultural water supplies for use in the American River Basin. These actions include new and renewal CVP long-term contracts, Warren Act contracts for the use of federal facilities to obtain water rights water, agreements with Water Forum participants stipulating the conditions of dry year water use agreements, and various flood control projects (Folsom Reservoir), and infrastructure improvements, including the American River pump station project.

The Cumulative Report (Appendix D of the Draft EIS/EIR) provides a programmatic assessment of potential effects to environmental resources within the "service area" of water purveyors receiving water under new or renewal federal water supply contracts or otherwise facilitated by a federal action (Warren Act Contract, project funding or other discretionary approval).

The cumulative service area analysis evaluates the potential secondary, indirect effects of providing increased water supplies to lands within the service boundaries of the water purveyors and includes lands within Placer, El Dorado, Sacramento, Alameda, and Contra Costa counties where impacts to environmental resources could result from the collective actions associated with future planned urbanization. The determination of existing and future projected land uses was based on current general plans and input from local land use planning agencies.

The report evaluates potential land use, terrestrial vegetation and wildlife, fish resources and aquatic habitat, and other growth-related effects, including water quality, recreation, visual and cultural resources, power supply, flood control, and public services and utilities.

Detailed descriptions of Reclamation actions, associated service area and results of that analysis are provided in the Cumulative Report (Appendix D of the Draft EIS/EIR). The analysis is intended to provide an overview of potential changes within the American River Basin. Additional individual evaluations of specific purveyor water service areas would be required in project-specific environmental documentation and for resource agency consultations.

3.3 IMPACT ASSESSMENT FRAMEWORK AND METHODOLOGY

Implementation of the Proposed Project or alternatives is anticipated to produce two distinct types of effects within the local or regional setting: (1) direct impacts related to construction and operation of the facilities (such as noise); and (2) indirect diversion-related effects (such as changes in hydrology) resulting from the increased diversion of water from the North Fork American River. The facilities impacts are localized, and are mostly construction-related; the potential effects of increased diversions are long-term, and may affect environmental resources beyond the local project area. The general approach to the analysis of these topics is presented below. Additional topic-specific information is presented in each of the Methodology sections for the resources discussed in Sections 3.4 through 3.17. Service area impacts for PCWA and for the American River Basin study areas are discussed in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.3.1 FACILITIES-RELATED ANALYSIS FRAMEWORK

The EIS/EIR evaluates the specific environmental effects of construction of the facilities necessary to implement the pump station project and anticipated operations and maintenance practices. Generally, the approach for these analyses was to consider the type of construction, operation, and maintenance practices that would affect local resources. Information for these evaluations was collected through literature review, agency correspondence and consultation, and site surveys. Resource-specific methodologies are presented for each topic.

3.3.1.1 Presentation of Facilities-Related Impacts

The analysis provides a project-specific evaluation of how each alternative would affect the existing resources (as described in the Affected Environment section) under the following comparisons:

- No Action /No Project Alternative Compared to the Existing Condition
- Proposed Project Compared to the Existing Condition
- Upstream Diversion Alternative Compared to the Existing Condition

The impact indicators selected to evaluate the resource topics represent the potential impact issues. A discussion of each impact issue is presented for each alternative. The anticipated change that would occur under each scenario is compared against the significance criteria to determine whether the individual alternatives would result in a less than significant, potentially significant, or significant impact. In most instances, where a potentially significant or significant impact may occur, environmental protection measures to reduce environmental effects to less than significant have been identified and incorporated.

For many facilities-related issues, the No Action/No Project Alternative would not differ substantially from the existing condition. In instances where there are notable differences between existing and No Action/No Project Alternative conditions, the analyses under this

heading also provide a discussion of Action Alternative impacts compared to the No Action/No Project Alternative. These comparisons are further highlighted in the impact summary table (Executive Summary of the Final EIS/EIR, Table S-5).

3.3.1.2 Cumulative Facilities-Related Impacts

The individual alternative comparisons are followed by a discussion of how the facilities-related effects of the Proposed Project or alternatives would contribute to cumulative conditions in the American River canyon and nearby communities. For this analysis, the effects of past, present, and reasonably foreseeable future projects were considered. Several agencies were contacted to determine the type and location of other projects that would be under construction or implementation within the timeframe of the pump station project and that may contribute to similar "facilities-related" effects. Other projects identified and included in the cumulative facilities-related analyses are described below.

Past Actions

Past actions within the project study area that have produced effects similar to environmental effects which could occur under the Proposed Project and alternatives include Auburn Dam construction and MFP development.

Auburn Dam Construction

Construction of the Auburn Dam foundation in the 1970s resulted in massive changes to the project study area. Two substantial modifications to the river canyon included installation of the bypass tunnel and construction of the earth-filled cofferdam. The bypass tunnel and cofferdam were used to dewater the dam construction zone. Additionally, canyon walls were cut and substantially modified to construct extensive foundations for the arch dam, power plant, tailrace, and service spillway stilling basin, and tributary creek canyons upstream and downstream of the site were filled with large volumes of excavated bedrock (Reclamation 1996a).

In 1986, several years after suspension of dam construction, a major flood overtopped and eroded away the northwest section of the cofferdam. An extremely large volume of water impounded behind the cofferdam poured through the failing section in a short period of time, with the instantaneous flow reaching several hundred thousand cubic feet per second (cfs) according to one estimation (Reclamation 1996a). An immense volume of dam-derived sediment filled the canyon floor up to 23 feet deep downstream of the breach and extending thousands of feet downstream. Large quantities of finer sediment were deposited further downstream and into Folsom Reservoir. Due to the instability of the river bed and presence of cofferdam materials, each new flood event reconfigures the canyon floor and river channel (Reclamation 1996a).

Middle Fork Project Development

In the mid-1960s, PCWA developed the MFP, a multi-purpose water development project designed to utilize waters of the Middle Fork American River and Rubicon River for irrigation,

domestic and commercial water supplies, and hydroelectric generation. The project includes two reservoirs, five diversion dams, five power plants, and related facilities. The MFP is operated first to meet required fish flows, then to meet PCWA's water demands, and finally to maximize hydroelectric generation. Most of PCWA's MFP water is diverted from Folsom Reservoir and flows upstream are controlled by power production operations. Typically, flows are regulated by power generation water releases and, therefore, flows in the river are low during the night and early morning when electric demand also is low. Releases and river flow increase into the afternoon and evening as electrical use increases. The construction of the MFP has greatly altered the natural flow cycles of the Middle Fork American River, the Rubicon River, and the North Fork American River.

Present Actions

Present actions within the project study area which produce effects similar to environmental effects that could occur under the Proposed Project and alternatives include the annual installation, operation, and removal of the seasonal pump station; the PCWA/Sacramento Suburban Water District (SSWD, formerly Northridge Water District (NWD)) Groundwater Stabilization Project; and the development of camp sites at the American River Canyon Overlook Recreation Area.

American River Seasonal Pump Station

Reclamation has met its obligation to supply water to PCWA through the annual installation and removal of a seasonal pump station. Each spring Reclamation installs the seasonal pumps and then removes the equipment in late autumn to avoid damage from rain and high river flows (R. Hall, pers. comm. 1997). Often, installation of the seasonal pump station requires rehabilitation of access roadways, reinstalling pipeline from the seasonal pump station site to the Auburn Ravine Tunnel portal, and excavating/dredging the sump pond in front of the pump station's intake structure (Figures 2-4 and 2-5).

Placer County Water Agency/Sacramento Suburban Water District (formerly known as Northridge Water District) Long-Term Groundwater Stabilization Project

The PCWA/SSWD (NWD recently combined with Arcade Water District and renamed SSWD) project provides a surface water supply to SSWD from PCWA's MFP under its American River water rights as a means of stabilizing the regional groundwater aquifer. This surface water supply allows SSWD to curtail its historic and significant reliance on groundwater, thereby contributing to groundwater stabilization through the reduced withdrawals at, or near, the centroid of the groundwater cone of depression in this area. It also provides SSWD with greater conjunctive use opportunities, operational flexibility and reliability in meeting current and anticipated water needs, and perhaps provide water for portions of the service areas of McClellan Air Force Base, California-American Water Company (CAWC) (formerly known as Citizens Utility Company of California), and Rio Linda/Elverta Community Water District with part of this surface water supply.

To deliver water to SSWD, PCWA makes scheduled releases of MFP water that are diverted at Folsom Reservoir. Up to 29,000 AF are expected to be delivered to SSWD in this manner, subtly altering flows in the North and Middle forks of the American River including flows through the project study area.

American River Canyon Overlook Recreation Area Campground

The Auburn Recreation District (ARD) is preparing to develop a campground immediately south of the Auburn Dam Overlook. These grounds will include designation of up to 50 campsites accommodating up to 200 visitors. Peak use is anticipated to occur in spring and summer months. The campsites will be fairly rustic, walk-in sites. The ARD campsite would be accessed by Pacific Avenue and would be available for seasonal use when there is a campground host on site. Vehicles would park at the existing Auburn Dam Overlook parking lot and recreationists would hike to the designated tent sites. The ARD anticipates that very little earthwork will be required to create flat areas for tent sites. Picnic tables, trash containers, and portable restrooms will be provided. The site will be managed and maintained by ARD.

At the time when the Draft EIS/EIR was being prepared, it was believed that construction of the ARD campground would begin in the immediate future and that the site would be on schedule to open in 2001. This timeframe has been revised and the current expectation is for the campground to be completed by the summer of 2003. At present, the proposal is under environmental review and pending final board approval.

Reasonably Foreseeable Future Actions

Future actions within the project study area that could produce effects similar to environmental effects under the Proposed Project and alternatives include construction activities anticipated to take place within the same general timeframe as the Proposed Project (late 2002 through summer 2004) as well as future projects that would contribute to modification of the pump station and/or reoperation of the MFP.

Placer County Seismic Retrofit and Painting of Foresthill Bridge

Placer County Department of Public Works is in the early planning stages for two improvement projects involving the Foresthill Bridge. Seismic retrofit activities would include operation of heavy construction equipment (i.e., crane) within the North Fork American River canyon. The restoration activities (i.e., painting) also would involve the use of construction equipment, although these activities may avoid placement of vehicles within the river canyon. Related construction activities would include protective measures to minimize environmental impacts and protect river water quality. Implementation of these projects could coincide with the Proposed Project construction activities, depending upon the length of time required to complete planning studies and environmental review processes.

Georgetown Divide Public Utility District Folsom North Pumping Project

The Folsom North Pumping Project is intended to deliver water from the North Fork American River to Georgetown Divide Public Utility District (GDPUD). The project would utilize PCWA's proposed intake structure and year-round pump station. Water would be pumped from the North Fork American River by PCWA's intake and pump station, then conveyed through a pipe crossing the North Fork to an outlet in the eastern bank (El Dorado County side) of the river. New pipeline would be constructed by GDPUD from this outlet upwards along the canyon then proceeding to a new regulating reservoir of 60 to 100 acre-feet (AF) in capacity. An additional pipeline and small pump station would be used to convey water from the regulating reservoir to a new 2.0 to 2.5 million gallons per day (mgd) capacity water treatment plant in the community of Cool. The project would be operated conjunctively with GDPUD's existing Stumpy Meadows Project. The objective would be to fully utilize Stumpy Meadows Project water and to use the more expensive Folsom North Pumping Project only as necessary. As demands increase, the Folsom North Pumping Project would operate more frequently, diverting up to 5,788 AF by the year 2030. Water taken by the Folsom North Pumping Project would be served to GDPUD's Western Service Area, including the Cool and Pilot Hill areas and the peninsula between the North and South forks of the American River west of Highway 49.

The Folsom North Pumping Project would require the installation of an additional pump at the year-round pump station, a pipeline along to the eastern river bank, and also may require construction of an additional lift station. These facilities would introduce additional sources of noise into the canyon and would further alter the visual character of the project study area.

Placer County Water Agency American River Pump Station Expansion

As described in Chapter 2.0, Description of Alternatives, PCWA identified the potential future expansion of the pump station project from a capacity of 100 to 200 cfs to meet future anticipated demands for PCWA MFP water supplies. Such expansion would require additional CEQA documentation and public review, but physical changes to the project site would be limited due to the design of the Proposed Project. Specifically, space is included in the pump station housing to accommodate additional pumps to increase the pump station capacity in the future to 200 cfs. Such changes would have limited environmental impact to the project site, and would include some additional reoperation of MFP storage and hydroelectric facilities to provide sufficient water to divert up to 200 cfs at the project site. Such increases in releases would increase American River flows during low-flow conditions between Ralston Afterbay and the project study area.

Placer County Water Agency Ralston Afterbay Fish Habitat Improvements

PCWA is evaluating the feasibility of removing gravel from behind Ralston Afterbay Dam and placing it in the river downstream of the dam to improve fish habitat in this reach of the Middle Fork American River.

City of Auburn Development

The City of Auburn has identified several subdivision projects along or near Maidu Drive that are at various planning or development stages. Depending upon the timing of environmental review and permitting activities for these projects, one or more may coincide with pump station project construction.

Placer County Development

Various residential, commercial, and public works projects are anticipated to take place within the same general timeframe as the Proposed Project.

3.3.2 DIVERSION-RELATED ANALYSIS FRAMEWORK

Under the Proposed Project or Upstream Diversion Alternative, PCWA and Reclamation would construct a year-round pump station project capable of diverting up to 100 cfs for an annual water supply diversion of up to 35,500 AF. This diversion represents an increase of up to 27,000 AF over the existing condition (8,500 AF) and an additional 16,200 AF over what may be obtained under the No Action/No Project Alternative (19,300 AF). PCWA would reoperate Ralston Afterbay to ensure sufficient river flow at and below the pump station intake for the diversion as well as to meet minimum instream flow requirements. It is anticipated that such reoperation would only be required during low flow months when the unregulated North Fork flows do not satisfy flow requirements. In some years (dry water years) during low-flow periods, operation of the MFP would include additional releases from the upstream storage reservoirs, French Meadows and Hell Hole.

The diversion-related analysis addresses the potential effects of the operation of the alternatives on those resources potentially affected by changes in surface water hydrology and are based on comparisons made between computer model simulations that represent existing and future hydrologic conditions with and without the Proposed Project.

An overview of the computer simulation models used for analysis of alternative impacts, the simulations performed from which impacts were estimated, and the primary assumptions and model inputs used to represent hydrologic, regulatory, structural, and operational conditions is provided below. Detailed information is provided in Appendix E of the Draft EIS/EIR. Select representations (graphs, tables, charts) of the modeling results, as cited throughout the Chapter 3.0 impact analyses, are provided in Appendix H of the Draft EIS/EIR, Modeling Tables and Figures Cited in Chapter 3.0, Affected Environment and Environmental Consequences. Appendix I of the Draft EIS/EIR, the full set of modeling output for each simulation and comparison, is available on compact disk (CD). The CD may be obtained upon request through the lead agency representatives (see Cover Page for contact information).

3.3.2.1 Hydrologic Framework

The project site is located on the North Fork American River, upstream of the Folsom Reservoir high water line. Flows through the project area are a combination of North Fork and Middle

Fork flows. The North Fork flows are unregulated, while the Middle Fork flows are regulated by operation of the MFP. Folsom Reservoir, approximately 14 miles from the project area, is the most upstream CVP facility on the American River.

Both the CVP and State Water Project (SWP) store and deliver water for various purposes, including meeting water supply and environmental requirements. Flow levels in the lower American River are largely determined by Reclamation's operation of Folsom Dam, a component of the CVP. Flow levels in the Sacramento River and the Sacramento-San Joaquin River Delta (Delta) are governed largely by the integrated operations of the CVP and SWP.

Upper American River - Middle Fork Project

PCWA's MFP is a multi-purpose hydropower, water supply, irrigation, recreation, and water conservation project on the Middle Fork American River and includes the Rubicon River and other tributaries (Figure 2-2). It includes two large storage reservoirs, five diversion dams, five power plants, water transmission facilities, tunnels, and related facilities. The two large storage reservoirs of the MFP, French Meadows and Hell Hole, have a combined storage capacity of approximately 344,000 AF.

French Meadows Reservoir is situated in the upper Middle Fork American River watershed about 16 miles west of Lake Tahoe. A diversion tunnel with a capacity of 400 cfs also delivers water to Hell Hole Reservoir via the French Meadows Power Plant (DWR 1997). Hell Hole Reservoir is located about three miles southeast of French Meadows Reservoir on the Rubicon River. Water is released from these storage reservoirs downstream to Ralston Afterbay. Ralston Afterbay, located approximately 20 miles east of Auburn, is operated as a re-regulating reservoir for the MFP. The confluence of the North Fork of the Middle Fork and the Middle Fork American River is less than one mile downstream of Ralston Afterbay.

Approximately 20 miles downstream from this confluence is the confluence of the Middle Fork American River and the North Fork of the North Fork of the American River, near the crossing of Highway 49 over the North Fork of the American River near Auburn. The flows of the North Fork of the Middle Fork and the North Fork of the North Fork are unregulated. The flows of the North Fork of the Middle Fork are important to meeting the 75 cfs minimum instream flow requirements for downstream of Ralston Afterbay, specified in Article 37 of PCWA's Federal Energy Regulatory Commission (FERC) license (Federal Power Commission 1963), and agreed to by the California Department of Fish and Game (CDFG). The flows of the North Fork of the North Fork are important to meeting the 75 cfs minimum instream flow requirements established by State Water Resources Control Board (SWRCB) D1400, downstream of the American River pump station.

Central Valley Project and State Water Project Operation

The respective operations of the CVP and SWP are coordinated to manage streamflows in many Central Valley streams and the Delta. Many factors are considered in the operation of the CVP and SWP facilities. Releases from CVP and SWP reservoirs must be sufficient to achieve downstream environmental conditions such as flow, water quality, and temperature objectives.

These environmental conditions are required at various locations within the river system and in the Delta.

Considerations in determining the required releases include the diversions of CVP and SWP water contractors from the river system, diversions by non-CVP and SWP entities, the contribution of flow into the river system from streams not controlled by the CVP and SWP, the contribution of return flows into the system from agricultural drains and wastewater treatment plants, and operation of other projects. Environmental obligations must be met, and therefore in years of low water supply, reduction in water deliveries to some CVP and SWP contractors becomes necessary.

Lower American River

Reclamation operates Folsom Dam to meet the objectives and environmental obligations of the San Francisco Bay-Sacramento-San Joaquin River Delta Estuary (Bay-Delta) Water Quality Control Plan (WQCP), the biological opinions for winter-run chinook salmon, Delta smelt, and splittail, and the management of Central Valley Project Improvement Act (CVPIA) Section 3406(b)(2) water.

Additionally, efforts are underway to develop and implement a lower American River Flow Management Plan to increase the minimum release requirement for the river in conjunction with establishing an adaptive management process for Folsom Reservoir and lower American River operations, geared toward the protection and enhancement of fish species of priority management concern.

Sacramento River and Sacramento-San Joaquin River Delta

Instream flow objectives for the Sacramento River and the Delta are governed by state and federal laws and regulations established for the protection of fishery and aquatic resources. Requirements are defined in the following:

- SWRCB WQCP for the Bay-Delta
- NMFS Winter-run Chinook Salmon Biological Opinion
- USFWS Delta Smelt Biological Opinion
- USFWS Sacramento Splittail Biological Opinion

The Bay-Delta WQCP established measures to protect the beneficial uses of the Bay-Delta and includes objectives that influence the operations of the CVP and SWP. Some of these objectives (specific flow, temperature, reservoir storage, and diversion requirements) in the Sacramento River and Delta were developed through consultation with NMFS for the Biological Opinion for Winter-run Chinook Salmon. Reclamation currently operates the CVP in accordance with the 1993, as amended in 1995, Biological Opinion for Winter-run Chinook Salmon and Bay-Delta Plan. The delta smelt and Sacramento splittail biological opinions both concluded that operations as specified by the Biological Opinion for Winter-run Chinook Salmon and the Bay-Delta Plan would probably benefit these species.

Feather River

Minimum flows in the lower Feather River are established by a 1983 agreement between CDFG and DWR. The major provisions include minimum flow standards between the months of October and March for preservation of salmon spawning and rearing habitat, as well as streamflow reduction limits to prevent salmon redds from drying out (DWR 1994). In normal water years, the minimum flow requirement is 1,700 cfs from October through March and 1,000 cfs from April through September. Lower minimum flows are allowed in dry and critical water years. Additionally, the agreement does not allow for more than 2,500 cfs from October 15 through November 30. If the 2,500 cfs maximum flow is surpassed, the river must be maintained at 2,500 cfs from the point of initial violation through March.

Water Rights and Central Valley Project Contractors

Surface water rights in California are governed under a complex, hierarchical system administered by the SWRCB. Most surface water rights can be categorized either as riparian rights, which are attached to property that abuts a waterway, or pre-1914 or post-1914 appropriative water rights. Riparian and pre-1914 water rights are granted the prior right to use water; when these needs are met, post-1914 water rights holders are allowed to divert water. The priority of appropriative water rights holders is governed by the principle of "first in time, first in right." In other words, earlier (senior) water rights holders are allowed to appropriate water before junior water rights holders. The CVP (and SWP) hold post-1914 appropriative water rights from the SWRCB.

In order to resolve potential conflicts with the CVP, Reclamation entered into contracts with many senior water rights holders early in the CVP development. These settlement contracts recognize senior water rights and clarify the responsibilities of Reclamation and the other parties. Reclamation also has entered into long-term water contracts with various water purveyors (irrigation districts and municipal water agencies) for delivery of CVP water. These water service contracts are a type of wholesale agreement in which water is delivered to the CVP contractor subject to availability. Reclamation operates the CVP to meet environmental requirements and to accommodate diversions by settlement contractors and other water rights holders senior to the CVP. Water is delivered to Water Service Contractors to the extent that water is available in excess of these obligations, in accordance with allocation deficiency criteria.

3.3.2.2 Models Used for the Hydrologic (Diversion-Related) Impact Analysis

Computer simulation models of water systems provide a means for evaluating changes in system characteristics such as carryover storage, reservoir water elevation, river flow rate and power generation, as well as the effects of these changes on environmental parameters such as water temperature, early-lifestage chinook salmon survival, and recreational opportunities. The models used to evaluate the alternative operations include the following:

- Reclamation's Project Simulation (PROSIM) model of the CVP and SWP;
- DWR's Upper American River Model (UARM) of the major reservoirs and river reaches above Folsom Reservoir;
- Reclamation's American and Sacramento river water temperature models; and
- Reclamation's American and Sacramento river early-lifestage chinook salmon mortality models.

PROSIM provides a monthly simulation of the CVP and SWP water and power operations. Output from PROSIM serves as input to the temperature models that simulate monthly American River and Sacramento River water temperatures. Temperature model output serves as input to the early-lifestage chinook salmon mortality models.

PROSIM Model

PROSIM simulates CVP and SWP operations and the hydrologic effects of those operations on the major Central Valley river and reservoir systems. The model simulates system operations within the geographical area affected by CVP and SWP facilities, including the Delta. PROSIM Version 2000 was used in this study and incorporates modifications to code and data sets determined through resource agency consultations and coordination meetings held in 1999 and 2000.

PROSIM uses a mass balance approach to simulate the occurrence, regulation, and movement of water from one node (i.e., computation point) to another. Various physical processes (e.g., surface water inflow or accretion, flow from another node, groundwater accretion or depletion, and diversion) are simulated or assumed. Operational constraints, such as reservoir size and seasonal storage limits or minimum flow requirements, also are defined for each node. The model uses a monthly time step. Flows are specified as a mean flow for the month and reservoir storage volumes are specified as end-of-month content. Appendix E provides additional information regarding the PROSIM model and how it is used to simulate system operations.

Upper American River Model

The UARM simulates the American River system upstream of Folsom Reservoir by combining use of the U.S. Army Corps of Engineers (Corps) HEC-III Program for hydrologic routing and storage accounting purposes with a spreadsheet model that simulates operations of the MFP.

Temperature Models

Reclamation has developed water temperature models for five reservoirs (Trinity, Whiskeytown, Shasta, Oroville, and Folsom) and three river systems (Sacramento, Feather, and American). The models for reservoirs are distinctly different than the models for rivers. Because of the monthly time step and relatively small volumes, regulating reservoirs (Lewiston, Keswick, Thermalito, and Natoma) are modeled similar to river reaches rather than as storage reservoirs.

These models estimate mean monthly water temperatures based on flow and storage quantities simulated by PROSIM. They are used to identify changes in water temperature caused by changes in CVP and SWP operations.

Reservoir Models

Reservoir inflow, outflow, and end-of-month storage content as calculated by PROSIM is input to the reservoir temperature models. Additional input data include meteorological information and monthly temperature targets which are used by the model to select the level from which reservoir releases are drawn. Temperature control devices (TCD), such as the outlet control device in Shasta Reservoir, the temperature curtains in Whiskeytown Reservoir, and the penstock shutters in Folsom Reservoir, are incorporated in the simulation. Model output includes water temperature at each level in the reservoir as well as temperature of the reservoir release. The reservoir release temperature is then used in the downstream river temperature model.

River Models

The river temperature models utilize the calculated temperatures of reservoir release, much of the same meteorological data used in the reservoir models, and PROSIM output on river flow rates, gains and diversions. Mean monthly water temperatures are calculated at multiple locations on the Sacramento, Feather, and American rivers.

Automated Temperature Selection Procedure

The Folsom Reservoir and lower American River temperature models are utilized in an iterative manner referred to as the Automated Temperature Selection Procedure. This procedure operates the reservoir and river models with the objective of achieving multi-species fish monthly target water temperatures in the lower American River at Watt Avenue. Targets are achieved through choice of reservoir level from which the release is drawn.

Salmon Mortality Models

Water temperatures calculated for specific reaches of the Sacramento and American rivers are used in Reclamation's chinook salmon mortality models to estimate annual percentage mortality of early-lifestage chinook salmon. On the Sacramento River, a calculation is performed for each of the four chinook salmon runs: fall, late-fall, winter, and spring. On the American River, estimates are made for the fall-run chinook salmon.

Application of Modeling Output

The models used in this analysis (DWR's UARM, Reclamation's PROSIM, reservoir temperature models, American and Sacramento water temperature models, and the lower American and Sacramento river chinook salmon early-lifestage mortality models) are tools that have been developed for comparative planning purposes, not for predicting actual river conditions at specific locations at specific times. The 70-year and 69-year periods of record for PROSIM and temperature modeling, respectively, provide an index of the kinds of changes that

would be expected to occur with implementation of a specified set of operational conditions. Reservoir storage, river flows, water temperature, and salmon survival output for the period modeled should not be interpreted or used as definitive absolutes depicting actual river conditions that will occur in the future. Rather, output for the with-project and the cumulative condition can be compared to that for the without-project condition to determine:

- Whether reservoir storage or river flows and temperatures would be expected to change with implementation of the project alternative;

- The months in which potential reservoir storage and river flow and temperatures changes could occur;

- A relative index of the magnitude of change that could occur during specific months of particular water year types, and whether the relative magnitude anticipated would be expected to result in impacts to fish resources within the regional area; and

- The relative degree to which alterations in operations of Folsom Dam and Reservoir, as directed by the principles of coldwater pool management, could eliminate or minimize temperature increases.

The models used, although mathematically precise, should be viewed as having "reasonable detection limits." Establishing reasonable detection limits is useful to those using the modeling output for impact assessment purposes, and prevents making inferences: (1) beyond the capabilities of the models; and (2) beyond an ability to actually measure changes. Although data from the models are output to the nearest 100 AF, tenth of a foot in elevation, tenth of a cfs, tenth of a degree Fahrenheit (F), and tenth of a percent in salmon mortality, these values were rounded when interpreting differences for a given parameter between two modeling simulations. For example, two simulations having river flows at a given location within one percent of each other were considered to be essentially equivalent. Because the models provide reservoir storage data on a monthly time-step, measurable differences in reservoir storage were evaluated similarly. Similar rounding of modeled output was performed for other output parameters in order to assure the reasonableness of the impact assessments.

3.3.2.3 Description of Simulations and Impact Analysis Comparisons

Model simulations were developed to represent existing and future hydrologic conditions with and without implementation of the Proposed Project. The simulations were then compared to identify the potential changes in the CVP/SWP hydrologic conditions (i.e., instream flow, reservoir elevations, end-of-month storage, and water temperature) that could influence environmental resources. The evaluation of environmental impacts was performed by considering the modeling results from the comparison in light of the impact indicators and significance criteria developed for each resource topic. Additional detail regarding the cumulative analysis is provided in the Cumulative Report (Appendix D of the Draft EIS/EIR).

Model Simulations

Five simulations were performed to meet the CEQA and NEPA analysis requirements for the project, as described below.

- Existing
- Proposed Project
- No Action/No Project Alternative
- Cumulative Condition
- Future Base

Modeling Simulation 1 - "Existing" - The Existing simulation represents the diversion at the seasonal pump station obtained under historical existing practices of installing the pumps in July, operating as needed throughout the summer (diversion rate of up to 50 cfs), and removal of the pumps in late October/early November. The historical maximum annual diversion amount for operation of the seasonal pumps is 8,500 AF.

The simulation represents existing hydrologic conditions within the CVP and SWP before the project is implemented. It includes existing surface water diversion and operation practices and policies (such as minimum instream flows, flood control, and Delta water quality standards) of the CVP/SWP. The modeling includes certain assumptions associated with accretion and depletions from the system which incorporates the exercise of water rights by non-CVP/SWP users.

The existing condition analysis satisfies CEQA requirements to evaluate a proposed project as if it were fully implemented under the existing environmental conditions. This comparison of the project to existing conditions is used to determine the potential significance of environmental changes that would occur with implementation of the Proposed Project or alternatives.

Modeling Simulation 2 - "Project" - The project simulation includes a year-round pump station with annual diversions of up to 35,500 AF. This simulation was conducted with all other CVP/SWP system demands at existing levels.

The simulation assumes implementation of PCWA's Purveyor-Specific Agreement from the Water Forum Action Plan (Water Forum 2000). Under this agreement, when projected March

through November unimpaired inflow to Folsom Reservoir is less than 950,000 AF, PCWA will replace to the American River a portion of the water diverted at the pump station by reoperation of the MFP reservoirs (referred to as "replacement water"). The replacement would start when the unimpaired inflow is less than 950,000 AF and would reach a maximum of 27,000 AF when the unimpaired inflow is less than 400,000 AF. Replacement water operations were modeled as delivery to Folsom Reservoir from MFP reservoirs in equal monthly amounts during the months of March through September. The maximum replacement was 27,000 AF corresponding to a Folsom Reservoir unimpaired inflow of 400,000 AF. For a Folsom Reservoir unimpaired inflow between 950,000 AF and 400,000 AF, the replacement water is linearly interpolated between zero and 27,000 AF.

Modeling Simulation 3 - "Future No Project" - The Future No Project simulation represents the No Action/No Project Alternative and incorporates all reasonably foreseeable actions with the exception of a year-round pump station. The diversion pattern for this model simulation corresponds with the extended operational period where Reclamation would install the seasonal pumps during April and remove them in early November for an annual supply of up to approximately 19,300 acre-feet annually (AFA).

Modeling Simulation 4 - "Cumulative" - The Cumulative simulation includes all reasonably foreseeable future actions including implementation of either the Proposed Project or Upstream Diversion Alternative, increasing PCWA's pump station annual diversion up to 35,500 AF and providing replacement water up to 27,000 AF in dry years. This simulation includes future build-out demands by all purveyors, subject to delivery restrictions defined through known agreements such as the Water Forum, as well as any reasonably foreseeable system operational changes or environmental obligations. Consistent with the Water Forum, dry year restrictions defined in the purveyor-specific agreements are included in the modeling assumptions. This simulation represents the future with the project.

Modeling Simulation 5 - "Future Base" - The Future Base simulation represents the existing condition pump station diversion (8,500 AF) under hydrologic conditions and demands assumed to be in place in the future. This simulation is used in the evaluation of the project's incremental contribution to the cumulative condition (CEQA consideration).

Impact Assessment Comparisons

The following comparisons were performed to assess the potential environmental effects of the Proposed Project and alternatives. The name of the simulation is indicated in parenthesis after the name of the alternative or condition as used in the impact analysis.

Action Alternatives (Project) Compared to the Existing Condition (Existing). Required by CEQA to identify, in an existing context, the potential impacts and benefits of installing the proposed year-round pump station. A permanent pump station with an annual diversion amount of 35,500 AF was compared to continued use of a seasonal pumping facility with an annual diversion of 8,500 AF.

Action Alternatives (Cumulative) Compared to the No Action/No Project Alternative (Future No Project) in the Future. Required by NEPA to identify, in a future context, the potential impacts and benefits of installing the year-round pumping facility. A year-round pump station with an annual diversion amount of 35,500 AF (with replacement water up to 27,000 AF in dry years) was compared to continued use of the seasonal pump station over an eight-month period with annual diversions of approximately 19,300 AF.

Cumulative Impacts (Cumulative Versus Existing). Required by CEQA and NEPA to identify the cumulative impacts of all reasonably foreseeable actions related to the American River Basin. A year-round pump station with an annual diversion of 35,500 AF (with replacement water up to 27,000 AF in dry years) was compared to the existing use of a seasonal pumping facility with diversions at 8,500 AFA.

The simulation of the cumulative condition represents "probable future projects" considering the timeframe of the project and other water supply projects that would influence the American River system (including the Sacramento River and Delta). The Cumulative simulation includes the additional diversion amounts under the Water Forum Agreement (which includes the pump station project), American River diversion CVP long-term contract renewals, and other potential future system-wide actions (out-of-basin CVP and SWP demands and increased Sacramento Valley demands).

Incremental Contribution to the Cumulative Condition (Cumulative Versus Future Base). The evaluation of the project's incremental contribution to the cumulative condition is based on a comparison between predicted CVP operations in the cumulative condition (2025), and a future base condition (essentially future without the project where the pump station diversion is maintained at the existing level of 8,500 AFA).

3.3.2.4 Modeling Assumptions

Assumptions and parameters used in the simulations are summarized in Appendix E of the Draft EIS/EIR, Table 1 and described briefly below.

Period of Record

The period of record used in the hydrologic modeling (UARM and PROSIM) extends from October 1921 through September 1991 (70 years). The period of record used for water temperature modeling and the associated simulations for early-lifestage chinook salmon mortality extends from 1922 through 1990 (69 years) because the temperature model operates on a calendar year, rather than a water year basis. These periods are considered representative of the natural variation in climate and hydrology experienced in the Central Valley during recent times, and include periods of extended drought, high precipitation and runoff, and variations in-between.

Hydrology/Level of Land Use

The hydrology used is based on DWR Bulletin 160-98. The existing condition uses a 2000 level of land use, estimated as a linear interpolation between 1995 and 2020 land uses. The hydrology used for the future condition (2025 system demands) is consistent with the 2020 land use projections.

Demands

Modeled demands for water diversion are based on contract amount, historical use, the CVPIA Programmatic Environmental Impact Statement (PEIS), and the Water Forum Agreement (Water Forum 2000). The modeled demand associated with each water purveyor is provided in Appendix E of the Draft EIS/EIR, Tables 2 through 5.

Existing condition demands were updated from the assumptions in the CVPIA PEIS and Water Forum evaluations and represent 2000 demand levels. Future condition demands are based on system demands projected for 2025. Demands that change between existing conditions and future conditions include purveyors in the American River Basin, East Bay Municipal Utility District (EBMUD), Contra Costa Water District (CCWD), and the SWP.

CVP project demands are modeled based on the conditions that apply to the four classes of contract type: agricultural, M&I, Settlement and Exchange Contractors, and refuges. SWP demands are simulated as defined and referred to by DWR's Office of Planning.

American River Basin

Water demands estimated for the American River Basin are summarized in Appendix E of the Draft EIS/EIR, Tables 2 and 3. Included in these tables are diversions from the Sacramento River that serve land in the American River Basin. Water Forum participants' agreements to incrementally reduce diversions in dry years are indicated in the tables and included in the modeling.

Facilities and Operations

Assumptions regarding CVP system facilities and associated operations, including flood control and temperature management, are explained in Appendix E, and displayed in Appendix E of the Draft EIS/EIR, Table 1.

Central Valley Project and State Water Project Allocation

Reclamation operates the CVP to balance many competing objectives, including water quality, fish and wildlife protection, irrigation and domestic water supply, hydroelectric power production, and flood control. In some years, the demand for water exceeds available supplies, and Reclamation must adjust its allocation of water among the uses. Authorizing legislation, statutes, regulations, and agreements guide Reclamation's decisions in determining water allocations. Similarly, DWR balances the SWP's many competing objectives.

One of the critical operating decisions for the CVP and SWP is the annual water supply allocation. When specific water supply indices indicate an insufficient amount of water supply to meet all demands, allocation deficiencies are imposed depending upon the contract type. The Settlement and Exchange Contractors and the CVP wildlife refuges receive either 100 percent (normal and wet years) or 75 percent (critical years) allocation based on the Shasta Index.

The remaining, and majority, of CVP contracts receive allocations on a sliding scale based on a comparison of forecast demand and supply for the March through September period. As the simulation is run, PROSIM compares water demand and available water supply for the March through September period. If the supply is greater than the demand, a full allocation is made. If the supply is less than the demand, allocations are reduced incrementally in response to the severity of the simulated shortfall. CVP M&I contracts receive allocations ranging from 100 to 50 percent. CVP agricultural contracts receive allocations ranging from 100 to 0 percent. Agricultural allocations are reduced first; reductions to the M&I allocations start after the agricultural allocations have been reduced to 75 percent of the full contract allocation. SWP allocation imposes deficiencies equally to agricultural and M&I water users.

Regulatory Standards

Various laws and regulatory decisions provide for protection of environmental conditions. These protections include minimum instream flow requirements, minimum reservoir storage content and protection of the Delta against excessive salinity. Specifics regarding these requirements, including references to the regulatory documentation are provided in Appendix E of the Draft EIS/EIR. As an overview, **Table 3.3-1** summarizes the locations and applicable conditions which are either incorporated into the modeling or used as objectives in evaluating the modeling results.

Table 3.3-1
Modeling Standards and Applications

Location	Regulatory Standard	Modeling Application
Trinity River/Reservoir	Minimum instream flow requirements Minimum end-of-year reservoir storage	Both incorporated into PROSIM
Clear Creek	Minimum instream flow requirements below Whiskeytown Reservoir	Incorporated into PROSIM
Upper Sacramento River	Minimum end-of-year storage in Shasta Reservoir	Objective evaluated in interpretation of PROSIM results
	Minimum instream flow requirements below Keswick Dam	Incorporated into PROSIM
	Navigation flow requirement upstream of City of Sacramento (at Wilkins Slough-navigation control point)	Incorporated into PROSIM
Feather River	Minimum instream flow requirements	Incorporated into PROSIM

Table 3.3-1 (Continued)
Modeling Standards and Applications

Location	Regulatory Standard	Modeling Application
Upper American River	Minimum instream flow requirements below the American River pump station diversion site	Incorporated into UARM
Lower American River	Minimum instream flow requirements (1) below Nimbus Dam and (2) for the reach from Nimbus Dam to the confluence with the Sacramento River	Incorporated into PROSIM
Lower Sacramento River	Minimum instream flow requirements at (1) Freeport and (2) Rio Vista	Incorporated into PROSIM
Mokelumne River	Minimum release rates from Camanche Reservoir	Incorporated into SANJASM modeling which serves as input to PROSIM
Stanislaus River	Minimum instream flows below Goodwin Dam	Incorporated into SANJASM/ STANMOD modeling which serves as input to PROSIM
Tuolumne River	Minimum instream flow requirements at LaGrange Bridge	Incorporated into SANJASM modeling which serves as input to PROSIM
San Joaquin River	Minimum instream flow requirements at Vernalis	Incorporated into SANJASM/ STANMOD modeling which serves as input to PROSIM
Delta	Maximum salinity, minimum dissolved oxygen, minimum outflow, and maximum export	Incorporated into PROSIM

3.3.3 COMPLIANCE WITH ENDANGERED SPECIES AND FISH AND WILDLIFE COORDINATION ACTS

The Fish Resources and Aquatic Habitat (Section 3.5), Terrestrial Resources (Section 3.6), and ESA Compliance (Section 3.19) sections, combined with the biological resources evaluations of the Cumulative Report (Appendix D of the Draft EIS/EIR), provide information needed to meet state and federal regulations for the protection of biological resources.

3.3.3.1 Endangered Species Acts

A summary discussion of listed and proposed for listing species protected under the federal ESA of 1973, as amended, and the California Endangered Species Act (CESA) is provided in the Terrestrial Resources and Fish Resources and Aquatic Habitat sections of the EIS/EIR and the Cumulative Report (Appendix D of the Draft EIS/EIR). An assessment of biological and other resource issues for previously prepared environmental documents and from general, specific, and master plans for land development activities in the project service area is included as part of the

analysis and is provided in the Cumulative Report (Appendix D of the Draft EIS/EIR). The assessment provides an overview of impacts anticipated to result from future development as currently approved by those agencies with local land use jurisdiction and authority.

3.3.3.2 Fish and Wildlife Coordination Act

The Fish Resources and Aquatic Habitat and Terrestrial Resources sections of the EIS/EIR and Cumulative Report provide information needed to meet Fish and Wildlife Coordination Act (FWCA) requirements (i.e., a discussion of wildlife species with the potential to be affected by the Proposed Project or alternatives), with the exception of federally listed and proposed for listing species.

3.4 WATER SUPPLY AND HYDROLOGY

3.4.1 AFFECTED ENVIRONMENT

3.4.1.1 Regional Setting

The regional setting includes water supply components and associated waterways of the CVP and SWP system that may be indirectly affected by implementation of the Proposed Project or alternatives and other reasonably foreseeable actions within the American River Basin. These facilities include: Trinity and Shasta reservoirs, the upper and lower Sacramento River, Oroville Reservoir, the Feather River, Folsom Reservoir, Lake Natoma, the lower American River, and the Delta. The area is defined in Section 3.2.1 and shown on Figure 2-1. The water supply and hydrology of these system components and the purveyors that utilize them for water supplies are described in the Cumulative Report (Appendix D of the Draft EIS/EIR).

Water is supplied to the region from PCWA's MFP, water rights from the American River Basin, the CVP, the SWP, and groundwater. Water storage and conveyance components of these systems are operated in an integrated manner to meet the regulatory requirements (environmental instream flows and flood control) and to provide water for M&I and agricultural uses. These waterways and resources potentially would be affected by implementation of the Proposed Project or alternatives and future changes in CVP operations. Detailed descriptions of the CVP and SWP systems, the integrated operations, and water purveyors that utilize them for water supplies are described in the Cumulative Report (Appendix D of the Draft EIS/EIR).

Central Valley Project

The CVP is a multi-purpose project operated by Reclamation that stores and transfers water from the Sacramento, San Joaquin, and Trinity river basins to the Sacramento and San Joaquin valleys. The CVP was authorized by Congress in 1937 for water supply, hydropower generation, flood control, navigation, fish and wildlife, recreation, and water quality control purposes. The CVP service area extends about 430 miles through much of California's Central Valley, from Trinity and Shasta reservoirs in the north to Bakersfield in the south.

State Water Project

The SWP supplies water to 30 agencies (contractors) in the San Francisco Bay area, the San Joaquin Valley, and southern California. The northernmost portion of the SWP consists of three small lakes on tributaries of the Feather River. The flows from the tributaries augment Feather River flows as the branches and forks of the Feather River converge at Oroville Reservoir, the principal reservoir of the SWP. From Oroville Reservoir, water flows through three hydro-electric power plants before continuing down the Feather and Sacramento rivers to the Delta.

Regional Groundwater Basin

An extensive groundwater aquifer system underlies the Central Valley. The system is categorized into a shallow aquifer zone and an underlying deeper aquifer zone. Since 1970, with steadily increasing groundwater pumping, groundwater levels and groundwater storage have declined throughout the Central Valley.

3.4.1.2 Project Area Setting

The water supply resources of the project study area include the Middle and North forks of the American River. The area of study encompasses the Middle Fork American River from below Ralston Afterbay to its confluence with the North Fork American River and downstream past the Auburn Dam site to Oregon Bar. PCWA's seasonal pump station is the only existing intake/diversion facility in this reach. The project area setting is depicted on Figure 2-2.

3.4.1.3 Water Supply System and Water Service Area

Placer County Water Agency Water Supply

PCWA primarily uses surface water as its source of supply for M&I and agricultural uses throughout its service area. A small amount of groundwater is used in Service Area Zones 2 and 4.

PCWA has three water source entitlements that can be used for western Placer County: (1) the Drum-Spaulding Project; (2) the MFP; and (3) CVP American River water. The surface water and groundwater sources are described below. Additionally, provisions of PCWA's purveyor specific agreement in the Sacramento Area Water Forum Agreement is discussed.

Drum-Spaulding Project Raw Water Supply

The Pacific Gas and Electric Company (PG&E) Drum-Spaulding Project supply originates from Lake Spaulding, located on the south Yuba River and Fordyce Creek, and Rollins Reservoir, located on the Bear River. The water supply is conveyed primarily via the Drum, Bear River, and Upper Boardman canals. The contract between PCWA and PG&E states that PCWA can receive up to 100,400 AFA. Because of physical restrictions on the Bear River Canal through which all of the supply is conveyed, PCWA is limited to a diversion of 244.8 cfs. PCWA delivers this water to Zone 1.

Middle Fork Project Raw Water Supply

PCWA's MFP is a multi-purpose project designed to conserve waters of the Middle Fork American River, the Rubicon River and certain tributaries for irrigation, domestic and commercial purposes, and for the generation of electrical energy. Principal project features include two storage and five diversion dams, five power plants, diversion and water transmission facilities, five tunnels and related facilities.

SWRCB Permits 13856 and 13858, both issued in 1963 and amended in 1975, allow for diversion of MFP water at Auburn (the seasonal pump station) or at Folsom Dam (PCWA 1993). PCWA's consumptive use of its water rights is limited under an agreement with Reclamation to no greater than 120,000 AFA. PCWA's power purchase agreement with PG&E limits the amount of MFP consumptive use diversions to 90,000 AF until 2002. In addition, the PG&E contract limits diversions according to the monthly diversion schedule presented in **Table 3.4-1**.

Of the 120,000 AFA MFP water available to PCWA, a total of 55,000 AFA has been contracted to SJWD (25,000 AFA) and the City of Roseville (30,000 AFA). In addition, in years when PCWA experiences a surplus in supply, PCWA has contracted to deliver up to 29,000 AFA to SSWD.

Table 3.4-1
Allowable MFP Monthly Diversion Schedule
Per Pacific Gas and Electric Company Contract Limits

Month	Permissible Range of Diversions (Percent)
January	0 to 5
February	0 to 5
March	2 to 6
April	5 to 10
May	9 to 16
June	12 to 19
July	13 to 19
August	13 to 16
September	12 to 13
October	4 to 8
November	0 to 6
December	0 to 5

Source: PCWA 1993

Central Valley Project Water Supply

PCWA entered into a CVP water supply contract with Reclamation on September 18, 1970. The original contract allowed for a maximum water allotment of 117,000 AFA. In February 2002, this contract was amended, limiting the amount of water available to PCWA from this source to 35,000 AFA prior to the completion of Auburn Dam. This supply is subject to water shortages in a manner similar to shortages imposed on other CVP contractors. PCWA does not anticipate using any of its CVP entitlement prior to putting to use the full amount of the 120,000 AF available to it annually from the American River pursuant to PCWA's water rights.

Groundwater Supply

PCWA currently obtains about 64 AF of water from two wells located in Zone 2 and about 927 AF of water from two wells located in Zone 4. Water from these wells supplements the amount of water that is obtained under PG&E water supply contracts.

Due to concerns about groundwater pumping exceeding groundwater recharge within the North American River Groundwater Basin, which underlies the western portion of Placer County, Placer County has established a policy that all urban and suburban development should rely on

public water systems using a surface water supply. PCWA's water demand projections for western Placer County assume that surface water will be used to supply all new development.

Sacramento Area Water Forum Agreement

The Water Forum Agreement was the result of the efforts of a diverse group of community leaders formed in 1994 to formulate principles for a regional solution of future water supply. The Water Forum is a comprehensive package that will achieve two coequal objectives:

- Attempt to provide a reliable and safe water supply for the region's economic health and planned development to 2030; and

- Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

The key water supply provisions in the specific agreement for PCWA are as follows:

- Water that PCWA sells to the City of Roseville, SJWD, and SSWD are not addressed in PCWA's specific agreement.

- In most years, when the projected March through November unimpaired inflow to Folsom Reservoir is greater than 950,000 AF, PCWA could divert and use up to 35,500 AF from the American River and 35,000 AF from the Sacramento and/or Feather rivers with certain conditions.

- In the drier and driest years, when the Folsom Reservoir inflow is less than 950,000 AF, PCWA will divert up to 35,500 AF plus replace up to 27,000 AF of water in the American River from reoperation of the MFP reservoirs.

A Regional Water Master Plan (RWMP) is being prepared to develop water resource management strategies to protect and enhance water supply availability, reliability, and quality for the water users of Folsom Reservoir, the American River, and the connected groundwater basin, while preserving the environmental and aesthetic values of the lower American River. The RWMP will define facilities that will facilitate the use of the American River water in wet years and the use of groundwater in dry years. The RWMP will provide the mechanism for implementing elements of the Water Forum Agreement. Through these planning efforts, it is possible that PCWA eventually may be able to either obtain water from others or supply water to others in dry and wet years.

Water Demand

Figure 3.2-1 depicts the portion of PCWA's water service area to receive water from the Proposed Project. Water demand projections have been prepared based on data from several sources. The Placer County General Plan and general plans from cities throughout the county each contain data regarding projected population and housing units. The Sacramento Area Council of Governments also has prepared population projections for Placer County. PCWA has compared this information with historical records and prepared a range of growth rates. The

projected water demands contained within PCWA's water supply master plan are based on a mid-range estimate of probable growth rates.

PCWA anticipates that build-out of its service area will occur in approximately 2035. By 2020, water demands are expected to increase by 50 percent, from 114,047 AF in 1999 to 171,572 AFA in 2020 for the entire service area. The projected annual water demand increase between 1999 and 2020 is two percent per year.

Table 3.4-2 presents the projected water demands for Service Area Zones 1 and 5. The table shows that demands will exceed the current supply of 108,900 AFA (100,400 AFA from PG&E and 8,500 AFA from the MFP) sometime before 2005. In fact, in recent years, PCWA had to purchase surplus water from neighboring water districts. This water would not remain available for PCWA's use in the future.

Table 3.4-2
Projected Water Demands in Service Area
(AF)

	2000	2005	2010	2015	2020
Zone 1	89,300	106,100	116,000	128,500	145,500
Zone 5	17,000	17,000	17,000	17,000	17,000
Total	**106,300**	**123,100**	**133,000**	**145,500**	**162,500**

Source: PCWA 2000

The remaining source of water to supplement Drum-Spaulding Project supplies to Zone 1 is additional water from PCWA's MFP. PCWA has agreed not to take CVP water until it is using 120,000 AFA of its MFP water.

Water Conservation/Water Shortage Contingency Plan

PCWA has installed water meters on each water connection in its service area and bills usage accordingly. PCWA's treated water service customers are 100 percent metered, which is rate in the Sacramento region. PCWA's in-house conservation actions have included:

- 1992 Rate Study (with emphasis on conservation-oriented billing rates)
- Pipe replacement program
- Pressure reducing program
- Meter testing and replacement program
- Leak detection program
- Corrosion control program
- Telemetry system expansion (to control pressures and reservoir overflows)

PCWA's conservation-related community outreach activities include:

- Conservation publications distribution
- Newsletter (mailed directly to PCWA customers)
- Elementary school conservation education program

- Conservation logo on agency letterhead
- Participation in conservation information distribution at local fairs

PCWA has a five-stage rationing plan that it invokes during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage. The five stages are delineated in **Table 3.4-3**

Table 3.4-3
Placer County Water Agency Water Rationing Stages and Reduction Goals

Shortage Condition	Stage	Customer Reduction Goal	Type of Rationing Program
None	I - Normal Conditions	0%	Normal Operation
Up to 10%	II - Water Alert	10%	Voluntary
10%-25%	III - Water Warning	25%	Mandatory
25%-35%	IV - Water Emergency	35%	Mandatory
35-50%+	V - Critical Water Emergency	50% or greater	Mandatory
Source: PCWA 1997			

Additionally, as a member of the Water Forum, PCWA has committed to either continue or initiate implementation of a number of conservation measures designed to improve water use efficiency. The measures (BMPs) incorporated into the Water Forum purveyor-specific agreement include the following:

- Provide interior and exterior water audits and incentive programs for single-family residential, multi-family residential and institutional customers;
- Offer plumbing retrofit kits to residential customers;
- Provide distribution system water audits, leak detection, and repair;
- Provide non-residential meter retrofit;
- Provide large landscape water audits and incentives for commercial, industrial, institutional, and irrigation accounts;
- Support city/county landscape water conservation requirements for new and existing commercial, industrial, institutional, and multi-family developments;
- Provide a public information program;
- Provide a school education program;
- Provide a commercial and industrial water conservation program;
- Implement conservation pricing;
- Provide a landscape water conservation program for new and existing single-family homes;
- Enact a water waste prohibition ordinance;

- Designate a staff member as a water conservation coordinator; and
- Provide an ultra-low-flush toilet replacement program for non-residential and residential customers.

PCWA also is committed to improving the efficiency of its raw water delivery system and in aiding raw water customers to become more water efficient. Each year, PCWA installs lining along additional sections of the raw water delivery canals and pipelines to minimize water loss.

Placer County Water Agency Facilities

PCWA does not have the facilities to provide storage beyond that needed for normal operations. PCWA's seven reservoirs serving Zone 1 have a total usable capacity of 480 AF, which is less than one maximum day's demand for Lower Zone 1. When installed, the seasonal pump station on the American River provides back-up supply to the Drum-Spaulding Project supply.

Drum-Spaulding Project water is generally conveyed southwest along the Interstate 80 corridor by a network of canals. The most important conveyance facility in the Drum-Spaulding Project is the Bear River Canal, because all project water flows through it at some point. This canal extends 23 miles through relatively steep terrain and is subject to outages due to landslides. The reliability of the Bear River Canal also is threatened by several road crossings that make the canal vulnerable to outages because of physical damage and/or contamination by hazardous materials resulting from accidental traffic spills. Furthermore, the Bear River Canal is taken out of service each year for maintenance beginning in the latter half of October for three to five weeks. The Caperton Canal, which serves the Sunset Water Treatment Plant (WTP), also traverses steep terrain for several miles and is subject to outages from physical damage or contamination from hazardous material spills.

River Flows

The upper American River system includes the North and Middle forks of the American River, which drain the upper watershed. The Middle Fork American River originates above 7,500 feet mean sea level (msl), west of Squaw Peak in Placer County and joins the North Fork east of the City of Auburn. The North Fork American River originates in the Sierra Nevada above 6,500 feet msl in Placer County. Hydrologic conditions within the Middle Fork of the American River downstream of Ralston Afterbay, and the North Fork American River below the confluence with the Middle Fork American River, are partially dependent upon releases from Ralston Afterbay. Flow releases from Ralston Afterbay during the June through October period, which would change under the alternatives, are primarily a function of upstream hydroelectric power generation. Flow patterns generally cycle on a daily basis, with peak flows occurring during hydropower generation and low-flow releases to meet minimum instream flow requirements for the remainder of the day. However, based on water availability, peak flows may not be released on every day of the June through October period. Reduced releases and/or minimum instream flow releases prevail in late summer and fall of most years. The North Fork American River flows into the north end of Folsom Reservoir. Folsom Reservoir releases water from Folsom Dam into Lake Natoma, its regulating afterbay. Water is released from Lake Natoma into the

lower American River below Nimbus Dam. The lower American River extends 23 miles to its confluence with the Sacramento River.

River flows past the proposed pumping plant site originate from the Middle and North Forks of the American River. Flows on the Middle Fork are regulated upstream by the Hell Hole and French Meadows reservoirs, and are re-regulated by Ralston Afterbay. Ralston Afterbay, the most downstream dam in the MFP system, releases flows to the Middle Fork American River upstream of its confluence with the North Fork of the Middle Fork. Downstream of this confluence, Middle Fork flows are a combination of regulated and unregulated flows.

North Fork American River flows at the project site have been estimated based upon upstream gage measurements. Dry season (summer) flows at the project site fluctuate within the day from 100 cfs when power is not being generated at Ralston Afterbay to about 1,100 cfs when power production peaks. The estimated peak flow of the 1.5-year flood event is 12,400 cfs. The peak flow of the 100-year flood event is estimated to be 220,000 cfs (Reclamation 1996a).

Average monthly river volumes on the American River for the project vicinity for nine water years (October through September) from 1988 to 1996 are shown in **Table 3.4-4**. The data represent historical flows as measured at two upstream gauging stations (U.S. Geological Survey (USGS) Stations 11433300 below Ralston Afterbay and 11427000 below Lake Clementine). These values are not corrected for any accretions that may occur between the gages and the project site. Depicted in **Figure 3.4-1** are the average, minimum, and maximum historical monthly flows for these nine water years.

Table 3.4-4
Average Monthly American River Volume in Vicinity of Auburn Pump Station (1987 – 1996)
(thousand acre-feet (TAF))

Year [a]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
1987	-	-	-	-	-	-	-	-	-	12	9	40	-
1988	74	39	49	49	40	37	35	29	23	7	48	37	469
1989	48	66	382	234	140	78	56	54	33	35	54	42	1,222
1990	42	43	99	79	52	56	58	57	35	36	28	12	596
1991	8	10	129	114	120	82	55	49	33	25	33	15	671
1992	16	88	80	70	33	30	31	27	19	12	16	61	482
1993	242	184	336	244	214	153	78	67	37	38	28	37	1,657
1994	28	42	70	55	53	44	34	33	13	17	34	75	498
1995	474	184	614	359	447	312	138	74	38	52	42	95	2,829
1996	164	337	294	257	432	123	69	58	46	-	-	-	-

[a] Data are presented in water years, therefore some months are excluded.
Source: SWRI, unpublished data, 1998.

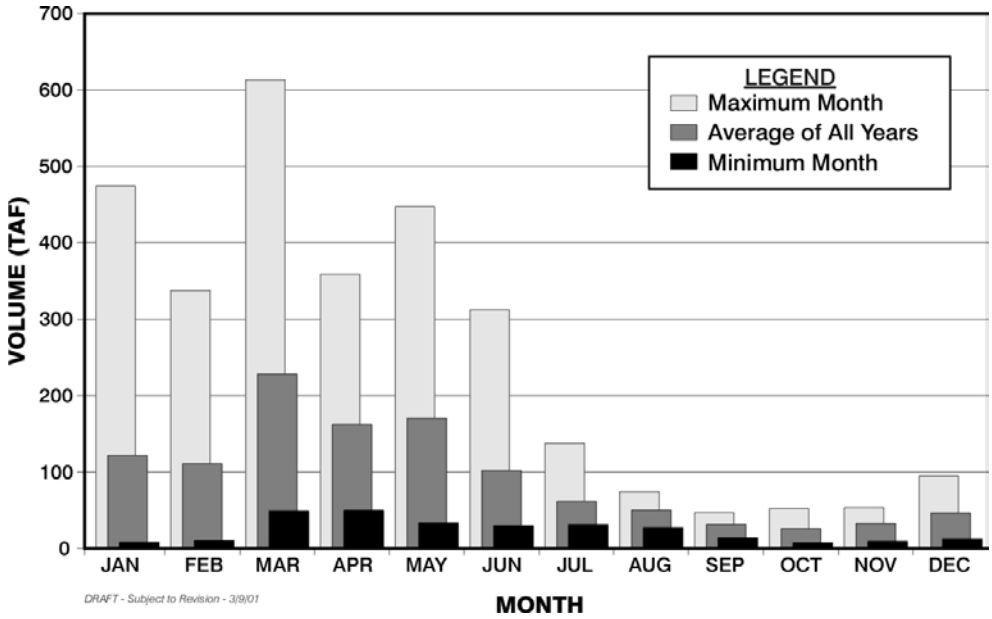


Figure 3.4-1. Average, Minimum and Maximum Monthly River Volumes, Water Years 1988-1996 North Fork American River (USGS gaging station data below Ralston Afterbay and below Lake Clementine)

Using historic data from 1991, which was a median flow year for the nine-year period of record, **Figure 3.4-2** shows flows from June to November that reflect the erratic nature of hydropower releases. August 1991 is represented on **Figure 3.4-3** to show more clearly how the river flows rise and fall each day. The Upstream Hydrologic Analysis (SWRI 1998) was based on this period of record because it represents the best available data set from which to calculate flows at the site.

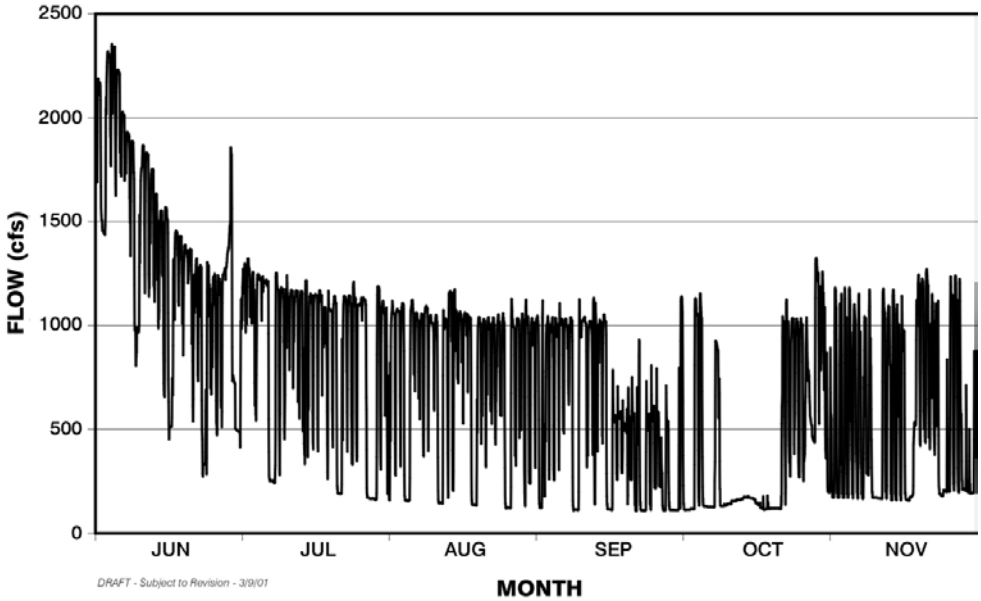


Figure 3.4-2. North Fork American River Flows, June - November 1991 (USGS gaging station data below Ralston Afterbay and below Lake Clementine)

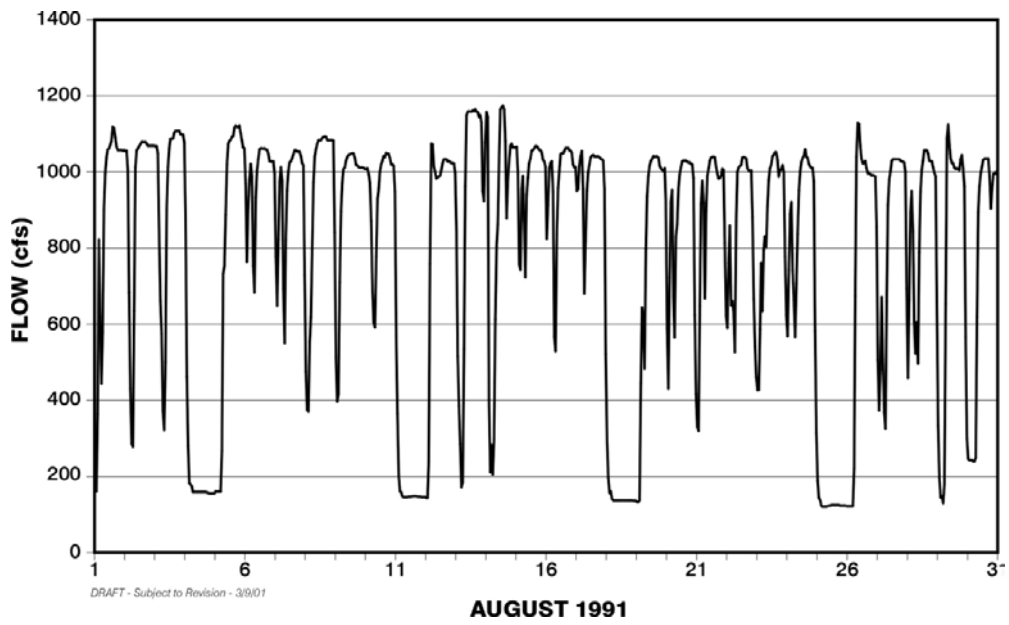


Figure 3.4-3. North Fork American River Flows, August 1991
(USGS gaging station data below Ralston Afterbay and below Lake Clementine)

The flows at the project site are directly affected by fluctuations in Ralston Afterbay releases, but are attenuated somewhat by the unregulated flows from the North Fork of the Middle Fork and the North Fork American River, which exhibit less fluctuation within a day. Ralston Afterbay releases reflect upstream regulation to maximize hydropower generation while meeting an instream flow requirement of 75 cfs. This fish flow release is specified in Article 37 of the FERC license, was agreed to by CDFG and is, indirectly, a part of the SWRCB permits. Ralston Afterbay releases can vary greatly over the course of a day, month, and year. Hydropower generation generally increases over the course of the day, peaks in the late afternoon, and decreases as the evening progresses.

During the peak diversion season (May to September), water releases are fairly predictable. For example, during 1989, which is considered a typical year by PG&E, a continuous 1,000 cfs was typically released from Ralston Afterbay 20 hours a day during the diversion season, and a continuous 240 cfs was released for the remaining four hours. Beginning in October, however, the water releases became erratic ranging from zero to 1,000 cfs, and could not be relied on as a continuous water supply again until the beginning of March (MW et al. 1998).

3.4.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.4.2.1 Methodology

Facilities-Related Analysis Approach

Facilities-related water supply impacts were analyzed by consulting various PCWA reports and with staff regarding the historical reliability of the PG&E water supply and the historical reliability of the seasonal pump station. Preliminary design information was reviewed to determine the projected reliability of the diversion structure configurations and locations. The preliminary design information also was reviewed to assess the effect of the diversion structure configurations and locations and operation upon channel stability.

Diversion-Related Analysis Approach

The assessment of diversion-related water supply impacts focuses on the potential increase in diversions to result in changes to annual delivery allocations to CVP and SWP contractors and annual deliveries to non-CVP purveyors that divert water from Folsom Reservoir and the lower American River due to changes in river flows and reservoir volumes. Reclamation's PROSIM model was used to simulate hydrologic conditions over a 70-year period of record for Folsom Reservoir, the lower American River, and Sacramento River, including the Delta.

The evaluation of water supply is based on a comparison of CVP reservoir surface water storage volumes and American and Sacramento river flows under the existing and future conditions with and without the project. Because the timing and amount of the proposed diversion increase under the Proposed Project and Upstream Diversion Alternative are identical, the "Action Alternatives" condition represents the hydrologic condition for both alternatives. The analysis of impacts is, therefore, combined into one discussion. Hydrologic modeling results from these modeling simulations were reviewed and compared to determine whether implementation of a year-round pump station project would result in substantial changes to the reservoir storage volumes or river flows that would affect the water supply of these water bodies compared to existing and No Action/No Project Alternative conditions.

3.4.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The SWRCB and nine Regional Water Quality Control Boards (RWQCB) regulate water resources in California. The SWRCB protects water quality and determines rights to surface water use. Specifically, the SWRCB appropriates surface water, oversees disputes over rights to water bodies, establishes surface and groundwater quality standards, and oversees the RWQCBs, which implement water quality standards and regulations.

3.4.2.3 Impact Indicators and Significance Criteria

There are no formal, specific regulations that indicate criteria or thresholds associated with impact significance related to changes in water supply. Therefore, significance criteria have

been developed specifically to address the potential regional and local area effects of implementing the Proposed Project or alternatives. The impact indicators and significance criteria developed for the evaluation of water supply and hydrology impacts are presented in **Table 3.4-5**.

Table 3.4-5
Water Supply and Hydrology Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Location of pump station facilities relative to flood flows (elevation).	❑ An increase in flooding of the facilities, relative to the basis of comparison, such that reliable operation of the pump station as a back-up and increased water supply source would be affected.
❑ Availability to meet PCWA's annual water demands.	❑ The months of the year the MFP water supply can be diverted by PCWA, more specifically measured by the number of months each year that the pump station is operational.
❑ Use of groundwater.	❑ Increased use of groundwater, relative to the basis of comparison, sufficient to adversely affect overdraft conditions.
❑ Area of backwater effect created by the water intake/diversion structures.	❑ Decrease in channel stability upstream of the water intake, relative to the basis of comparison, of sufficient magnitude and frequency that water supply operations would be impaired.
❑ Deliveries to non-CVP Folsom Reservoir customers and lower American River water rights holders.	❑ Reduction in the deliveries to non-CVP Folsom Reservoir and lower American River water rights holders, relative to the basis of comparison, for the corresponding year over the 70-year period of record.
❑ Delivery allocations to SWP customers.	❑ Reduction in the percent delivery allocation to any SWP customer, relative to the basis of comparison, for the corresponding year over the 70-year period of record.
❑ Delivery allocations to CVP customers.	❑ Reduction in the percent delivery allocation to any CVP customer category, relative to the basis of comparison, for the corresponding year over the 70-year period of record.

3.4.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related water supply and related hydrology impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.4-1: Reliability of water supply facilities.

Factors considered in the evaluation of the reliability of the seasonal pump station include the location (elevation within the floodplain) of the seasonal pump station facilities and their susceptibility to flooding.

Because the seasonal pump station, at elevation 525 feet msl, is below the 100-year and 50-year flood stage elevations (elevations 557 feet and 550 feet msl, respectively), high flows in April, May, or November could result in flooding of the facilities. Daily average river flows for the period 1969 through 1996 were evaluated to assess the potential for high river flows and associated pump station damage during the April through November operations period assumed for the No Action/No Project Alternative.

Flows of approximately 20,000 cfs exceed the capacity of the bypass tunnel and begin to flow down the dewatered river channel where the seasonal pump station pipeline is routed (E. Maisch, pers. comm. 1998). However, when river flows approach 20,000 cfs, Reclamation can no longer gain access to the seasonal pump station or pipeline. To provide time for removing the pumps and the pipeline, river hydrology and watershed characteristics require that Reclamation be on standby to remove the facilities when flows reach about 10,000 cfs. **Figure 3.4-4** charts flow events of 10,000 cfs and above by month.

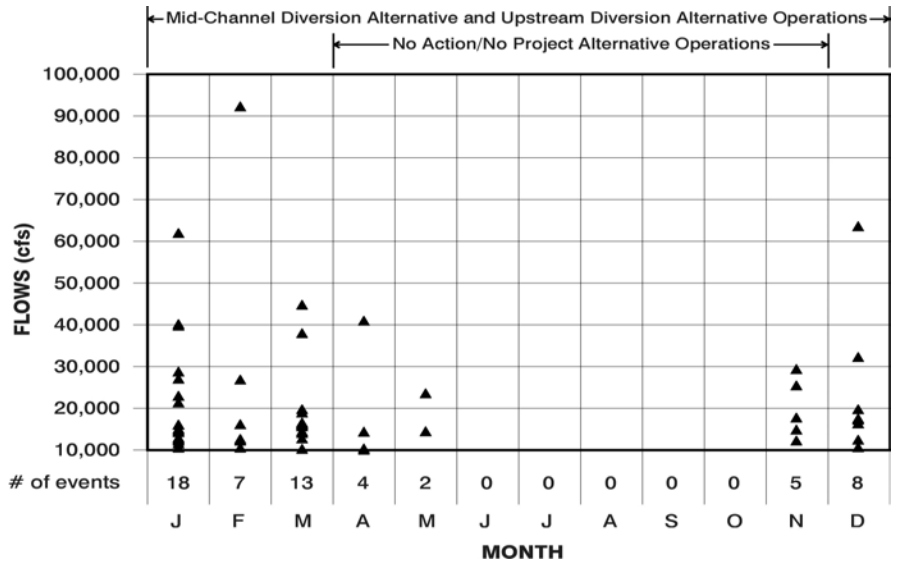


Figure 3.4-4. Number of Peak Flow Events that Produced Average Daily Flows Greater than 10,000 cfs, North Fork American River, 1969 Through 1996.
Note: Data points represent the sum of two USGS river gages. Gages exclude over 10% of the total river basin area. Data represent average daily flows, not maximum daily values.

Review of the daily flow data on Figure 3.4-4 shows that certain high-flow events developed rapidly, in four cases so quickly that removal of the seasonal pump station would not likely have been possible. The four events, and the daily flows (rounded to the nearest 100 cfs), were as shown in **Table 3.4-6**.

Table 3.4-6
American River High-flow Event Data

November 1981		April 1982		November 1983		May 1996	
Date	cfs	Date	cfs	Date	cfs	Date	cfs
Nov 20	2,300	Apr 9	5,000	Nov 15	2,700	May 14	2,700
Nov 21	6,700	Apr 10	6,500	Nov 16	3,500	May 15	4,600
Nov 22	12,900	Apr 11	41,000	Nov 17	29,400	May 16	23,600
Nov 23	13,100	Apr 12	29,700	Nov 18	9,200	May 17	14,400
Nov 24	25,500	Apr 13	16,100	Nov 19	7,300	May 18	15,500
Nov 25	7,700					May 19	7,300
Nov 26	5,200						

These data indicate that damage to the seasonal pump station facilities would have been likely under a No Action/No Project Alternative operations scenario. River flows in those instances increased so rapidly that facility removal efforts, even on a standby basis, would not have been possible. Since the 1969 through 1996 period, there have been additional high-flow events (e.g., April and May 1997) when flow levels either would have prevented the spring installation of the seasonal pump station or caused damage to an already installed pump station.

Additionally, flood flows of recent years have eroded channel features (including remnant cofferdam materials) that are critical to the stability of the seasonal pump station pipeline. It is expected that future flood flows will continue downcutting the remaining cofferdam debris, thereby decreasing the flow levels at which the river would return to the normally dry channel and damage the seasonal pipeline in the future. Figure 3.4-4 shows that the seasonal pump station facilities, if operated as assumed under the No Action/No Project Alternative, would likely have been removed and reinstalled several times to avoid potential flood damage over the 1969 through 1996 period.

Section 1.2, Project History, discusses the record runoff of January 1997 that destroyed both the access road to the seasonal pump station and the foundation for the seasonal pipeline connecting the pumps to the Auburn Ravine Tunnel. Repair and rehabilitation of the site cost Reclamation $650,000 more than the annual budget ($250,000) and delayed installation of the seasonal pump station until the late summer. Unless a project is implemented which relocates or constructs a pump station on higher ground, PCWA's MFP water supply would continue to be vulnerable to problems of this magnitude.

Seasonal operation of the pump station under the No Action/No Project Alternative would result in an increased risk of flooding potentially affecting the reliability of water supply for PCWA's service area. This would be a potentially significant and unavoidable impact.

Impact 3.4-2: Ability to meet PCWA water supply demands with seasonal pump station.

In addition to the potential flooding problems, the 50 cfs capacity limit of the seasonal pump station under the No Action/No Project Alternative would not meet PCWA's seasonal capacity demands, provide sufficient back-up for scheduled or unscheduled outages of PG&E's Drum-Spaulding Project, and may fail to meet projected annual customer demands beginning as early as 2008. It also is noted that under the No Action/No Project Alternative, Reclamation could not fully meet its obligations to PCWA under the Land Purchase Agreement.

Reliability concerns for the No Action/No Project Alternative also would increase over time as PCWA customer demands increase because the seasonal pump station facility would be PCWA's only water delivery mechanism for meeting the increased demands. The seasonal pump station capacity would be adequate to meet demands during Drum-Spaulding Project scheduled system maintenance outages in the late-fall, but it would not be adequate to meet current or future unscheduled outages during spring or summer, when PCWA obtains up to 244.8 cfs from the Drum-Spaulding Project.

Based on the above information, the No Action/No Project Alternative would not provide a long-term reliable water supply source. The pump station could not be installed or would be at risk of failure in years with high spring river flows. In addition, due to its limited capacity, the No Action/No Project Alternative would not provide the needed back-up water supply for Drum-Spaulding Project outages. These conditions result in a potentially significant impact on the reliability of PCWA's water supply system.

Without additional water supplies, PCWA likely would begin implementing water delivery policies that apply during water shortage conditions. To consider PCWA's probable response to water supply shortages, PCWA's projected demands were reviewed. Sometime near 2005, PCWA likely would implement stringent conservation policies that, combined with anticipated market pressures, would initiate a shift in water supply deliveries from raw water/agricultural customers to urban customers. The shift in water deliveries would initially impact commercial agricultural customers, mostly rice farmers, in western Placer County. Then, continued shortages in deliveries would begin to impact non-commercial rural customers, mostly small farm and ranchette operations, that currently utilize raw water deliveries for irrigated pasture, small orchard, and related purposes. Of the total, approximately 70,000 AFA of water deliveries go to raw water/agricultural customers, about 10,000 to 12,000 AFA is delivered to commercial agriculture, and the balance (58,000 to 60,000 AFA) is delivered to rural small farm and ranchette raw water customers.

If a shortage occurred, the 10,000 to 12,000 AF delivered to commercial agricultural uses would be used to satisfy growing urban demands (this change in operations would reduce flow in Auburn Ravine by 10,000 to 12,000 AFA). The commercial farmers would be expected to use groundwater, which is the only alternative water supply readily available. Groundwater may be used only to the extent that the local supplies are economically viable. In western Placer County, there is currently a groundwater overdraft condition that makes this alternative source uncertain in the long-term but viable in the short-term. Where there are wells, there would be increased groundwater pumping. Where no wells exist or where groundwater is not a viable supply, it is

possible that certain agricultural lands would no longer be farmed due to the high costs of installing new wells. Because of the groundwater overdraft condition, it is likely that many farmers over time would discontinue farming operations, or convert existing, water intensive, or higher value crops into less water-intensive crops or housing.

Deliveries to non-commercial rural customers would be reduced following reduced deliveries to commercial farmers. These reductions would be further into the future and it is more likely that PCWA might be able to develop alternative delivery mechanisms for its MFP supplies. However, if PCWA would not be able to develop such future options, then anticipated growth in urban water demands for PCWA's supplies would begin to redirect raw water deliveries from the rural farms and ranchettes beginning sometime around 2011. This scenario could result from a combination of several factors including PCWA water delivery policies, urban development pressures on the value of available water supplies, and conversions of rural or agricultural lands for urban uses.

The No Action/No Project Alternative would not meet the overall long-term project objectives of providing a year-round reliable water supply source, resulting in a potentially significant and unavoidable water supply impact.

Impact 3.4-3: Groundwater overdraft.

The No Action/No Project Alternative would fail to meet projected water needs sometime before 2008. At that time, PCWA's increasing urban water demands would exert pressure on the agency to not supply future users, to reduce untreated/agricultural supplies in Zone 1, and to eliminate untreated agricultural water supply to Zone 5. Agricultural customers could turn to groundwater or could abandon their agricultural pursuits. As agricultural land is increasingly available for urbanization, urban water demands would subsequently increase. If the mostly non-commercial agricultural customers in Zone 1 turn to groundwater supplies, they would encounter an unreliable, overdrafted water source (J. Warren, pers. comm. 1998). Groundwater supplies are more reliable in Zone 5; however, groundwater throughout Placer County is overdrafted and requires deep wells (DWR 1997). The No Action/No Project Alternative would, therefore, have a potentially significant impact on groundwater overdraft (after 2008).

Impact 3.4-4: Channel instability from backwater effects.

The existing diversion structure does not create a backwater effect. The No Action/No Project Alternative diversion pond would be the same configuration (sump pond) as the existing one. Therefore, there would be no impact on channel stability as it relates to operation of the intake.

Proposed Project and Upstream Diversion Alternative (Action Alternatives)

Impact 3.4-5: Reliability of water supply facilities.

With a year-round pump station, PCWA would obtain year-round back-up supply. Scheduled or accidental interruptions in the PG&E Drum-Spaulding Project supply system would be accommodated by the MFP system. Because the proposed pump station would be year-round,

increase water delivery capacity from 50 cfs to 100 cfs, and increase reliability of deliveries even during flood events, the Action Alternatives would have a significant beneficial impact on the reliability of PCWA's water system.

Impact 3.4-6: Ability to meet water supply demands with year-round pump station.

Increasing pump station diversions to 35,500 AFA, in combination with Drum-Spaulding Project supply, would meet projected annual water demand through 2015. PCWA would be able to meet all of its demands resulting in a beneficial impact.

Impact 3.4-7: Groundwater overdraft.

PCWA's increasing urban water demands would be met by increased surface water supplies from a year-round facility. PCWA's increased diversion to up to 35,500 AFA would meet water demands until about 2015. Therefore, there would be no anticipated increased use of groundwater resulting in a less-than-significant impact on the overdraft condition.

Impact 3.4-8: Channel instability from backwater effects.

A backwater effect upstream of the diversion structures could create deposition as the river attempts to compensate for the flatter gradient imposed upstream of the site. Over time, an increased backwater depth causes sediment deposition resulting in an increase in water surface, bed elevation, and possibly bank instability. Destabilizing the channel banks would result in additional deposition of material into the river, thereby affecting river flow patterns.

At the project site, inundation of Tamaroo Bar rapids is likely to occur somewhat more frequently than under the existing condition. However, the river flows would be within existing ranges and would not be expected to cause additional stability issues upstream of the diversion or of Tamaroo Bar rapids.

Given the expected extent of the backwater effect, the potential for increased channel instability and related effects on the intake reliability would be expected to be less than significant under either alternative.

Cumulative Facilities-Related Impacts

The Action Alternatives would contribute to an improvement of water supply reliability and availability conditions that potentially would be further developed with future expansion of the pump station facility for PCWA and GDPUD. This would be considered a local beneficial water supply impact.

The backwater effect created by the Action Alternatives would not be considered significant, and would not be expected to be further influenced by other future projects. This is a less-than-significant cumulative impact.

The Action Alternatives also would provide a potentially significant influence over groundwater overdraft conditions, by avoiding increases in the use of groundwater in Placer County. Other regional water supply planning efforts would continue to work toward improvement of the groundwater basin conditions. The Action Alternatives would not result in a considerable adverse contribution to groundwater conditions.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.4-1, H-3.4-2, etc.).

No Action/No Project Alternative

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant water supply effects on American River water rights holders, SWP customers, or CVP Settlement and Exchange contractors. Some small and infrequent reduction of CVP water service contractor delivery allocations may occur. However, because any reduction of water supply delivery allocations would be considered significant, this would be a significant impact.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

Under the Action Alternatives, PCWA's diversion would increase from the current 8,500 AFA up to 35,500 AFA. Although it is assumed that PCWA would eventually divert 35,500 AFA, in most years, the impact is likely to be less than the 27,000 AFA increase in diversion. This is because the PCWA return flows (which occur between the Feather and American rivers) would alter the water balance downstream, which, in turn may result in a reduction of required Folsom Reservoir releases to meet CVP obligations in the Delta. Consequently, supplies to water users downstream of the lower American River may be reduced by less than 27,000 AFA. Furthermore, as a participating agency in the Water Forum Agreement, PCWA agreed to replace (in dry years) any water diverted in excess of its allocation under the Water Forum Agreement. While this commitment is conditioned on PG&E approval and the purchaser of the water, experience over the past decade demonstrates the reasonableness of the assumption that these conditions will be met. The combination of the offsetting effect of return flows and the replacement water could result in an increased water supply particularly in dry years.

Impact 3.4-9: Effects on water supply to American River water rights holders.

Water rights holders have a greater priority to the available water supply than CVP for export. Consequently, the Action Alternatives would impact the CVP allocation before impacting water

rights holders. The hydrologic modeling reflects this, showing identical deliveries to water rights holders under the existing condition and the Action Alternatives. Therefore, no impact to American River water rights holders would result from the Action Alternatives.

Impact 3.4-10: Effects on delivery allocations to SWP customers.

SWP customers receive deliveries from the Feather River and the Delta. Although deliveries to SWP customers would be less than 100 percent of demand in many years as a function of the hydrology or annual water supply conditions, both the Feather River and the Delta service area customers would receive the same delivery allocation under the Action Alternatives as under the existing condition. Therefore, there would be no water supply impact to SWP customers from the Action Alternatives.

Impact 3.4-11: Effects on delivery allocations to CVP contractors.

The CVP provides water to users along the Sacramento and American rivers, within the Bay-Delta, and south of the Delta. There are three types of CVP contractors: Sacramento River Water Rights Settlement Contractors, San Joaquin River Exchange Contractors, and CVP Water Service Contractors. Their priority rights with respect to water supply curtailments due to insufficient supplies are described below:

- Sacramento River Water Rights Settlement Contractors claimed water rights in the Sacramento River Basin prior to the construction of Shasta Dam. Contract provisions allow for reductions of up to 25 percent of contracted amount during dry conditions, as determined by the Shasta Inflow Index.

- San Joaquin River Exchange Contractors claimed water rights from the San Joaquin River and agreed to forgo these rights in exchange for CVP water diverted from the Delta and delivered to the Mendota Pool. Contract provisions allow for reductions of up to 25 percent of contracted amounts under dry conditions, as determined by the Shasta Inflow Index.

- CVP Water Service Contractors (agricultural and M&I Water Service Contractors both north and south of the Delta) entered into agreements with Reclamation for delivery of CVP water as a supplemental supply. Water deliveries to agricultural Water Service Contractors can be reduced up to 100 percent in particularly dry years. Maximum curtailment levels are not specified for most M&I Water Service Contractors. Historically, Reclamation has limited maximum curtailments to M&I contractors to 25 percent. Future system demands are assumed to potentially require curtailments of up to 50 percent. Water availability for delivery to CVP Water Service Contractors during periods of insufficient supply is determined based on a combination of operational objectives, hydrologic conditions, and reservoir storage conditions.

Settlement and Exchange Contractors

As described above, delivery allocation, and therefore, water supply impact is dependent on the category of contract. Because the delivery allocation for the Sacramento River Settlement

Contractors and the San Joaquin River Exchange Contractors is dependent solely on the Shasta Inflow Index, these two types of contractors would not experience any change in allocation as a result of the Action Alternatives. Therefore, there would be no impacts to either settlement or exchange contractors as a result of the Action Alternatives.

Central Valley Project Water Service Contractors

Agricultural and M&I contractors south of the Delta and M&I contractors north of the Delta would experience a reduction in percent delivery allocation in one year out of the 70 years simulated. Agricultural contractors would experience a reduced allocation in two years out of the 70 years simulated. **Table 3.4-7** summarizes the reduced allocation associated with the Action Alternatives as compared to the existing condition.

Table 3.4-7
Changes in Central Valley Project Percent Allocation Under the Existing Condition and Action Alternatives

Year	Year Type	Existing Conditions				Action Alternatives				Difference			
		North of Delta		South of Delta		North of Delta		South of Delta		North of Delta		South of Delta	
		M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag
1935	BN	90	65	90	65	85	60	85	60	-5	-5	-5	-5
1972	BN	100	100	100	80	100	95	100	80	0	-5	0	0

BN = Below Normal (Sacramento 40-30-30 Index), Ag = Agricultural, M&I = Municipal and Industrial

The PROSIM modeling shows small and infrequent differences in allocations to CVP Water Service Contractors. Nonetheless, because of the impact threshold criteria adopted for water supply, the impact of the implementation of the Action Alternatives to CVP service contractors would be considered significant.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.4-12: Effects on water supply to American River water rights holders.

Because water rights holders are given first priority to the water supply available, their supply would not be diminished under the future condition (2025). American River water rights holders would receive the same amount of water under the No Action/No Project Alternative and the Action Alternatives. Therefore, no impact to American River water rights holders would result from the Action Alternatives as compared to the No Action/No Project Alternative.

Impact 3.4-13: Effects on delivery allocations to SWP customers.

SWP customers receive deliveries from the Feather River and the Delta. Although deliveries to SWP customers would be less than 100 percent of demand in most years as a function of the hydrology or water supply conditions, both the Feather River and the Delta service area customers would receive the same delivery allocation under the future condition with the project

as under the No Action/No Project Alternative. Therefore, there would be no water supply impact to SWP customers from implementation of the Action Alternatives.

Impact 3.4-14: Effects on delivery allocations to CVP contractors.

Settlement and Exchange Contractors

Delivery allocation, and therefore water supply impact is dependent on the category of contract (see additional description under Impact 3.4-11). Because the delivery allocation for the Sacramento River Settlement Contractors and the San Joaquin River Exchange Contractors is dependent solely on the Shasta Inflow Index, these two types of contractors would not experience any change in allocation as a result of the future condition including implementation of the Action Alternative. Therefore, there would be no water supply impacts to either Settlement or Exchange Contractors.

Central Valley Project Water Service Contractors

The percent delivery allocation differs slightly under the No Action/No Project Alternative as compared to the Action Alternatives. Agricultural and M&I contractors north of the Delta would experience a five percent decrease in allocation in one year and a five percent increased allocation in another year, under the Action Alternatives relative to the No Action/No Project Alternative condition.

South of the Delta agricultural contractors experience two years with a five percent decrease and two years with a five percent increase in allocation. South of the Delta M&I contractors experience two years with increased allocation and only one year with decreased allocation. **Table 3.4-8** summarizes the difference in allocation under the future condition with and without one of the Action Alternatives.

Table 3.4-8
Changes in CVP Percent Allocation Under Future No Action/No Project and Future Conditions

Year	Year Type	Future No Action/No Project				Future Condition				Difference			
		North of Delta		South of Delta		North of Delta		South of Delta		North of Delta		South of Delta	
		M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag	M&I	Ag
1927	W	100	100	100	90	100	100	100	85	0	0	0	-5
1928	AN	100	85	90	65	100	85	95	70	0	0	5	5
1935	BN	80	55	80	55	75	50	75	50	-5	-5	-5	-5
1987	C	70	20	70	20	75	25	75	75	25	5	5	5

W = Wet, AN = Above Normal, BN = Below Normal, D = Dry, C = Critical (Sacramento 40-30-30 Index),
Ag = Agricultural, M&I = Municipal and Industrial

As shown in Table 3.4-8, a reduction in water supply availability associated with PCWA's increased diversion may cause an allocation cut (1927 and 1935). An allocation reduction in one year may result in an allocation increase in the following year (1927-1928). Under the No Action/No Project Alternative, PCWA can divert up to 19,300 AFA, over an eight-month period,

with no reductions in dry years. Under the Action Alternatives, the year-round pump station would divert 35,500 AFA in years when the March to November Folsom Reservoir unimpaired inflow would be above 950,000 AF. When the March to November Folsom unimpaired inflow was projected to be less than 950,000 AF, PCWA would replace diversions in excess of 8,500 AFA as agreed to in the Water Forum Agreement. This agreement includes provisions for PG&E approvals and arrangements with a downstream buyer. The replacement water could be up to 27,000 AF in dry years. As a consequence, the Proposed Project could result in an increased water supply to the CVP in dry years, and therefore, increased supply available for meeting allocations to other CVP Water Service Contractors (1987).

The PROSIM modeling suggests small and infrequent differences in allocations to CVP Water Service Contractors. Nonetheless, because of the impact threshold criteria adopted for water supply, the impact of the Action Alternatives and related changes in CVP operations upon CVP Water Service Contractors would be considered significant. It is recognized that use of water by PCWA is in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom to the extent that such CVP rights are used for export.

Cumulative Impacts

Impact 3.4-15: Effects on water supply to American River water rights holders.

Water rights holders have a higher priority to the available water supply higher than CVP south of Delta contractors. Consequently, the Action Alternatives would impact the CVP allocation before impacting water rights holders. The hydrologic modeling reflects this, showing identical deliveries to water rights holders under the existing condition and the cumulative condition. Therefore, no impact to American River water rights holders would result under the cumulative condition.

Impact 3.4-16: Effects on delivery allocations to SWP customers.

SWP customers receive deliveries from the Feather River and the Delta. The Feather River service area customers would not experience allocation reductions under the cumulative condition.

SWP customers dependent on water supplies from the Delta would, however, be subject to allocation reductions resulting from CVP/SWP operations under the cumulative condition. Such reductions would be caused by a decrease in surplus Delta inflow caused by the cumulative condition. Deliveries to SWP contractors are not distinguished by contract type (i.e., irrigation or municipal) in PROSIM, therefore, impacts reported are aggregate reductions in deliveries.

Modeling results show that SWP contractors would experience allocation reductions in 42 out of the 70 years simulated and allocation increases in three years under the cumulative condition. The allocation reductions range from five percent to 45 percent (Appendix H of the Draft EIS/EIR, Figure H-3.4-1). Given the frequency and magnitude of decrease in allocation to SWP customers, this is considered a significant cumulative impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that the delivery allocation to SWP customers would remain unchanged between the future base and the cumulative condition. Consequently, there would be no impact associated with the Action Alternatives' contribution to future impacts to SWP customers.

Impact 3.4-17: Effects on delivery allocations to CVP contractors.

Settlement and Exchange Contractors

Because the delivery allocation for the Sacramento River Settlement Contractors and the San Joaquin River Exchange Contractors is dependent solely on the Shasta Inflow Index, these two types of contractors would not experience any change in allocation as a result of the project alternatives. Therefore, there would be no impacts to either Settlement or Exchange Contractors as a result of the Action Alternatives.

Central Valley Project Water Service Contractors

CVP contract demands on the American River associated with future level of development are 195,850 AFA, while the same demands under the existing condition are 65,850 AFA. Because of the increased demands, it is likely that lower allocations to all categories of CVP contractors would occur in the future. However, lower allocations do not necessarily mean lower deliveries, particularly in drier years. For example, a 50 percent allocation under the future condition would mean 97,925 AFA delivery, which is more than a 100 percent allocation under the existing condition.

Figures H-3.4-2 through H-3.4-5 show the year-by-year change in allocation simulated by PROSIM (cumulative compared to the existing condition). All categories of CVP Water Service Contractors would experience reductions in allocation ranging from five percent to 25 percent.

CVP M&I contractors north of the Delta would experience reductions in allocation in 24 out of the 70 years simulated (Figure H-3.4-2). CVP agricultural contractors north of the Delta would experience allocation reductions in 42 out of the 70 years simulated (Figure H-3.4-3).

CVP M&I contractors south of the Delta would experience reductions in allocation in 24 out of the 70 years simulated, and increases of five percent in three years (Figure H-3.4-4). Out of the 70 years simulated, CVP agricultural contractors south of the Delta would experience allocation reductions in 35 years and increases in nine years (Figure H-3.4-5).

The PROSIM modeling shows changes in allocations to CVP Water Service Contractors. Because of the magnitude and frequency of change in allocation to CVP Water Service Contractors, the cumulative impact to these contractors would be considered significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

All categories of CVP Water Service Contractors would experience small reductions in delivery allocation as a result of the Action Alternatives under the future condition. Figures H-3.4-6 through H-3.4-9 show the year-by-year change in CVP delivery allocation simulated by PROSIM. CVP M&I and agricultural contractors north of the Delta would experience a five percent reduction in allocation in one out of the 70 years simulated (Figures H-3.4-6 and H-3.4-7).

CVP M&I contractors south of the Delta would experience a five percent reduction in allocation in one year and a five percent increase in allocation in another year, out of the 70 years simulated (Figure H-3.4-8). Therefore, there would be no long-term net change in the CVP M&I contractors south of the Delta delivery allocation. Out of the 70 years simulated, CVP agricultural contractors south of the Delta would experience allocation reductions of five percent in two years and an increase of five percent in one year (Figure H-3.4-9).

The PROSIM modeling suggests small and infrequent changes in allocations to CVP Water Service Contractors related to implementation of one of the Action Alternatives. The allocation, although small and infrequent, must be considered a significant impact. It is recognized that use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom to the extent that such CVP rights are used for export.

3.4.2.5 Environmental Protection and Mitigation Measures

The net reduction in CVP water delivery allocation to north of the Delta agricultural contractors has been identified as a significant unavoidable impact. This change in delivery allocation would result as an indirect effect of the Action Alternatives due to Reclamation's changes in operation of the CVP system in response to changes in PCWA's river diversions upstream of Folsom Reservoir.

The Proposed Project consists of diversion and use of American River water to benefit interests in Placer County. Because the American River flows through Placer County, state and federal law protect it from adverse water supply impacts associated with the operation of the CVP and SWP. Both the County of Origin Protection and the Watershed of Origin Protection guarantee Placer County a priority right to water that is senior to the water rights held by the CVP and SWP for water export. This protection guarantee applies even if it means a reduction of water supply that is available for service to existing CVP and SWP customers. The net result of the statutory and policy protections embodied in the County of Origin Protection and the Watershed of Origin Protection is to ensure that even if the project has a significant adverse impact on the CVP and SWP customers, the project may proceed.

Unavoidable Adverse Impacts

Areas north of the Delta are protected, in terms of overall CVP operations, by the area of origin statues. Because PCWA cannot assure that water supply impacts would be reduced to less-than-significant levels, to fulfill the disclosure requirements of CEQA, this EIS/EIR must indicate that water supply impacts are considered significant and unavoidable.

3.5 FISH RESOURCES AND AQUATIC HABITAT

3.5.1 AFFECTED ENVIRONMENT

3.5.1.1 Regional Setting

The regional setting for fish resources includes the American and Sacramento rivers and reservoirs, as well as Oroville Reservoir and the Feather River, that may be influenced by implementation of the Proposed Project or alternatives and other reasonably foreseeable future actions within the American River Basin that influence future CVP operations. The area is defined in Section 3.2.1 and shown on Figure 2-1. The fish resources, including lifestage histories, are described in the Cumulative Report (Appendix D of the Draft EIS/EIR). For the lower American River, Sacramento River and Delta, species of primary management concern include those that are recreationally or commercially important (fall-run chinook salmon (*Oncorhynchus tshawytscha*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*)), and federal- and/or state-listed species of the region (winter- and spring-run chinook salmon, steelhead (*Oncorhynchus mykiss*), delta smelt (*Hypomesus transpacificus*), Sacramento splittail (*Pogonichthys macrolepidotus*)), and candidate species under the federal ESA (fall-run chinook salmon).

Section 3.19, ESA Compliance, identifies ESA Section 7 requirements and provides an evaluation of impacts upon federally listed special-status species. The discussion identifies conclusions and determinations for each species and associated critical habitat, where designated.

3.5.1.2 Project Area Setting

The project area represents the direct effect study area for fish resources and aquatic habitat and encompasses the Middle Fork American River from Ralston Afterbay to the confluence with the North Fork and downstream to Oregon Bar (see Figure 2-2). Federal- and state-listed species are not known to occur in the upper American River. Species of management concern within the project area in the upper American River include rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*). Upstream migration of anadromous fish in the American River system is limited to the 23-mile reach of the lower American River below Nimbus Dam, which physically blocks further upstream migration.

Middle Fork American River

The Middle Fork American River supports both warm and coldwater fish species year-round. Operation of PCWA's MFP, constructed in 1962 (including Ralston Afterbay), results in cooler summer and fall water temperatures, thereby improving habitat suitability for rainbow trout and brown trout for a portion of the river below Ralston Afterbay (Corps 1991; Reclamation 1996a). Brown trout are resident stream fish, meaning they spend their entire lifecycle in fresh water. Spawning generally occurs during November and December (Moyle 1976). Brown trout fry

typically hatch in seven to eight weeks, depending on water temperature, with emergence of young three to six weeks later.

Optimal riverine habitat for brown trout reportedly consists of cool to coldwater, silt-free rocky substrate, an approximate 1:1 pool-to-riffle ratio, and relatively stable water flow and temperature regimes (Raleigh et al. 1986). Moyle (1976) reported that while brown trout will survive for short periods in water temperatures in excess of 80.6°F, optimum water temperatures for growth range from 44.6°F to 66.2°F, with a preference for temperatures in the upper half of this range. Brown trout tend to utilize lower reaches of low to moderate gradient areas (less than one percent) in suitable, high gradient rivers (Raleigh et al. 1986).

As with brown trout, rainbow trout also are resident stream fish whose optimal riverine habitat reportedly consists of coldwater, silt-free rocky substrate, a 1:1 pool-to-riffle ratio, and relatively stable water flow and temperature regimes (Raleigh and Duff 1980 *in* Raleigh et al. 1984). Moyle (1976) reported that while rainbow trout will survive in water temperatures of up to 82.4°F, optimum water temperatures for growth and completion of most lifestages reportedly range from 55.4°F to 69.8°F. Rainbow trout spawning generally occurs from February to June (Moyle 1976). Rainbow trout fry emerge from spawning nests approximately 45 to 75 days after spawning, depending on water temperatures.

In addition to rainbow and brown trout, fish sampling surveys of the Middle Fork American River conducted by the USFWS in 1989 from Ralston Afterbay downstream to the confluence with the North Fork American River documented the presence of hitch (*Lavinia exilicauda*), Sacramento sucker (*Catostomus occidentalis*), pikeminnow (*Ptychocheilus grandis*), and riffle sculpin (*Cottus gulosus*) (Corps 1991). No federal- or state-listed species or species proposed for listing under the federal ESA or CESA are reported in the Middle Fork American River.

North Fork American River

Downstream of its confluence with the Middle Fork, the North Fork American River supports warmwater fish species year-round, including smallmouth bass (*Micropterus dolomieu*), pikeminnow, Sacramento sucker, riffle sculpin, brown bullhead (*Ictalurus nebulosus*), and green sunfish (*Lepomis cyanellus*). Although some rainbow and brown trout are present, summer and fall water temperatures are generally too warm for significant spawning and early-lifestage rearing of trout. The majority of trout that do occur in the North Fork American River below the confluence with the Middle Fork American River are believed to be transitory downstream adult and/or sub-adult migrants that have dispersed into the area from upstream habitats (i.e., Middle Fork American River).

Project Site to Oregon Bar

The primary fish species that exist within the American River through the project area and downstream to Oregon Bar include those listed previously for the North Fork and Middle Fork American River, as well as spotted bass (*Micropterus punctulatus*), largemouth bass (*Microptemus salmonides*), and other centrarchid species. Coldwater fish, such as the native rainbow trout and introduced brown trout, also occur within the project area. However, use of

the project area by trout is primarily limited to transitory downstream adult or sub-adult migrants with little, if any, use of the project area for spawning or early-lifestage rearing (J. Hiscox, pers. comm. 1997; S. Lehr, pers. comm. 1997; J. Nelson, pers. comm. 1997). No anadromous salmonids or federal- or state-listed or species proposed for listing under the federal ESA or CESA are known to occur in the project area.

Auburn Ravine

Auburn Ravine flows include natural streamflow augmented by agricultural delivery and return flows, hydroelectric generation releases, wastewater treatment plant discharges from the City of Auburn, and stormwater runoff from the City of Auburn. The existing Auburn Ravine mean monthly flows are presented in **Table 3.5-1**.

Table 3.5-1
Estimated Streamflows in Auburn Ravine under Present Management Conditions
(Mean Monthly Flow, cfs)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
117	120	132	66	88	82	114	99	43	30	39	84

Source: Eco:Logic Engineering Water Balances; Nevada Irrigation District (NID) Gauge in Auburn Ravine below Highway 65 *in* City of Lincoln 1999

Auburn Ravine - Estimated Natural Flow Conditions

Natural flows estimated for Auburn Ravine exhibit significant monthly variations. Relatively high flows associated with storm runoff occur during winter months, particularly January, and flows decline to very low levels during spring months, with no natural flow during summer months. Estimated mean monthly natural streamflows in Auburn Ravine at the Highway 65 Bridge in the City of Lincoln range from approximately 70 cfs in January to 0 cfs in summer and early fall months (City of Auburn 1997 *in* City of Lincoln 1999) (**Table 3.5-2**).

Table 3.5-2
Estimated Natural Streamflows in Auburn Ravine Near Highway 65 Bridge in Lincoln
(Mean Monthly Flow, cfs)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
70.6	50.9	32.3	20.1	2.4	0.2	0.1	0.0	0.0	4.1	11.7	38.2

Source: City of Auburn 1997 *in* City of Lincoln 1999.

Auburn Ravine - Existing Flow Conditions and Supplemental Source Waters

Historically, Auburn Ravine has been used to convey water from multiple sources. Under existing conditions, the natural streamflow of Auburn Ravine is supplemented by four primary sources: (1) PG&E Drum-Spaulding Project source water; (2) PCWA deliveries from the North Fork American River through the Auburn Ravine Tunnel; (3) City of Auburn treated effluent

discharges from its wastewater treatment plant; and (4) Auburn Ravine watershed stormwater runoff.

These supplemental sources result in streamflows that vary considerably from estimated natural flow conditions in Auburn Ravine. Without the influence of these supplemental water sources, Auburn Ravine would remain an intermittent stream carrying only flow originating at its headwaters and runoff from the watershed. Although Auburn Ravine flows can vary substantially on a daily and monthly basis, in general, these supplemental flows significantly augment the estimated natural late summer and early fall streamflows. Therefore, in comparison to the estimated natural flows, existing condition flows in Auburn Ravine are higher in summer months and lowest during fall months.

Pacific Gas and Electric Company Drum-Spaulding Project Source Water

PG&E's Drum-Spaulding system and Nevada Irrigation District's (NID) Upper Yuba River system are integrated to meet the water demands of western Placer and Nevada counties, while at the same time maximizing hydroelectric power production. This joint system is one of the oldest and most complex water systems in California, with storage reservoirs and canals that can capture runoff from the north, middle and south forks of the Yuba River, the Bear River, and the Upper North Fork of the American River, and route that water through a series of hydroelectric plants and to customers all the way to Folsom Reservoir.

Much of the water supplies provided by the Drum-Spaulding system are delivered either to NID or PCWA to meet the consumptive demands of their customers. Consumptive deliveries to NID and PCWA via Auburn Ravine occur during the "irrigation season" (April 15 to October 15). Most of the consumptive demand satisfied through deliveries to Auburn Ravine is for irrigated commercial agriculture in Zone 5 (primarily rice and pasture), most of which occurs on land between Highway 65 and the Sacramento River. Over the course of the current planning horizon (2030) it is not anticipated that the consumptive demand for irrigation water deliveries via the Auburn Ravine will change.

In addition to these consumptive use deliveries to PCWA and NID during the irrigation season, PG&E often spills substantial amounts of hydroelectric system water to Auburn Ravine. PG&E's Drum-Spaulding system originally terminated at its Wise Powerhouse in the Auburn Ravine, and all of the water that ran through the hydroelectric system that was not delivered for consumptive use at other locations was spilled into the Auburn Ravine. A lawsuit by downstream landowners on the Auburn Ravine to prevent flooding by these spills forced PG&E to construct the South Canal in 1931. Since then, the South Canal delivers most of the spill water into Folsom Reservoir. However, the capacity of the South Canal is less than the Wise Canal, which delivers water into Auburn Ravine upstream of the Wise Powerhouse. The result is that, in winter and spring, when demand for consumptive deliveries from the Wise Canal is low and the Wise Canal is running at full capacity for hydroelectric power production, a substantial amount of water is still spilled into the Auburn Ravine.

Today, the South Canal also is used for consumptive delivery at a capacity of about 450 cfs, of which PCWA has contractual entitlement to 244.8 cfs, with NID entitled to the remainder. The

South Canal is at about elevation 900 at its point of discharge to Auburn Ravine. At the peak of the summer delivery season, 100 percent of the capacity of the PG&E canal system below Rollins Reservoir is used to meet consumptive deliveries to NID and PCWA. During these periods the hydroelectric operation becomes secondary to the water delivery requirements, and there is no excess spill water in Auburn Ravine.

PG&E operates the Wise Powerhouse with flows from the Yuba and Bear rivers to generate power year-round, with the exception of the four to six weeks in the late fall when it shuts down the hydroelectric system for maintenance. As indicated above, PG&E powerhouse releases to the South Canal are conveyed to Auburn Ravine for use by NID and PCWA deliveries to irrigation customers within their respective service areas. These releases are made over the course of the entire irrigation season. Additionally, throughout much of the summer, PG&E continuously releases flows of approximately 31 cfs (20 mgd) from the Wise Powerhouse South Canal into Auburn Ravine, thereby providing supplemental streamflows when the ravine would naturally become dry. **Figure 3.5-1** shows the Auburn Ravine watershed and related water supply delivery infrastructure. **Figure 3.5-2** provides a regional view of the Auburn Ravine watershed and related water supply service areas for PCWA and NID.

PCWA North Fork American River Source Water

PCWA currently has the ability to pump approximately 50 cfs of American River water to Auburn Ravine during the irrigation season. The transferred water is pumped through the Auburn Ravine Tunnel using the seasonal (temporary) American River pump station.

When PCWA's consumptive water demands increase beyond the amount available from PG&E (244.8 cfs), PCWA operates the seasonal American River pump station and delivers water into Auburn Ravine via the Auburn Ravine Tunnel. This water is delivered to PCWA customers along Auburn Ravine west of Highway 65.

The seasonal American River pump station has been used at times to deliver the full capacity (50 cfs) of North Fork American River water to Auburn Ravine. For instance, during the 1977 drought event, the seasonal American River pumps were used to supply Auburn Ravine with 8,500 AF of North Fork American River water and an exchange of water took place with NID. North Fork American River water was delivered to NID via the Auburn Ravine Tunnel and PG&E water that normally would have been delivered to NID via Auburn Ravine was instead delivered to PCWA's water treatment plants and canals within the Auburn, Newcastle, Penryn, Loomis, Rocklin, and Lincoln areas.

In more recent years, the seasonal pump station has provided a maximum annual delivery of approximately 2,900 AF of North Fork American River water to Auburn Ravine. The American River supply is used to meet peak irrigation demands, primarily during summer months. Agricultural return flows also contribute to the streamflow conditions of Auburn Ravine from April through September/October.

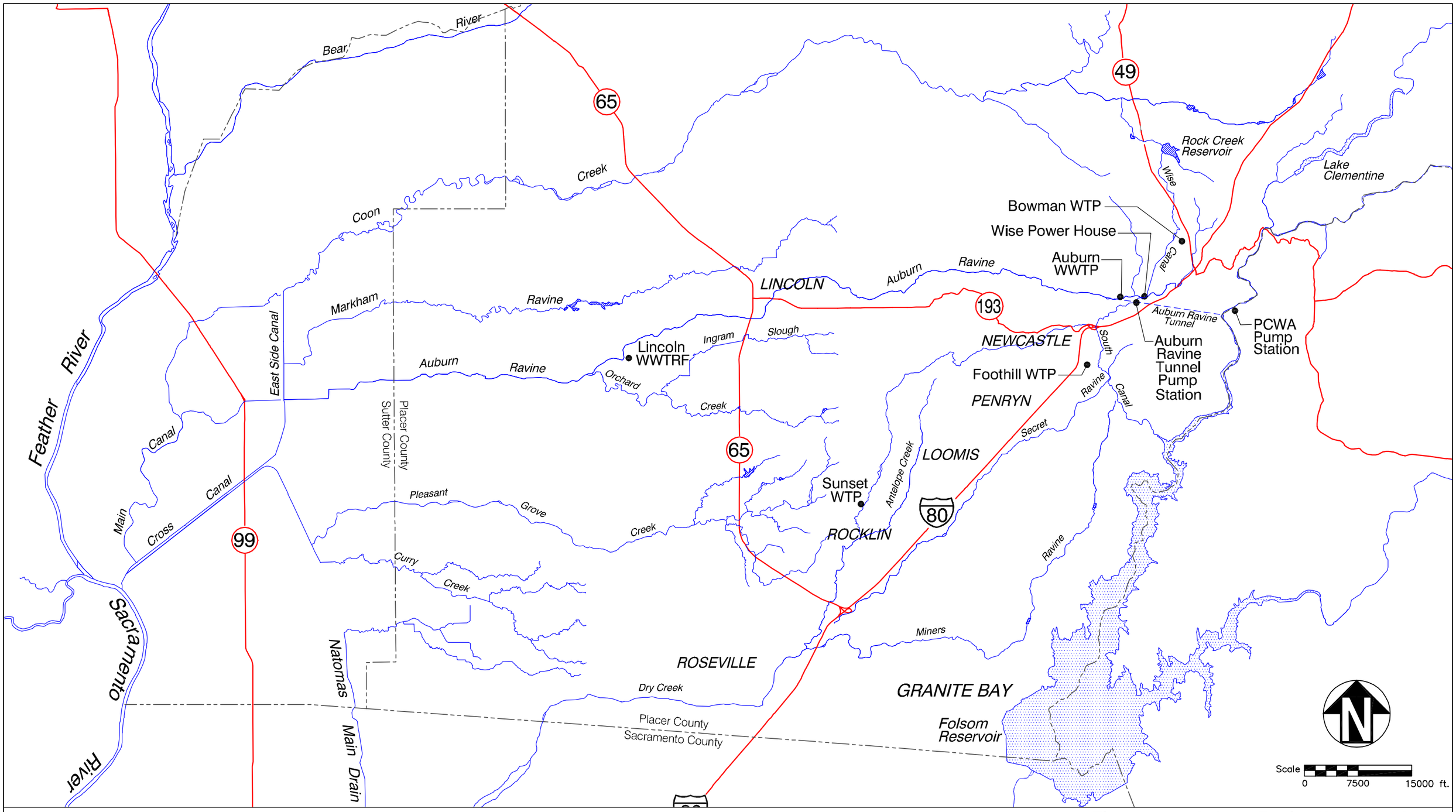


Figure 3.5-1 Auburn Ravine Watershed and Related Delivery System Infrastructure

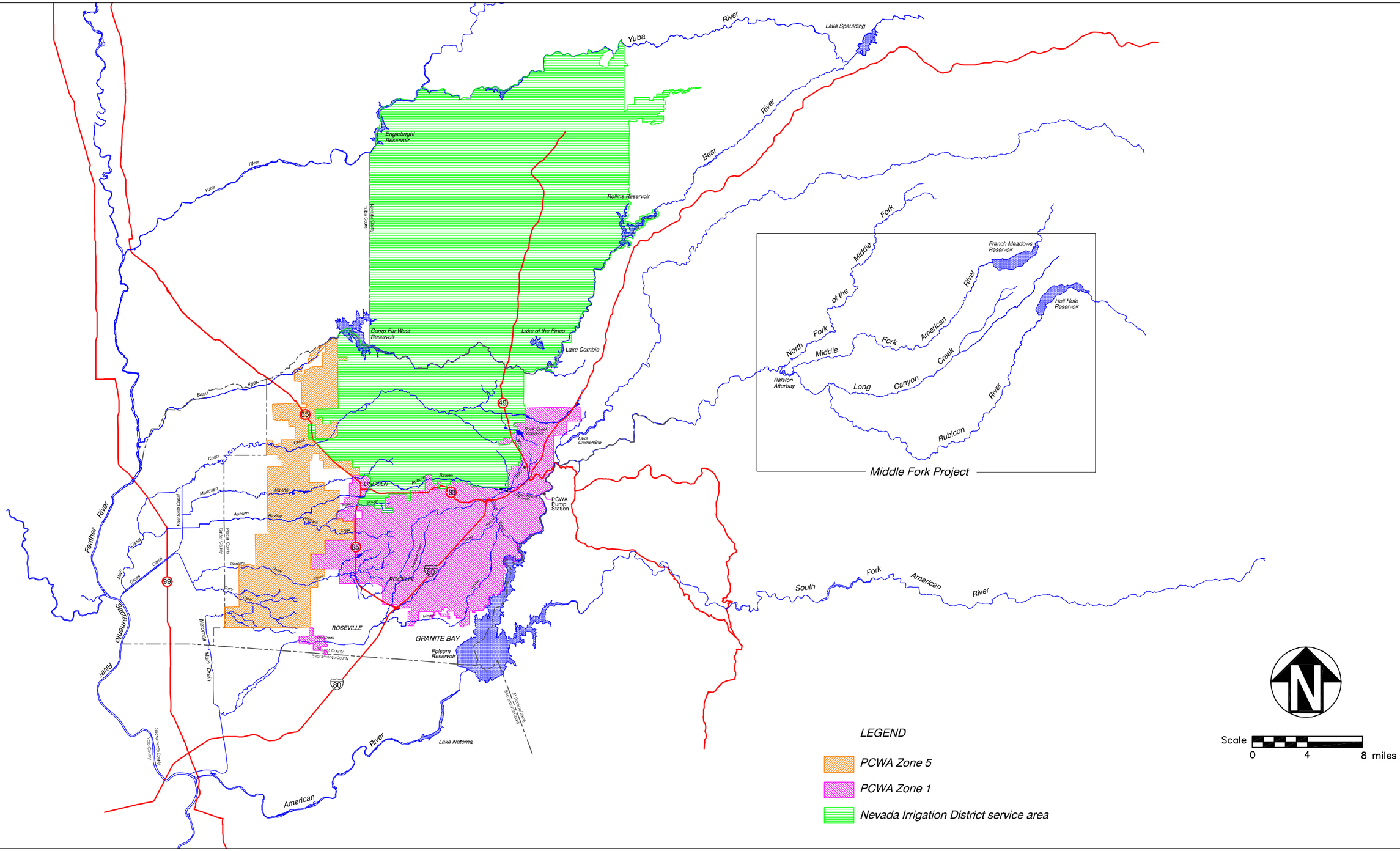


Figure 3.5-2 Regional View of Auburn Ravine Watershed

In addition to being able to supply water to Auburn Ravine from the American River, PCWA has the ability to pump approximately 50 cfs of water directly from the Auburn Ravine Tunnel to PG&E's South Canal via the Auburn Ravine Tunnel pump station (constructed in 1990). This pump station is located directly above the Auburn Ravine Tunnel and lifts water approximately 200 feet from the tunnel to PG&E's South Canal. Once within the South Canal, this water flows by gravity toward the Foothill WTP. The Auburn Ravine Tunnel pump station has been used infrequently in the past, due to the high cost of double-pumping the American River water.

Water pumped from the American River historically has been delivered into Auburn Ravine. When American River water has been needed, PCWA orders a cutback in its PG&E deliveries to Auburn Ravine and reassigns the water to delivery at other, higher elevation locations. By exchanging American River water for PG&E's Drum/Spaulding water in this fashion, PCWA has been able to save half the energy cost that would otherwise be incurred in double-pumping the American River water from the 500-foot elevation of the American River to the 700-foot elevation of the Auburn Ravine Tunnel, and then pumped again to the 900-foot elevation of the South Canal (**Figure 3.5-3**)

While the water exchange has been effective during the irrigation seasons of past years in reducing double-pumping costs, PCWA has still been required to double-pump water during the annual PG&E canal maintenance outage in late October and early November. During these outages, water is not available from PG&E, and PCWA must double-pump American River water to supply the Foothill WTP and treated water customers.

City of Auburn Wastewater Treatment Plant Discharges

The City of Auburn's Wastewater Treatment Plant (WWTP) lies along the Auburn Ravine approximately one-half mile below PG&E's Wise Powerhouse South Canal crossing and one-half mile above the outlet of PCWA's Auburn Ravine Tunnel. The City continuously releases approximately 3.9 cfs of treated effluent into Auburn Ravine year-round. The City of Auburn WWTP service area water supply source is imported from the Drum-Spaulding Project (Yuba/Bear River system) and delivered by PCWA. The treated wastewater effluent releases are a function of the WWTP inflow and are unrelated to other sources of water released into Auburn Ravine. Likewise, direct releases to Auburn Ravine from other source waters are independent of the City of Auburn's WWTP.

Auburn Ravine Watershed - Stormwater Runoff

The Auburn Ravine headwaters lie within the City of Auburn. Urban stormwater runoff occurs in response to rainfall and due to over-watering of landscaped areas.

Fish Resources and Aquatic Habitat Considerations

The current flow augmentation in Auburn Ravine is particularly beneficial for chinook salmon and steelhead. Higher spring and summer flows support greater habitat diversity, increased quantity and quality of habitats, and lower summer water temperatures than what would be found

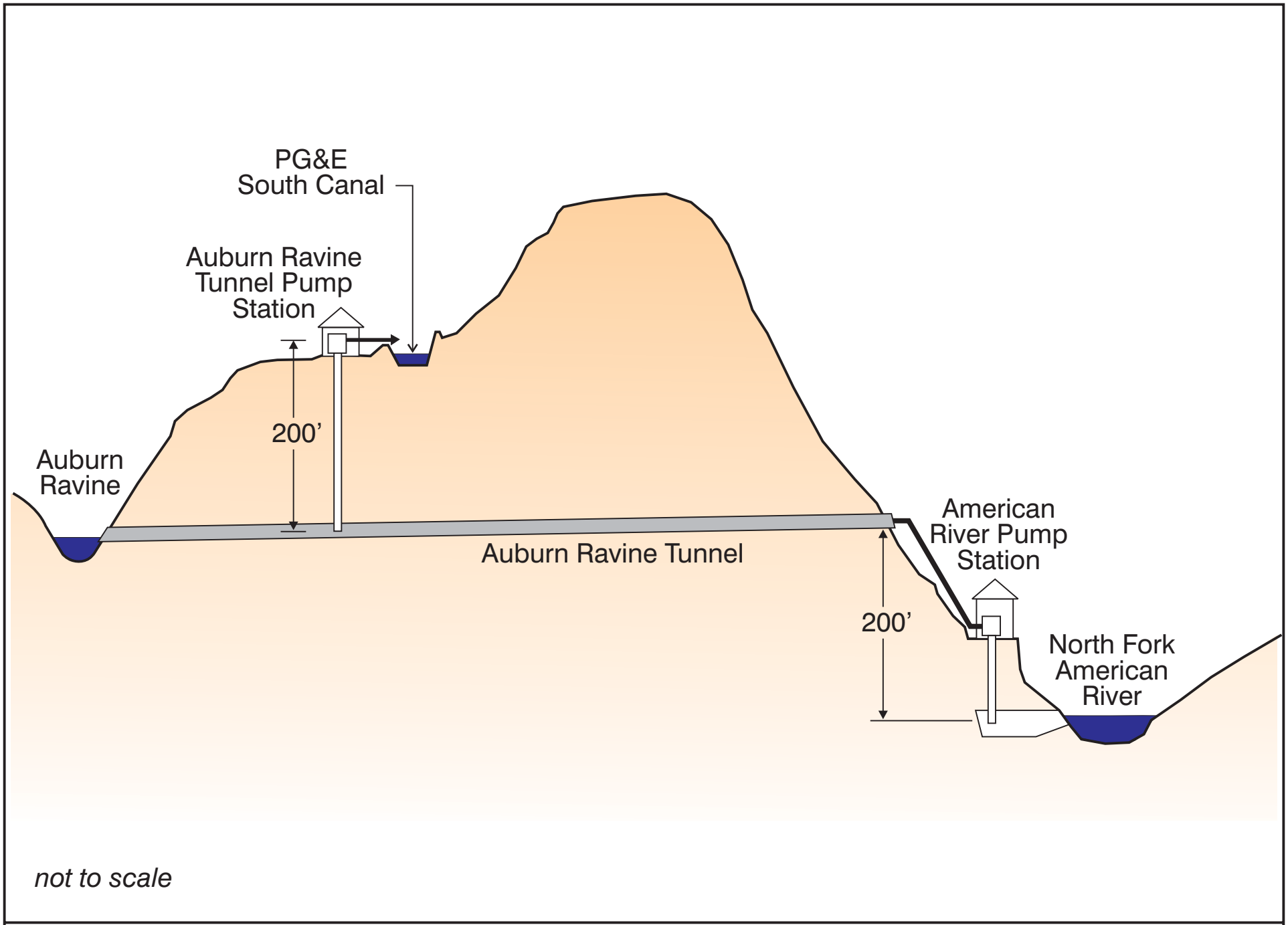


Figure 3.5-3 Hydraulic Profile of Water Deliveries from the American River Pump Station

under natural conditions (City of Lincoln 1999). Current water management practices, therefore, greatly enhance potential anadromous salmonid production in Auburn Ravine (City of Lincoln 1999).

Although flow augmentation provides obvious beneficial effects for anadromous salmonids in Auburn Ravine, concern has been raised about an increase in salmonid straying into Auburn Ravine due to the existing deliveries of North Fork American River water into Auburn Ravine, as well as the project's contribution to the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF) discharges. The issue of straying is of particular concern because steelhead are listed as threatened under the federal ESA, fall-run chinook salmon are listed as a candidate species under the federal ESA, and spring-run chinook salmon are listed as threatened under both the federal ESA and CESA. Presumably, the possibility of increased straying of anadromous salmonids into Auburn Ravine is a concern because of potential impacts, including competition and genetic introgression, on fish native to Auburn Ravine.

Fish surveys of Auburn Ravine conducted in 1997, 1998, and 1999 indicate a fish population assemblage typical of a Sierra Nevada foothill stream (City of Lincoln 1999). In general, these surveys found steelhead/rainbow trout, Sacramento pikeminnow, Sacramento sucker and hitch in upstream areas characterized by more complex structure and gravel substrates (City of Lincoln 1999). The fish assemblage in areas downstream of the Highway 65 Bridge included a number of non-native sunfish family members, mosquitofish, and carp. Habitat in the downstream locations is characterized by lower stream gradient and slower velocity, less complex structure, and sand substrate (City of Lincoln 1999). The federally listed splittail are not believed to use Auburn Ravine. Auburn Ravine does not provide conditions consistent with big-river, floodplain, and estuarine habitat normally used by splittail (Sommer et al. 1997). Although it is possible that some splittail could exist in Auburn Ravine, given the absence of splittail in fish surveys, and given the absence of appropriate habitat, splittail are not expected to occur in Auburn Ravine (City of Lincoln 1999).

Fall-run Chinook Salmon

Fall-run chinook salmon from the Feather River and Nimbus hatcheries historically have been stocked by CDFG in Auburn Ravine, Doty Ravine, and Coon Creek (Cramer and Demko 1997 *in* City of Lincoln 1999). Typically, about 100,000 fall-run chinook salmon fingerlings from Nimbus Fish Hatchery are released annually into Auburn Ravine. In March 1998, CDFG released 140,000 fall-run chinook salmon fingerlings into Auburn Ravine. No chinook salmon were collected or observed during the fish surveys conducted in 1997, 1998, or 1999. However, anecdotal information from long-time residents indicates that fall-run chinook salmon historically migrated as far upstream as Auburn to spawn. Lincoln area residents report that as many as several hundred fall-run chinook salmon spawned just upstream of Lincoln in the fall of 1985 (City of Lincoln 1999).

Spring-run Chinook Salmon

Occurrence of either adult or juvenile lifestages of spring-run chinook salmon have not been documented in Auburn Ravine. Spring-run chinook salmon are not believed to be native to

Auburn Ravine but, over the last 15 years, spring-run chinook salmon from the Feather River and Nimbus hatcheries have been stocked in Auburn Ravine by CDFG (Cramer and Demko 1997 *in* City of Lincoln 1999). In March 1998, CDFG released 77,400 spring-run chinook salmon fingerlings into Auburn Ravine and the same number in Doty Ravine, which combines with Auburn Ravine and Coon Creek prior to the combined waters flowing into the Cross Canal (Cramer and Demko 1997 *in* City of Lincoln 1999). Spring-run chinook salmon from the Feather River Hatchery are interbred with fall-run chinook salmon and do not represent a genetically uncontaminated stock (CDFG 1994 *in* City of Lincoln 1999).

Central Valley Steelhead

Currently, there is little detailed information regarding steelhead specific to Auburn Ravine. Steelhead/rainbow trout were not collected during the fish survey conducted in 1997, although juveniles were collected in upstream areas in the 1998 and 1999 surveys. It can be difficult to definitively determine whether juveniles are the anadromous steelhead or resident rainbow trout. The fish survey conducted in 1998 reported that some of the captured juveniles exhibited the iridescent silvery sides typical of smolting salmonids (City of Lincoln 1999). The juvenile steelhead/rainbow trout collected during the 1999 survey reportedly did not exhibit any obvious visual characteristics of emigration associated with the anadromous form (i.e., steelhead) (City of Lincoln 1999).

Steelhead have not been reported to have been planted in Auburn Ravine. Rainbow trout historically were planted in Auburn Ravine until 1965. Rainbow trout continues to be planted in water bodies connected to Auburn Ravine (e.g., the Bear River and associated reservoirs) (City of Lincoln 1999).

Anecdotal information suggests that adult steelhead, exhibiting the silver-side characteristics of recent migration from the ocean, have been captured and released by anglers in the Ophir area. Long-time residents report that steelhead/rainbow trout routinely spawned near Auburn.

Juvenile steelhead would be expected to rear in Auburn Ravine for a year or more prior to emigration to the ocean. Therefore, summer rearing habitats are an important factor in the survival of these juveniles, and the current water management practices in Auburn Ravine provide this habitat.

3.5.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.5.2.1 Methodology

Facilities-Related Analysis Approach

Facilities-related effects include those associated with construction, operation, and maintenance of the pump station facilities, and restoration of the previously dewatered channel, and are limited to the immediate project area setting. To determine if potential impacts to fish resources may occur as a result of construction of project facilities, the duration of construction, the potential turbidity, sedimentation, and siltation resulting from construction, and the composition

of the fish communities present in the immediate project area (North Fork American River) were considered and evaluated.

Operation and maintenance considerations include potential impacts associated with project facilities and fish screen functions on the aquatic resources of the upper American River. To determine potential impacts to fish passage resulting from alternative facility operations, fish swimming velocities, and the length of the bypass tunnel were considered and evaluated. Finally, as part of the operation considerations, fish communities present in the project area, as well as their respective lifestages, were assessed to determine if any potential impacts would be associated with backwater created by the new diversion facilities. Additionally, the analysis evaluated potential impacts to adult salmonid emigration patterns resulting from operational changes in Auburn Ravine flows. To determine if salmonid genetic stock in Auburn Ravine would be expected to be impacted from alternative operations, a literature review regarding chemical detection limits and olfactory response mechanisms of salmonids was conducted. Auburn Ravine water composition and hatchery influences also were evaluated.

Diversion-Related Analysis Approach

Extensive hydrologic, water temperature, and early lifestage salmon mortality modeling was performed to provide a quantitative basis from which to assess potential diversion-related impacts to fish resources and aquatic habitats within the study area.

Modeling output provided monthly values for each year of the 70-year period of record modeled for river flows, reservoir storage and elevation, and for each year of the 69-year hydrologic simulation period modeled for river water temperatures. Water temperature modeling encompassed a 69-year period because the model is based upon a calendar year, whereas the hydrologic modeling is based upon a water year. River water temperature output was then used in Reclamation's chinook salmon mortality models to characterize water temperature-induced losses of early lifestages of chinook salmon under each simulated condition. Output from the salmon mortality models provided estimates of annual (rather than monthly mean) losses of emergent fry from egg potential (all eggs brought to the river by spawning adults), which is presented in terms of survival.

The specific hydrologic, water temperature, and salmon mortality modeling output used to assess potential impacts to fish resources and aquatic habitats are identified in Section 3.5.2.3, Impact Indicators and Significance Criteria, for each water body potentially affected.

Application of Modeling Output

The models used in this analysis (DWR's UARM, Reclamation's PROSIM, reservoir temperature models, American and Sacramento water temperature models, and the lower American and Sacramento river chinook salmon early-lifestage mortality models) are tools that have been developed for comparative planning purposes, not for predicting actual river conditions at specific locations at specific times. The 70-year and 69-year periods of record for PROSIM and temperature modeling, respectively, provide an index of the kinds of changes that would be expected to occur with implementation of a specified set of operational conditions.

Reservoir storage, river flows, water temperature, and salmon survival output for the period modeled should not be interpreted or used as definitive absolutes depicting actual river conditions that will occur in the future. Rather, output for the with-project and the cumulative condition can be compared to that for the without-project condition to determine:

- Whether reservoir storage or river flows and temperatures would be expected to change with implementation of the project alternative;
- The months in which potential reservoir storage and river flow and temperatures changes could occur;
- A relative index of the magnitude of change that could occur during specific months of particular water year types, and whether the relative magnitude anticipated would be expected to result in impacts to fish resources within the regional area; and
- The relative degree to which alterations in operations of Folsom Dam and Reservoir, as directed by the principles of coldwater pool management, could eliminate or minimize temperature increases.

The models used, although mathematically precise, should be viewed as having "reasonable detection limits." Establishing reasonable detection limits is useful to those using the modeling output for impact assessment purposes, and prevents making inferences: (1) beyond the capabilities of the models; and (2) beyond an ability to actually measure changes. Although data from the models are output to the nearest 100 AF, tenth of a foot in elevation, tenth of a cfs, tenth of a degree Fahrenheit, and tenth of a percent in salmon mortality, these values were rounded when interpreting differences for a given parameter between two modeling simulations. For example, two simulations having river flows at a given location within one percent of each other were considered to be essentially equivalent. Because the models provide reservoir storage data on a monthly time-step, measurable differences in reservoir storage were evaluated similarly. Similar rounding of modeled output was performed for other output parameters in order to assure the reasonableness of the impact assessments.

Commonly used field-temperature monitoring equipment (in situ temperature loggers, thermometers, electronic meters) have a total error of measurement of 0.2°F or more. Therefore, modeled differences in temperature of 0.2°F or less could not be consistently detected in the river by actual monitoring of water temperatures. In addition, as mentioned above, output from Reclamation's water temperature models provides a "relative index" of water temperatures under the various operational conditions modeled. Output values indicate whether the temperatures would be expected to increase, remain unchanged, or decrease, and provide insight regarding the relative magnitude of potential changes under one operational condition compared to another. Therefore, for the purposes of this impact assessment, modeled temperature changes that were within 0.3°F between modeled simulations were considered to represent no measurable change. Temperature differences of more than 0.3°F were assessed for their biological significance. This approach is very conservative (rigorous). For example, USFWS and Reclamation, in the Trinity River Mainstem Fishery Restoration Draft EIS/EIR (USFWS et al. 1999), used a change in long-

term average water temperature of 0.5°F as a threshold of significance, and the Central Valley RWQCB generally uses a change of 1.0°F or more as a threshold of significance.

Assessment Methodologies

The impact assessment methodologies defined below are discussed in terms of comparing the modeled output for one condition to output from a second condition depicting the additional surface water diversions associated with the Proposed Project or Upstream Diversion Alternative. Hence, throughout this methodology section, reference will be made to comparing modeled output from the Action Alternatives to that under another condition without implementation of a project (i.e., either the existing condition or No Action/No Project Alternative). The same basic methodologies described below were used to assess cumulative impacts (i.e., 2025 with the project versus existing condition) and for evaluating the project's incremental contribution to the cumulative condition.

Upper American River Basin

To assess diversion-related impacts to fish resources and aquatic habitat in the upper American River associated with the Action Alternatives or the cumulative condition, a flow comparison was performed to determine the difference between monthly mean flows for all of the months of the 70-year period of record relative to the basis of comparison. Monthly mean flows were further examined to determine the difference between monthly mean flows for the high-flow season (i.e., December through June) and the low-flow season (i.e., July through October) of the 70-year period of record.

Ralston Afterbay

No substantial storage-, elevation-, or temperature impacts to the fish resources of Ralston Afterbay would be expected to occur because, as a regulating afterbay of the MFP, its monthly storage, elevation, and temperature regimes would be expected to remain relatively similar under the Action Alternatives compared to the existing condition. Any small changes in storage, elevation, or temperature that could occur would constitute a less-than-significant impact to Ralston Afterbay fish resources.

Folsom Reservoir

Warmwater Fisheries

Because Folsom Reservoir's warmwater fish species (black bass, sunfish, crappie, and catfish) use the warm upper layer of the reservoir and nearshore littoral habitats throughout most of the year, seasonal changes in reservoir storage, as it affects reservoir water surface elevation (feet msl), and the rates at which water surface elevation changes during specific periods of the year, can directly affect the reservoir's warmwater fish resources. Reduced water surface elevations can reduce the availability of nearshore littoral habitats used by warmwater fish for spawning and rearing, Therefore reducing spawning and rearing success and subsequent year-class strength. In addition, decreases in reservoir water surface elevation during the primary spawning

period for nest-building, warmwater fish (March through July) may result in reduced initial year-class strength through warmwater fish nest "dewatering."

To assess potential elevation-related impacts to the warmwater fish of Folsom Reservoir, the following two-phased approach was used. First, a relationship between reservoir water surface elevation and acres of nearshore littoral habitat containing submerged structure (submerged macrophytes and/or inundated terrestrial vegetation) was developed. Using this relationship, the mean number of acres of littoral habitat was estimated for each month of the primary spawning and rearing period (March through September) under the Proposed Project and the cumulative condition relative to that modeled for the basis of comparison.

Second, the magnitude of change (feet) in reservoir water surface elevation occurring each month of the primary spawning period for nest-building fish (March through July) under the Proposed Project and the cumulative condition was determined and compared to that modeled for the basis of comparison. A recent study by CDFG, which examined the relationship between reservoir elevation fluctuation rates and nesting success for black bass, suggests that a reduction rate of 0.15, 0.18, and 0.39 meter per day (m/day) or greater would result in 100 percent nest mortality (or zero percent nest survival) for largemouth bass, smallmouth bass, and spotted bass, respectively (Lee et al. 1998). However, CDFG reservoir biologists suggest that, on the average, a nest survival rate of at least 20 percent is necessary to maintain the long-term population levels of high-fecundity, warmwater fish (D. Lee, pers. comm. 1998). Using nest survival curves developed by CDFG (Lee et al. 1998), reservoir fluctuation criteria were developed that would provide a minimum nest survival rate of approximately 20 percent for largemouth bass, the bass species found by CDFG to be most sensitive to reservoir elevation fluctuations.

A reduction rate of nine feet per month would represent an approximate water level decrease of 0.3 feet per day (ft/day) (0.09 m/day) during a nesting event, which would correlate to an approximate nest survival rate of 20 percent for largemouth bass (Lee et al. 1998). Therefore, a decrease in mean Folsom Reservoir water surface elevation of nine feet or more per month was selected as the threshold beyond which spawning success of nest-building, warmwater fish (black bass, sunfish, crappie, and catfish) could potentially result in long-term population declines. To evaluate impacts to warmwater fish, the number of times that reservoir reductions of nine feet or more per month could occur under the Proposed Project and the cumulative condition were compared to the number of occurrences that were modeled to occur under the basis of comparison.

Criteria for reservoir elevation increases (nest flooding events) are not recommended by CDFG. Because of overall fishery benefits, greater reservoir elevations that would be associated with rising water levels would offset negative impacts due to nest flooding (Lee et al. 1998). Therefore, the likelihood of spawning-related impacts from nest flooding is not addressed for reservoir fisheries.

Coldwater Fisheries

During the period when Folsom Reservoir is thermally stratified (April through November), coldwater fish within the reservoir reside primarily within the reservoir's metalimnion and

hypolimnion where water temperatures remain suitable. Reduced reservoir storage (TAF) during this period could reduce the reservoir's coldwater pool volume, thereby reducing the quantity of habitat available to coldwater fish species during these months. Reservoir coldwater pool size generally decreases as reservoir storage decreases, although not always in direct proportion because of the influence of reservoir basin morphometry. Therefore, to assess potential storage-related impacts to coldwater fish habitat availability in Folsom Reservoir, end-of-month storage modeled for each year of the 70-year period of record under the Proposed Project and the cumulative condition was compared to end-of-month storage under the basis of comparison for each month of the April through November period. Substantial reductions in reservoir storage were considered to result in substantial reductions in coldwater pool volume and, therefore, habitat availability for coldwater fish. Impacts to the coldwater fisheries were further assessed by determining whether seasonal changes in reservoir storage, and associated changes in water-surface elevation, would be expected to indirectly affect coldwater fish species by adversely affecting the productivity of their primary prey species (threadfin shad (*Dorosoma petenense*) and wakasagi (*Hypomesis hipponensis*)).

Lake Natoma

No storage- or elevation-related impacts to fishery resources of Lake Natoma are expected to occur because as a regulating afterbay of Folsom Reservoir, its monthly storage and elevation would be affected little, if at all, by the Proposed Project or cumulative condition, relative to the basis of comparison. Consequently, no quantitative assessment of potential storage- or elevation-related impacts to fishery resources in this water body is warranted.

Because the increased diversion under the Proposed Project and the cumulative condition could alter the temperature of water released from Folsom Dam, and because Lake Natoma's water temperature at any given time is largely dictated by the temperature of water released from Folsom Dam, these additional diversions could change seasonal water temperatures within Lake Natoma. The small changes in lake temperatures that could occur would not be expected to adversely affect the lake's warmwater fisheries. Conversely, increases in lake temperatures could adversely affect coldwater species such as rainbow trout stocked by CDFG. To assess the potential impacts of altered lake temperatures to fishery resources within the lake, monthly mean temperatures of water released from Nimbus Dam were determined for the Proposed Project and the cumulative condition, and compared to monthly mean temperatures modeled under the basis of comparison for each month of the year. Temperatures of water released from Nimbus Dam were used as an "index" to represent the relative changes in Lake Natoma water temperatures that could occur under the Proposed Project, relative to the basis of comparison.

Nimbus Hatchery

Because the additional diversions could alter Lake Natoma water temperatures during some months, and because Nimbus Hatchery diverts its water supply directly from Lake Natoma throughout the year, the Proposed Project or cumulative condition could change hatchery water temperatures during some months of the year. Nimbus Hatchery production remains relatively unaffected when hatchery temperatures remain below 60°F. However, increased disease and mortality of hatchery-reared fish often occurs when temperatures exceed 60°F. Losses from

these factors become a particular problem when hatchery water temperatures exceed 65°F for extended periods. Water temperatures exceeding 68°F for even short periods (days) are particularly detrimental to hatchery fish held at high densities, and could require the hatchery to release and/or transfer most or even all of its fish to prevent unacceptably high mortality (B. Barngrover, pers. comm. 1997).

To assess potential temperature-related impacts to Nimbus Hatchery operations, monthly mean temperatures of water released from Nimbus Dam under the Proposed Project and the cumulative condition were modeled and compared to those modeled under the basis of comparison for each month of the year. The number of years of the 69 years modeled that monthly mean Nimbus Dam release temperatures would exceed the index values of 60°F, 65°F, and 68°F under the Proposed Project and the cumulative condition were determined and compared to the frequency of exceedance of these temperature index values under the basis of comparison. In addition, for each month of the year, the mean temperature of water released from Nimbus Dam for the years exceeding each of these temperature index values was determined.

Lower American River

The additional diversions by PCWA could affect lower American River flows and water temperatures during portions of the year. The lower American River is the water body within the study area with the greatest potential to experience impacts to fisheries associated with implementation of the Proposed Project and the cumulative condition due to anticipated changes in Reclamation's operation of Folsom Reservoir. In addition, a number of fish species of primary management concern utilize the lower American River during one or more of their lifestages. For these reasons, species-specific impact assessments were warranted for this water body and were conducted for the following five species of primary management concern:

- Fall-run Chinook Salmon
- Steelhead
- Splittail
- American Shad
- Striped Bass

These species are of primary management concern due either to the importance of their commercial and/or recreational fisheries (i.e., chinook salmon, steelhead, American shad, and striped bass) and/or because they are a species currently listed under the federal ESA and/or CESA (i.e., steelhead, chinook salmon, and splittail). Because the species selected for species-specific assessments include those sensitive to changes in both river flow and water temperature throughout the year, an evaluation of impacts to these species is believed to reasonably encompass the range of potential impacts to lower American River fish resources that could occur under the Proposed Project or the cumulative condition relative to the basis of comparison.

Potential impacts resulting from changes in river flows and water temperatures were evaluated for each of the five species of primary management concern. Because these species are known to use the lower American River during discrete time periods associated with specific lifestages,

potential impacts were evaluated using species-specific assessment parameters, where appropriate. The impact assessment methodologies used to assess potential flow- and water temperature-related impacts to the five indicator species are described below.

Fall-run Chinook Salmon

Watt Avenue represents the river location above which approximately 98 percent of fall-run chinook salmon spawning occurs. To assess flow-related impacts to fall-run chinook salmon spawning, incubation and initial rearing, monthly mean flows at Watt Avenue and below Nimbus Dam under the alternatives were compared to monthly mean flows under the existing condition for each month of the October through February period. In addition, monthly mean flows at Watt Avenue and below Nimbus Dam under the cumulative condition (i.e., 2025 with the American River Pump Station Project) versus both the existing condition and future No Action/No Project Alternative conditions were evaluated to assess flow-related impacts to fall-run chinook salmon spawning incubation and initial rearing. If a cumulative impact (versus the existing condition) was found to be significant, then the Action Alternatives' incremental contribution to the cumulative condition was assessed.

Changes in flows during the period March through June also were assessed at Watt Avenue to further address potential impacts to fry and juvenile lifestages rearing during these months. Flows at the mouth were compared between modeling simulations to assess flow-related impacts to adult immigration and juvenile emigration. The frequency with which specified flow levels were met was determined under the alternatives, and was compared to that under the existing condition.

Water temperature-related impacts to lower American River fall-run chinook salmon were evaluated through three distinct assessments focusing on distinct lifestages and periods, including: (1) adult immigration (September through November); (2) spawning/incubation and initial rearing (October through February); and (3) juvenile rearing and emigration (March through June) using the multi-step analysis described below.

Adult Immigration (September Through November)

Temperature-related impacts to adult immigration were based on water temperature at the mouth of the lower American River and at Freeport on the Sacramento River. The 69-year average water temperatures for each month of the September through November period that would occur at the American River mouth and at Freeport under the Proposed Project and the cumulative condition were compared to those under the basis of comparison. In addition, monthly mean water temperatures at the American River mouth and at Freeport were compared for each month of the adult immigration period over the 69-year period of record. Therefore, a total of 483 months for each month were included in the analysis.

Spawning/Incubation and Initial Rearing (October Through February)

First, the long-term average water temperatures for each month of the October through February period that would occur below Nimbus Dam or at Watt Avenue under the Proposed Project or

cumulative condition were compared to the long-term average water temperatures for each of these months, at these same locations, under the basis of comparison. Because water temperatures generally warm with increasing distance downstream during October, and because 98 percent of all spawning occurs upstream of Watt Avenue, the most conservative assessment of thermal impacts to chinook salmon spawning and incubation during October is based on Watt Avenue temperatures. Therefore, all temperature assessments for the month of October are based on temperatures at Watt Avenue. Conversely, because water temperatures generally cool with increasing distance downstream during the period November through January, and because water temperatures generally change little between Nimbus Dam and Watt Avenue during February, temperature impact assessments for spawning and incubation during the months November through February are based on water temperatures below Nimbus Dam, thereby providing the most conservative assessment.

Second, the number of years (of the 69 years modeled) that monthly mean water temperatures would exceed 56°F below Nimbus Dam or at Watt Avenue was determined for each month of the October through February period and compared to those modeled under the basis of comparison.

Third, for each month of the October through February period, the mean water temperature below Nimbus Dam or at Watt Avenue for the years (of the 69 years modeled) exceeding the 56°F index value was determined under the Proposed Project or the cumulative condition and compared to those under the basis of comparison.

Finally, Reclamation's Lower American River Fall-Run Chinook Salmon Mortality Model was used to assess potential temperature-related impacts to the early lifestage of chinook salmon. Annual early lifestage survival (the complement of mortality) estimated for the Proposed Project and the cumulative condition were compared to that estimated for the basis of comparison for each year of the 69-year period of record. Model output represents the percentage of potential emergent fry produced, based on all eggs brought to the river by spawning adults, that would survive under the temperature regime that would occur under each model simulation. The model calculates temperature-induced mortality (the percentage of potential emergent fry lost as a result of temperature-induced mortality of pre-spawned eggs, fertilized eggs incubating in the gravel, and pre-emergent fry). Losses for each of these three early lifestages are then tallied by the model and output as a percent loss (mortality) from egg potential (all eggs brought to the river by immigrating adults) for each year modeled. The complement (i.e., survival = 100 - mortality) of these calculated percent losses is discussed for impact assessment purposes.

Juvenile Rearing and Emigration (February Through June)

The same methodology was used to evaluate potential temperature-related impacts to fall-run chinook salmon juvenile rearing and emigration with the following modifications:

- The period of assessment was February through June;

- The number of years (of the 69 years modeled) that monthly mean water temperatures would exceed the index value of 65°F were determined at Watt Avenue and the lower American River mouth;

- Mean water temperatures for the years (of the 69 years modeled) that were shown to exceed the 60°F and 65°F index values were determined at Watt Avenue; and

- Reclamation's Salmon Mortality Model was not used, because it does not assess mortality beyond the emergent fry lifestage.

The temperature index values for immigration/emigration and spawning/incubation are different because adult and juvenile fall-run chinook salmon are believed to tolerate water temperatures up to 65°F without substantial adverse impacts, whereas incubating eggs and pre-emergent fry incur substantial reductions in survival when water temperatures exceed 60°F. Because the majority of fall-run chinook salmon and steelhead rearing is believed to occur above Watt Avenue (River Mile (RM) 9.5), and because water temperatures generally increase between Nimbus Dam and Watt Avenue during the February through June period, use of Watt Avenue water temperatures for assessing temperature-related impacts to juvenile chinook salmon during this period provides the most conservative assessment.

In addition to the assessments described above, temperature-related impacts to juvenile emigration through the lower portion of the river were assessed based on temperatures at the mouth using the temperature index value described above.

Steelhead

Because environmental conditions required by steelhead are not significantly different from those required by fall-run chinook salmon, flow- and temperature-related impact determinations for steelhead for the period October through June were based on the same modeling output used to assess impacts to fall-run chinook salmon during this period. However, because steelhead rear within the lower American River year-round, additional flow and temperature impact assessments were made for the months of the year not addressed by the fall-run chinook salmon assessments (i.e., July through September).

Flow-related impacts to steelhead during the July through September period were assessed via the same methods used to assess flow-related impacts to fall-run chinook salmon during the October through June period.

Temperature-related impacts to steelhead juvenile rearing during the July through September period were assessed via the same methods used to assess temperature-related impacts to fall-run chinook salmon juvenile rearing and emigration during the March through June period. In addition, the number of months exceeding 65°F for each model simulation, as well as the average temperature for the months exceeding this index value, also was determined. Because no steelhead mortality model has been developed for the lower American River, no steelhead mortality modeling could be performed as a part of the assessment for this species.

Splittail

Splittail may spawn in the lower American River in extremely low numbers, with the majority of splittail spawning that could occur taking place in the lower sections of the river (i.e., downstream of RM 12). Consequently, altered river flows from the alternatives could impact the availability of potential splittail spawning habitat within the lower American River by reducing the amount of riparian vegetation that would be inundated during the splittail spawning season (February through May).

The lower American River from RM 5 to the mouth is largely influenced by the water surface elevation of the Sacramento River. Sacramento River stage often controls the water surface elevation here, and the extent to which splittail spawning habitat, particularly inundated riparian vegetation, along this lower reach of the river channel would be available. Conversely, river stage in the portion of the river between RM 8 and RM 12, which is characterized by abundant backwater habitat, is controlled primarily by lower American River flows. The frequency and duration of riparian vegetation flooding in this area and, therefore, the quality and quantity of potential splittail spawning habitat has the potential to be impacted by reduced flows.

To assess flow-related impacts to potential splittail spawning habitat availability during each month of the February through May period, for each year of the 70-year period of record, the amount of riparian habitat inundated in acres (dependent variable) was regressed against flow in cfs (independent variable). Using river flows at Watt Avenue (RM 9.5), the number of acres of flooded riparian habitat between RM 8 and RM 9 was determined under the Proposed Project and the cumulative condition and for the basis of comparison, and these values were compared for assessment purposes. Field measurements conducted for the interim reoperation of Folsom Dam and Reservoir indicated that the total amount of riparian vegetation inundated within RM 8 to RM 9 ranged from 2.4 acres at a river flow of 4,540 cfs to 35.8 acres at a river flow of 22,570 cfs (SAFCA 1999).

The simple linear regression analysis performed identified a positive, statistically significant (r^2=0.99; P<0.001) relationship between flow and the total acreage of riparian vegetation inundated within RM 8 to RM 9. This relationship is defined by the equation:

$$\text{Habitat} = (0.001874 \times Q) - 6.4585$$

Where: Habitat = the total amount of riparian vegetation inundated within the study area (acres); and
Q = flow within the study area (cfs)

The x-intercept of the linear regression line occurs at 3,456 cfs, which indicates that zero acres of riparian habitat are inundated within the study area at river flows of approximately 3,456 cfs or less. For river flows between 3,456 cfs and 22,571 cfs, the total acreage of riparian vegetation inundated within the study area increased by approximately 1.9 acres for each 1,000 cfs increase in flow. As previously discussed, field observations determined that the first 2.4 acres of riparian vegetation inundated primarily occurred within a narrow strip along the riverbank. This inundation zone was noted as being very shallow (i.e., generally less than two feet deep) and, therefore, unlikely to provide suitable potential habitat for splittail. Based on this observation,

more than 2.4 acres of inundated vegetation must be present within the study area before potentially suitable splittail spawning habitat would be available.

Splittail reportedly spawn at water temperatures from 48°F to 68°F (Wang 1986). To evaluate potential temperature-related impacts to splittail, the number of years (of the 69 years modeled) that monthly mean water temperatures at Watt Avenue and the mouth would be within this preferred range during the period February through May was determined under the Proposed Project and the cumulative condition, and compared to that under the basis of comparison. For the purposes of assessing temperature-related impacts to splittail in the American River, water temperatures at Watt Avenue and the mouth effectively represent the range of water temperatures that splittail would encounter when using the lower portion of the river for spawning and initial rearing.

American Shad

The flow-related impact assessments conducted for fall-run chinook salmon and steelhead described above provided for an evaluation of the relative change in monthly mean flows in the lower American River under the Proposed Project and the cumulative condition for all months of the year. Consequently, findings from these assessments also were used, in part, to assess potential flow-related impacts to American shad.

Because the majority of American shad spawning migrations into the lower American River are believed to occur during May and June, changes in river flows during these months warrant further assessment for this species. The relative number of adult American shad entering the lower American River during May and June is believed to be largely influenced by flows at the mouth. Snider and Gerstung (1986) recommended flow levels of 3,000 to 4,000 cfs during May and June as sufficient "attraction flows" to sustain the American shad fishery in the lower American River. Impacts to American shad attraction flows were assessed by determining the number of years (of the 70-year period of record) during which May and June flows at the mouth would be less than 3,000 cfs under the Proposed Project and the cumulative condition, compared to that determined for the basis of comparison.

To evaluate potential water temperature-related impacts to American shad spawning, monthly mean water temperatures under the Proposed Project and the cumulative condition were determined and compared to those under the existing condition for the months of May and June. A conservative approach for assessing potential water temperature impacts was to assume that American shad may spawn throughout the river and, therefore, to evaluate water temperature conditions below Nimbus Dam and the mouth. Specifically, the number of years (of the 69 years modeled) that mean May and June water temperatures below Nimbus Dam and the mouth would be within the reported preferred range for American shad spawning (60°F to 70°F) was determined under the Proposed Project and the cumulative condition and compared to that under the basis of comparison.

Striped Bass

Although no study to date has definitively determined whether striped bass spawn in the lower American River, it is believed that little, if any, striped bass spawning occurs there (DeHaven 1978, *in* Snider and Gerstung 1986). Nevertheless, the lower American River is used by juvenile striped bass for rearing and supports a striped bass sport fishery during May and June.

The flow-related impact assessments conducted for fall-run chinook salmon and steelhead address all months of the year. Hence, potential flow-related impacts to striped bass, as they pertain to juvenile rearing habitat availability, were assessed using the same data produced to assess flow-related impacts to fall-run chinook salmon and steelhead.

In addition to juvenile rearing considerations, the number of adult striped bass entering the lower American River during the summer is believed to vary with flow levels and food production. Snider and Gerstung (1986) suggested that flows of 1,500 cfs at the mouth during May and June would be sufficient to maintain the striped bass sport fishery in the lower American River. Hence, potential flow-related impacts to the striped bass sport fishery were assessed by determining the number of years (of the 70-year period of record) that flows at the mouth would be less than 1,500 cfs in May and June under the Proposed Project and the cumulative condition, compared to the number of years this would occur during these months under the basis of comparison.

Optimal water temperatures for juvenile striped bass rearing are reported to range from approximately 61°F to 73°F (USFWS 1988). Therefore, to evaluate potential water temperature-related impacts to striped bass juvenile rearing, the number of years (of the 69 years modeled) that monthly mean water temperatures below Nimbus Dam and at the mouth during May and June would be within the preferred range of 61°F to 73°F for juvenile rearing was determined and compared to those modeled under the basis of comparison.

Shasta and Trinity Reservoirs

Potential elevation- and storage-related impacts to the warmwater and coldwater fisheries of Shasta and Trinity reservoirs were assessed using the same methods described above for Folsom Reservoir.

Keswick Reservoir

No storage- or elevation-related impacts to the fishery resources of Keswick Reservoir are expected to occur because, as a regulating afterbay of Shasta Reservoir, its monthly storage and elevation will be affected little, if at all, by the Proposed Project, alternatives or the cumulative condition. Consequently, no quantitative assessment of potential storage- or elevation-related impacts to fishery resources in this water body is warranted. Similarly, the Proposed Project, alternatives or the cumulative condition would not be expected to substantially alter the water temperatures within Keswick Reservoir. Consequently, a quantitative assessment of potential water temperature-related impacts to fishery resources within this reservoir was not warranted.

Sacramento River

Additional American River diversions could potentially alter seasonal Sacramento River flows, which could change the relative habitat availability for Sacramento River fish. To assess such flow-related impacts to upper Sacramento River fish, monthly mean flows released from Keswick Dam under the Action Alternatives and the cumulative condition were compared to releases from Keswick Dam under the basis of comparison for each month of the year. Potential flow-related impacts to lower Sacramento River fish were assessed in the same manner, except that this assessment used modeled flows at Freeport (RM 46).

Additional diversions could potentially alter Sacramento River water temperatures seasonally during some years. Changes in Sacramento River water temperatures that could occur as a result of implementation of the Proposed Project, alternatives or the cumulative condition would not be expected to be sufficiently large to adversely affect fish species present in the upper Sacramento River, with the possible exceptions of chinook salmon and steelhead. Elevated water temperatures could reduce spawning and rearing success of these anadromous salmonids because of their low thermal tolerance. For this reason, an assessment of changes to upper Sacramento River water temperatures focused on these fish species. Moreover, because: (1) thermal requirements of chinook salmon and steelhead are generally similar; (2) the NMFS Biological Opinion for Winter-run Chinook Salmon (NMFS 1993 as revised in 1995) has established quantitative temperature criteria for the upper Sacramento River to protect winter-run chinook salmon; and (3) Reclamation has developed a Sacramento River Chinook Salmon Mortality Model applicable to all four runs of chinook salmon, this assessment focused quantitatively on chinook salmon. Impact findings for the four runs of chinook salmon provide a technical basis from which to infer whether steelhead would be impacted by seasonal changes in water temperatures.

A three-phased water temperature assessment was performed to evaluate potential temperature-induced impacts to the anadromous salmonid resources of the Sacramento River. First, monthly mean water temperatures at Keswick Dam (RM 301), the upstream extent of anadromous fish immigration, under the Action Alternatives and the cumulative condition were compared to monthly mean temperatures at this river location under the basis of comparison for each month of the year.

Second, the number of years of the 69-year period modeled that water temperatures at Keswick Dam and Bend Bridge would exceed the temperature criteria identified by NMFS in its Biological Opinion for Winter-run Chinook Salmon (NMFS 1993 as revised in 1995) was determined for the Action Alternatives and cumulative condition and compared to the number of years that these criteria would be exceeded under the basis of comparison. NMFS criteria used for this component of the assessment are as follows:

- Daily average water temperature not in excess of 56°F at Bend Bridge from April 15 through September 30; and

- Daily average water temperature not in excess of 60°F at Bend Bridge from October 1 through October 31.

Although the NMFS (1993) temperature criteria are stated as daily averages, the available hydrologic and water temperature models allow only for monthly mean temperature analyses and output. Consequently, this assessment was based on monthly mean water temperature data output from Reclamation's existing models.

Finally, Reclamation's Sacramento River Chinook Salmon Mortality Model was used to estimate annual, early lifestage losses (from egg potential) for fall-run, late-fall-run, winter-run, and spring-run chinook salmon populations. Temperature input to the Sacramento River Chinook Salmon Mortality Model consists of monthly mean temperatures at nine locations between Shasta Dam and Vina Bridge. Mortality estimates for each of the four runs were modeled under the Proposed Project and the cumulative condition, which were then compared to modeled mortality estimated for each run under the basis of comparison. Potential impacts to the four chinook salmon runs in the Sacramento River were evaluated using the same criteria established for the Lower American River Chinook Salmon Mortality Model (see discussion under Lower American River, Fall-Run Chinook Salmon).

To assess potential water temperature-related impacts to fish in the lower Sacramento River, the first phase of this assessment was conducted for the Freeport location.

Sacramento-San Joaquin River Delta

Increased surface water diversion could alter the quantity of freshwater flowing into and through the Delta. The abundance and distribution of several fish species of management concern that rely heavily upon the Delta for one or more of their lifestages, including delta smelt (federally threatened), splittail (federally threatened), longfin smelt (state species of special concern), and striped bass (recreationally important), can be affected by total Delta outflow, the location of X2 (two parts per thousand (ppt) isohaline in the Delta), and the export/inflow ratio.

To evaluate potential impacts to Delta fish resources, changes in monthly mean Delta outflow for the 70-year period of record under the Action Alternatives and the cumulative condition were determined for each month of the year and were compared to monthly mean Delta outflow under the basis of comparison. The frequency and magnitude of differences in Delta outflow were evaluated relative to life history requirements for Delta fish. In addition, changes in monthly mean X2 position were determined for all months of each year, with an emphasis on the February through June period.

Impacts to delta smelt, splittail, striped bass, and other Delta fishery resources were considered adverse if hydrology under the Action Alternatives or the cumulative condition showed a substantial decrease in monthly mean Delta outflow, relative to hydrology under the basis of comparison, during one or more months of the February through June period; if a substantial shift in the long-term monthly mean X2 position occurred (i.e., more than one kilometer (km)); or if Delta export/inflow ratios were increased to where allowable export limits would be exceeded. USFWS and Reclamation have in past documents (i.e., Draft Trinity River Mainstem Fishery Restoration EIS/EIR) applied a 10 percent modeled exceedance in changes in X2 position during the February through June period to determine potentially significant impacts to fish populations in the Delta. Therefore, the significance criteria utilized in this document (i.e.,

1 km or more shift in X2 position) to determine potentially significant impacts to Delta fish populations is very conservative (rigorous) relative to the significance criteria utilized by the resource agencies in previous documents.

Oroville Reservoir and Feather River

Additional American River diversions could potentially alter seasonal lower Feather River flow due to changes in releases from the Oroville Reservoir to the lower Feather River to meet its share of Delta requirements under the Coordinated Operating Agreement (COA). The COA is an agreement between the SWP and the CVP on how they will share the responsibility to meet operational requirements in the Delta. Since the COA takes local reservoir operations into account, any change in either project's operations may have an impact on the other. To assess such flow related impacts to lower Feather River fish, monthly mean flows released from Oroville Reservoir under the cumulative condition were compared to releases under the basis of comparison for each month of the year.

Any changes in Oroville Reservoir operations could alter water temperatures seasonally in the Feather River downstream of the reservoir. To assess such water temperature impacts mean monthly water temperature data from Reclamation's existing Oroville and lower Feather River temperature models were used. The assessment was performed by comparing the modeled monthly mean water temperatures in the Lower Feather River at Oroville Dam, under the cumulative condition to monthly mean water temperatures at this location under the basis of comparison for each month of the year.

3.5.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Management of non-anadromous fish and other aquatic species is the responsibility of the USFWS, whereas management of anadromous fish is the responsibility of NMFS. CDFG is a state "trustee agency" for aquatic species under CEQA. Sensitive aquatic resources are regulated by the federal ESA and CESA. The following discussion addresses fisheries management plans and other regulatory initiatives relative to aquatic resources in the study area.

Central Valley Project Improvement Act

The CVPIA (Title 34 of Public Law (P.L.) 102-575) amends the authorization of the CVP to include fish and wildlife protection, restoration, and mitigation as project purposes of the CVP having equal priority with irrigation and domestic uses of CVP water. It also elevates fish and wildlife enhancement to a level having equal purpose with power generation.

The CVPIA identifies several measures to meet these new purposes. Significant among these is the broad goal of restoring natural populations of anadromous fish (chinook salmon, steelhead, green and white sturgeon, American shad, and striped bass) in Central Valley rivers and streams to double their recent average levels. The Anadromous Fish Restoration Program (AFRP) directs the Secretary of the Interior to:

> *"... develop within three years of enactment and implement a program which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable, on a long-term basis, at levels not less than twice the average levels attained during the period of 1967-1991 ..."*

The USFWS has assumed the lead role in the AFRP. Under USFWS direction, technical teams have assisted in the establishment of components of the AFRP. A key element of the program is instream flow recommendations, including objectives for the lower American River, upper Sacramento River, and the Delta.

The Secretary of the Interior also is directed under Section 3406(b)(2) of the CVPIA to dedicate and manage 800,000 AFA of CVP yield for the primary purpose of implementing the fish, wildlife, and habitat restoration and measures authorized by that title. Management of the 800,000 AFA for fishery and habitat restoration is still under consideration; however, Reclamation has voluntarily implemented AFRP flow-related actions both for the Delta and upstream reservoirs. Moreover, both Reclamation and the USFWS have required the implementation of the AFRP actions in any modeling studies associated with federal actions or otherwise affecting the CVP. While it is recognized that recent litigation regarding the accounting of 3406(b)(2) water has resulted in uncertainty in how to characterize 3406(b)(2) actions, Interior has yet to suggest any specific approach (for planning and impact assessment purposes) other than AFRP actions. Inclusion of AFRP flow-related actions both for the Delta and upstream reservoirs best represents implementation of management of 3406(b)(2) water.

Ecosystem Restoration Program Plan of the CALFED Bay-Delta Program

The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan that will restore ecosystem health and improve water management for beneficial uses of the Bay-Delta system. The program addresses problems in four resource areas: ecosystem quality, water quality, system integrity, and water supply reliability. Programs to address problems in the four resource areas will be designed and integrated to fulfill the CALFED mission.

The goal for ecosystem quality is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. The CALFED Ecosystem Restoration Program Plan (ERPP) addresses this goal. The foundation of the ERPP is restoration of ecological processes that are associated with streamflow, stream channels, watersheds, and floodplains. These processes create and maintain habitats essential to the life history of species dependent on the Delta. In addition, the ERPP aims to reduce the effects of stressors that inhibit ecological processes, habitats, and species.

Key restoration actions for Sacramento River fisheries being proposed by this program include the following:

- Enhancing river flows;
- Restoring the natural river meander process;

- Enhancing riparian and riverine habitats;
- Maintaining suitable water temperatures for salmonids;
- Reducing fish losses at points of water diversion;
- Improving anadromous fish passage at existing barriers;
- Maintaining and improving water quality;
- Improving hatchery and stocking programs; and
- Improving management of inland harvest of salmonids.

Such restoration actions, when implemented over the next few decades, are expected to improve Sacramento River fisheries, including salmonid fisheries, over the existing condition. The ERPP establishes similar restoration goals for other major water courses throughout the Central Valley.

Restoring Central Valley Streams: A Plan for Action

In 1993, CDFG published *Restoring Central Valley Streams: A Plan for Action*, which was developed to address the protection of anadromous fish habitat in Central Valley streams (CDFG 1993). This plan identified the following five priorities for the lower American River, and establishes them as recommendations:

- Maintain specified instream flow releases below Nimbus Dam throughout the year;
- Establish minimum fall carryover storage at Folsom Reservoir to maintain suitable year-round stream temperatures;
- Control rapid-flow fluctuations to protect eggs and fry of anadromous fish;
- Develop a coordinated multi-agency management plan; and
- Develop and implement a continuing program for the purpose of restoring and replenishing, as needed, spawning gravel lost from the construction and operation of the CVP dams, bank protection projects, and other actions that have reduced the availability of spawning gravel and rearing habitat in the lower American River.

Steelhead Restoration Plan for the American River

In 1991, CDFG published the *Steelhead Restoration Plan for the American River*. The plan has two main objectives (CDFG 1991):

- Restoring and maintaining naturally produced steelhead as an integral component of the American River ecosystem; and
- Restoring the population to a level that will sustain a quality steelhead fishery and provide for other non-consumptive uses.

The plan focuses on restoring habitat conditions within the American River, and on supplementing the existing fisheries population with artificially reared fish. The plan also

recommends that the overall CVP operations be adjusted to allow for the elimination of drastic flow fluctuations in the American River; states water temperature objectives during spawning, incubation, emergence, juvenile rearing lifestages; and suggests maintenance of a minimum coldwater pool in Folsom Reservoir throughout the summer.

National Marine Fisheries Service Biological Opinion for Winter-run Chinook Salmon

In 1993, NMFS assessed the potential impacts of Reclamation's operation of the CVP on the federally listed winter-run chinook salmon. Based on this assessment, NMFS issued a biological opinion concluding that operation of the CVP would likely jeopardize the continued existence of winter-run chinook salmon. Reasonable and prudent alternatives to CVP operations were developed to avoid jeopardy, including specific flow, temperature, reservoir storage, and diversion requirements in the Sacramento River and in the Delta. NMFS reinitiated consultation on CVP operations when the "Principles for Agreement" that formed the basis for the Bay-Delta Plan was originally signed, and they subsequently issued a revised biological opinion in 1995. Reclamation currently operates the CVP in accordance with the Biological Opinion for Winter-run Chinook Salmon (NMFS 1993, as revised in 1995).

U.S. Fish and Wildlife Service Biological Opinion for Delta Smelt

In 1995, Reclamation consulted with the USFWS on impacts to the federally listed delta smelt potentially resulting from CVP operations. The USFWS concluded that operation of the CVP would not jeopardize the continued existence of delta smelt. This conclusion was based on the benefits to delta smelt expected from operating the CVP in accordance with the Biological Opinion for Winter-run Chinook Salmon (NMFS, 1993 as revised in 1995) and the Bay-Delta Plan.

U.S. Fish and Wildlife Service Biological Opinion for Splittail

In 1995, Reclamation consulted with the USFWS on impacts to then-proposed threatened Sacramento splittail potentially resulting from CVP operations. The USFWS concluded in a conference opinion that operation of the CVP would not jeopardize the continued existence of Sacramento splittail. This conclusion was based on the benefits to Sacramento splittail expected from operating the CVP in accordance with the Biological Opinion for Winter-run Chinook Salmon and the Bay-Delta Plan. It is important to note that the USFWS officially listed the Sacramento splittail as a threatened species on March 10, 1999. Nevertheless, as stated by the USFWS biological opinion (page 1), "[*s*]*hould the Sacramento splittail listing action be finalized as proposed, the [USFWS] intends to adopt the conference opinion as the biological opinion for combined project effects*" (USFWS 1995).

Federal Energy Regulatory Commission License for the Middle Fork Project

Article 37 of the FERC license issued to PCWA for the MFP, as modified in 1981, specifies that flows in the North Fork and Middle Fork American rivers below Ralston Afterbay must be a minimum of 75 cfs year-round to support fisheries of the American River. This 75 cfs minimum flow requirement extends downstream of the confluence of the Middle Fork American River and

the North Fork of the Middle Fork American River, and continues downstream for the North Fork American River to Folsom Reservoir. CDFG agreed with the modified fish flow releases and the flows are a part of PCWA's SWRCB permits.

Federal Energy Regulatory Commission License for Oroville Reservoir

An application for renewal for the power facilities at Oroville Reservoir is being prepared for submission to the FERC in 2006. During this process, the temperature and fishery resources of Oroville Reservoir and the lower Feather River will undergo detailed analysis to determine the appropriate flow and temperature requirements that will be part of the new license to maintain or enhance the fisheries of Oroville Reservoir and the lower Feather River.

3.5.2.3 Impact Indicators and Significance Criteria

Tables 3.5-3 and **3.5-4** list the impact indicators and significance criteria developed for use in assessing the significance of potential impacts upon fish resources and aquatic habitat that may result from facilities- and diversion-related activities.

Table 3.5-3
Fish Resources and Aquatic Habitat Facilities-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Streamflows through the project area.	❑ Decrease in habitat quantity, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term population levels of species of management concern.
❑ Amount of turbidity, sedimentation, siltation, or contaminants/pollutants.	❑ Decrease in habitat quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect population levels of species of management concern.
❑ Area of backwater effect created by the water intake/diversion structure.	❑ Decrease in habitat quality and quantity, relative to the basis of comparison, of sufficient magnitude to adversely affect long-term population levels of fish species of management concern.
❑ Velocity of the water passing through the project area.	❑ Impediment to fish passage through the project site, relative to the basis of comparison, of sufficient magnitude to adversely affect migration of adult and sub-adult species of management concern.
❑ Source and amount of water, and fish community present in Auburn Ravine.	❑ Significant increase in straying of anadromous salmonids known to be genetically distinct from Auburn Ravine stocks.

Table 3.5-4
Fish Resources and Aquatic Habitat Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Upper American River Basin	
❑ Monthly mean flows from Ralston Afterbay downstream to Folsom Reservoir.	❑ Decrease in river flows, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term population levels of species of management concern.
Folsom Reservoir	
Warmwater Fisheries	
❑ Mean number of acres of littoral habitat for each month of the primary spawning and rearing period (i.e., March through September).	❑ Decrease in the long-term average quantity (acres) of littoral habitat, relative to the basis comparison, of sufficient magnitude and frequency to adversely affect long-term population levels of warmwater fish, for any month of this period over the 70-year period of record.
❑ End-of-month reservoir water surface elevation (feet/msl) occurring each month of the primary spawning and rearing period for nest-building warmwater fish (i.e., March through September).	❑ Decrease in reservoir water surface elevation of more than nine feet per month, relative to the basis of comparison, of sufficient frequency to adversely affect long-term population of warmwater fish, for any month of this period over the 70-year period of record.
Coldwater Fisheries	
❑ End-of-month storage (TAF) for each month of the April through November period.	❑ Decrease in reservoir storage, relative to the basis of comparison, which also would reduce the coldwater pool, of sufficient magnitude to adversely affect long-term population levels of coldwater fish, for any month of this period over the 70-year period of record.
Nimbus Hatchery	
❑ Monthly mean water temperatures (°F) of water released from Nimbus Dam for each month of the year.	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency which would result in reduced hatchery production (using index temperatures of 60°F, 65°F, and 68°F) during any month of this period over the 69-year period of record.
Lower American River	
Fall-Run Chinook Salmon	
❑ Monthly mean flow (cfs) at the mouth for each month of the adult immigration period (i.e., September through December).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect upstream passage or olfactory response, for any month of this period over the 70-year period of record.
❑ Monthly mean water temperature (°F) at the mouth of the American River and at Freeport on the Sacramento River for each month of the adult immigration period (i.e., September through December).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect adult immigration, for any month of this period over the 69-year period of record.

Table 3.5-4 (Continued)
Fish Resources and Aquatic Habitat Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Lower American River (Continued)	
Fall-Run Chinook Salmon (Continued)	
❑ Monthly mean flows (cfs) below Nimbus Dam and at Watt Avenue for each month of the spawning and incubation and initial rearing period (i.e., October through February).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term initial year-class strength, for any month of this period over the 70-year period of record.
❑ Monthly mean water temperatures (°F) below Nimbus Dam and at Watt Avenue for each month of the spawning and incubation and initial rearing period (i.e., October through February).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to result in substantial egg and alevin loss (e.g., resulting temperatures >56°F), for any month of this period over the 69-year period of record.
❑ Monthly mean flow (cfs) at Watt Avenue and the mouth for each month of the juvenile rearing and emigration period (i.e., February through June).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect juvenile rearing and emigration, for any month of this period over the 70-year period of record.
❑ Monthly mean water temperature (°F) at Watt Avenue, the lower American River mouth, and at Freeport for each month of the juvenile rearing and emigration period (i.e., February through June).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect juvenile rearing and emigration (e.g., resulting temperatures >65°F) for any month of this period over the 69-year period of record.
❑ Average annual early lifestage survival.	❑ Decrease in annual early lifestage survival, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term initial year-class strength over the 70-year period of record.
Steelhead	
❑ Monthly mean flow (cfs) at the mouth for each month of the adult immigration period (i.e., December through March).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect upstream passage or olfactory responses for any month of this period over the 70-year period of record.
❑ Monthly mean water temperature (°F) at the mouth of the American River and at Freeport on the Sacramento River for each month of the adult immigration period (i.e., December through March).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect adult immigration for any month of this period over the 69-year period of record.
❑ Monthly mean water temperature (°F) below Nimbus Dam and at Watt Avenue for each month of the spawning and incubation period (i.e., December through March), as well as juvenile rearing (i.e., year-round).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to result in substantial egg and alevin loss (e.g., resulting temperatures >56°F) or substantial adverse affects to juvenile rearing (e.g., resulting temperatures >65°F) for any month of this period over the 69-year period of record.
❑ Monthly mean flow (cfs) at Watt Avenue for the spawning and incubation period (i.e., December through March), as well as juvenile rearing (i.e., July through September).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect initial year-class strength and juvenile rearing for any month of this period over the 70-year period of record.

Table 3.5-4 (Continued)
Fish Resources and Aquatic Habitat Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Lower American River (Continued)	
Steelhead (Continued)	
❑ Monthly mean flow (cfs) at Watt Avenue and the mouth for each month of the juvenile emigration period (i.e., February through June).	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency, to adversely affect juvenile emigration for any month of this period over the 70-year period of record.
❑ Monthly water mean temperature (°F) at Watt Avenue and the mouth for each month of the juvenile emigration period (February through June).	❑ Increase in water temperature, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect juvenile emigration (e.g., resulting temperatures >65°F) for any month of this period over the 69-year period of record.
Splittail	
❑ Monthly mean acreage of flooded riparian habitat at Watt Avenue during each month of the February through May spawning period.	❑ Decrease in long-term average quantity of inundated riparian habitat, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect potential splittail habitat availability for each month of this period over the 70-year period of record.
❑ Monthly mean water temperatures (°F) at Watt Avenue and the mouth during each month of the February through May spawning period.	❑ Substantial increase in the frequency, relative to the basis of comparison, in which water temperatures exceed the reported upper temperature range for splittail spawning (i.e., 68°F) for any month of this period over the 70-year period of record.
American Shad	
❑ Monthly mean flows (cfs) at the mouth during each month of the May through June spawning period.	❑ Substantial decrease in the frequency, relative to the basis of comparison, in which flows at the mouth are above the CDFG recommended "attraction flow" of 3,000 cfs for American shad spawning migrations during each month of the identified period, over the 69-year period of record.
❑ Monthly mean water temperatures (°F) below Nimbus Dam and the mouth of the lower American River during the May through June spawning period.	❑ Substantial increase in frequency, relative to the basis of comparison, in which water temperatures exceed the reported upper temperature range for American shad spawning (i.e., 70°F) for any month of the identified period over the 70-year period of record.
Striped Bass	
❑ Monthly mean flows (cfs) at the mouth during the May through June striped bass rearing period.	❑ Decrease of flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect striped bass juvenile rearing for May and June over the 70-year period of record.
❑ Monthly mean flows (cfs) at the mouth during the May through June striped bass sport fishery.	❑ Substantial decrease in the frequency, relative to the basis of comparison, in which flows at the mouth are above the CDFG recommended "attraction flow" of 1,500 cfs for the striped bass sport fishery for each month of the identified period over the 70-year period of record.
❑ Monthly mean water temperatures (°F) below Nimbus Dam and at the mouth during the May through June rearing period.	❑ Substantial increase in frequency, relative to the basis of comparison, in which water temperatures exceed the reported upper temperature range for striped bass rearing (i.e., 73°F) for any month of the identified period over the 69-year period of record.

Table 3.5-4 (Continued)
Fish Resources and Aquatic Habitat Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Shasta and Trinity Reservoirs	
Warmwater Fisheries	
❑ Mean number of acres of littoral habitat for each month of the primary spawning and rearing period (i.e., March through September).	❑ Decrease in the long-term average quantity (acres) of littoral habitat, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term population levels of warmwater fish for any month of this period over the 70-year period of record.`
❑ End-of-month reservoir water surface elevation (feet/msl) occurring each month of the primary spawning and rearing period for nest-building warmwater fish (i.e., March through September).	❑ Decrease in reservoir water surface elevation more than nine feet per month, relative to the basis of comparison, of sufficient frequency to adversely affect long-term population levels of warmwater fish for any month of this period over the 70-year period of record.
Coldwater Fisheries	
❑ End-of-month storage (TAF) for each month of the April through November period.	❑ Decrease in reservoir storage, relative to the basis of comparison, which also would reduce the coldwater pool, of sufficient magnitude to adversely affect long-term population levels of coldwater fish for any month of this period over the 70-year of record.
Sacramento River	
❑ Monthly mean flows (cfs) released from Keswick Dam for each month of the year.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to decrease the relative habitat availability for upper Sacramento River fish for any month of this period over the 70-year period of record.
❑ Monthly mean flows (cfs) at Freeport for each month of the year.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to decrease the relative habitat availability for lower Sacramento River fish for any month of this period over the 70-year period of record.
❑ Monthly mean water temperatures (°F) at Keswick Dam and Bend Bridge for each month of the year.	❑ Increase in water temperature, relative to the basis of comparison, of substantial magnitude and frequency to adversely affect spawning and rearing of anadromous salmonids for any month of the year for the 69-year period of record.
❑ Number of years that water temperatures at Keswick Dam and Bend Bridge would exceed the temperature criteria identified by NMFS in its Biological Opinion for Winter-run Chinook Salmon (NMFS 1993).	❑ Increase in the number of years that water temperatures exceed those stipulated in the NMFS Biological Opinion (i.e., 56°F and 60°F), relative to the basis of comparison, which would adversely affect winter-run chinook salmon over the 69-year period of record.
❑ Average annual early lifestage survival for fall-, late-fall-, winter-, and spring-run chinook salmon.	❑ Decrease in annual early lifestage survival for any run chinook salmon (i.e., fall-, late fall-, winter-, and spring-run chinook salmon), relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the long-term initial year-class strength over the 70-year period of record.

Table 3.5-4 (Continued)
Fish Resources and Aquatic Habitat Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Sacramento River (Continued)	
❑ Monthly mean water temperatures (°F) at Freeport for each month of the year.	❑ Increase in temperature, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect spawning and rearing of anadromous salmonids for any month of the year for the 69-year period of record.
Delta	
❑ Monthly mean Delta outflow (cfs) for all months of the year.	❑ Decrease in Delta outflow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect Delta fish resources over the 70-year period of record.
❑ Monthly mean location of X2 and Delta export/inflow ratios for all months of the year, with an emphasis on the February through June period.	❑ Change in position of X2 and Delta export/inflow ratio, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect spawning and rearing habitat and downstream transport flows over the 70-year period of record.
Oroville Reservoir	
Warmwater Fisheries	
❑ End-of-month reservoir water surface elevation (feet/msl) occurring each month of the primary spawning and rearing period for nest-building warmwater fish (i.e., March through September).	❑ Decrease in reservoir water surface elevation more than nine feet per month, relative to the basis of comparison, of sufficient frequency to adversely affect long-term population levels of warmwater fish for any month of this period over the 70-year period of record.
Coldwater Fisheries	
❑ End-of-month storage (TAF) for each month of the April through November period.	❑ Decrease in reservoir storage, relative to the basis of comparison, which also would reduce the coldwater pool, of sufficient magnitude to adversely affect long-term population levels of coldwater fish for any month of this period over the 70-year of record.
Feather River	
❑ Monthly mean flows (cfs) released from Oroville for each month of the year.	❑ Decrease in flows, relative to the basis of comparison, of sufficient magnitude and frequency to decrease the relative habitat availability for Feather River fish for any month of the year over the 70-year period of record.
❑ Monthly mean water temperatures (ºF) below Oroville for each month of the year.	❑ Increase in water temperature, relative to the basis of comparison, of substantial magnitude and frequency to adversely affect spawning and rearing of anadromous salmonids for any month of the year for the 69-year period of record.

3.5.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related fish resources and aquatic habitat impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.5-1: Construction effects on aquatic resources of the North Fork American River.

No substantial changes from existing in-river construction activities would occur under the No Action/No Project Alternative. Although the duration of seasonal pumping would increase, no additional dredging activities would be expected to occur at the pump intake. Reclamation would continue to perform these activities in compliance with regulatory permit terms and conditions to protect water quality (Section 3.7, Water Quality). Therefore, disturbance of floor sediments and increases in turbidity are not expected to occur beyond existing levels. Based on these findings, no water quality-related impacts to aquatic life in the project area would result from construction under the No Action/No Project Alternative.

Impact 3.5-2: Fish impingement and entrainment at the point of diversion.

The No Action/No Project Alternative would include use of fish screening techniques approved by CDFG and would be included in the Streambed Alteration Agreement terms and conditions for the seasonal pump station. These provisions would be re-evaluated every five years. Implementation of these measures would protect juvenile and adult rainbow trout from entrainment and impingement at the intake. Compliance with the CDFG permit terms and conditions would reduce impacts to less than significant.

Impact 3.5-3: Alteration of habitat through creation of backwater on the North Fork American River upstream of the intake structure.

No substantial changes from the existing in-river construction activities would occur under the No Action/No Project Alternative. Because gradient control structures would not be constructed, water levels within the North Fork American River would not rise, and therefore upstream aquatic habitat would remain unchanged. Therefore, no impacts due to habitat alteration would result from the No Action/No Project Alternative.

Impact 3.5-4: Fish passage through the project area.

Under the No Action/No Project Alternative, fish migration into the project area from downstream of the project site is not likely to occur due to high-flow velocities through the one-half mile long bypass tunnel. Flows in the upstream portion of the tunnel range from about five feet per second (fps) at 100 cfs to 10 fps at 1,000 cfs (R. McLaughlin, pers. comm. 1998). Therefore, use of the project site by rainbow and brown trout, identified as the fish species of management concern in the project area, would continue to be limited to the downstream migration of adult and sub-adult fish through the project area (via the bypass tunnel) to Folsom Reservoir, and/or downstream passive transport of fish during high-flow events. Because no new or additional facilities or impediments would be constructed, as part of continued use of the seasonal pumps, fish passage impacts under the No Action/No Project Alternative would be less than significant.

Impact 3.5-5: Effects on salmonid stocks in Auburn Ravine.

Numerous issues have been raised regarding the potential for increased straying of American River steelhead and fall-run chinook salmon into Auburn Ravine if the selected alternative were to result in a change in water composition or flow volume. Such modifications of Auburn Ravine conditions raises the issue that the No Action/No Project Alternative could reassign the environmental cues which migrating American River salmonids home toward, thereby drawing American River fish into Auburn Ravine. It also has been suggested that Auburn Ravine salmonids may confuse the American River for their natal spawning grounds, due to the existence of American River water in their natal stream. In addition, the possibility of falsely attracting salmonids from the American River into Auburn Ravine due to the increased discharge of the Lincoln WWTRF during sensitive migratory months, has been identified as a concern. Attraction of American River fish into Auburn Ravine is of concern because the American River run consists primarily of hatchery stocks.

PCWA's proposed operations would not change the quantity or seasonal distribution of North Fork American River water delivered to Auburn Ravine compared to existing conditions. Any future changes in these water deliveries would first require completion of additional environmental studies. Water diverted from the North Fork American River would be conveyed to the PCWA water supply distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within the Auburn Ravine Tunnel, and from the Auburn Ravine Tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station (Figure 3.5-3**)**. The water would then flow within the South Canal where it would be delivered to the Foothill WTP (Figures 3.5-1 and 3.5-2). The American River water currently delivered to Auburn Ravine would remain within the limits of recent historical monthly maximum delivery rates.

The double-pumping commitment by PCWA is a more costly method of water conveyance but ensures that the potential impacts resulting from an increase in volume or a change in the seasonal distribution of flow in Auburn Ravine would be avoided. Still, American River water would be delivered to Auburn Ravine as historically conveyed, as well as via the Lincoln WWTRF. A thorough review of the mechanisms that salmonids utilize when homing to natal streams indicates that it is unlikely that the No Action/No Project Alternative would produce a genetic disruption of Auburn Ravine salmonid stocks primarily due to the acute olfactory homing mechanisms in the salmonid family; the environmental homing cues and the fate of these cues within the study area; the sequential imprinting process; the probable lack of persistent, native Auburn Ravine stocks within the Central Valley Evolutionarily Significant Unit (ESU); and the mitigation programs of other water projects affecting Auburn Ravine. These topics are discussed below.

Salmonids have an acute homing mechanism which leads to an uncanny fidelity in returning to natal streams. The homing of migrating salmon likely derives from the processing of olfactory cues found in stream waters. The olfactory homing hypothesis is based on three assumptions (Hasler and Wisby 1951). First, streams differ in chemical characteristics that are stable over time. Second, salmonids can distinguish the chemical differences between streams. Third, salmonids learn the chemical characteristics of their natal stream (called imprinting) prior to or

during their seaward journey, remember these cues without reinforcement while in the ocean, and respond to them upon returning to freshwater to spawn.

Numerous years of research seem to validate the olfactory hypothesis assumptions. For instance, research indicates that salmonids have the ability to actively differentiate between different stream waters, even when the streams are proximate, using only their olfactory sense (Hasler and Wisby 1951; Shoji et al. 2000). Studies illustrate that the olfactory cue in which salmonids home toward is likely organic in nature. In fact, investigations cite distinct combinations of amino acids as the odor cue utilized in discriminating between stream waters (Shoji et al. 2000). The distinct cues of each stream may be a result of differences in watershed vegetation and soil. Other research indicates that salmonid adults can sense the unique chemical compounds released by conspecifics (juvenile salmonids rearing in the natal stream during the adult migration period) and respond to the signature of each specific population (Stabell 1992; Courtenay et al. 2001). Regardless of the exact compound utilized in the homing response, an overwhelming majority of the available research finds that the cue is organic.

The organic nature of the homing cue has an enormous implication for the analysis of potential impacts of the project alternatives, including the No Action/No Project Alternative. The American River water delivered for irrigation and municipal use is likely to encounter extreme and odor-altering environments before entering Auburn Ravine. The water utilized for irrigation may encounter new sources of organic material such as the vegetation and soil of the agricultural fields and conveyance canals, and the ambient organic signature in the American River water would be subject to decomposition by soil microbes. Similarly, the American River water delivered for municipal use and discharged into Auburn Ravine as storm runoff may be subject to lawn vegetation and soil. American River water municipally delivered within the service area of the Lincoln WWTRF and discharged as treated effluent into Auburn Ravine would be treated and likely heavily altered by the secondary wastewater treatment process utilized by the plant, which is designed to remove organic material (City of Lincoln 1999). Similarly, the municipally delivered water which is distributed to the service areas of Placer County Department of Public Works SMD No. 3 and the two City of Roseville WWTPs would undergo treatment as well, a process which is likely to drastically alter the homing cues before the treated effluent is discharged into Dry Creek and Pleasant Grove Creek. Therefore, the homing cues found in the American River water utilized within the PCWA watersheds are likely to be dramatically altered before entering Auburn Ravine, Dry Creek, and Pleasant Grove Creek suggesting that the water reaching these streams would retain low potential for attracting American River fish.

The timing of olfactory imprinting also is a key component to understanding the mechanisms that drive salmonid homing behavior. The majority of the research in this field suggests imprinting of stream odors is most sensitive during a developmental process called the parr-smolt transformation (PST) (Dittman et al, 1996), in which a juvenile salmonid prepares for life in the ocean. However some imprinting must occur before this time, as wild salmon home to their hatching area, not to the area of their PST. Many of the changes that occur in the PST process are related to elevations in thyroid hormones, and it is postulated that these hormones drive the imprinting process (Dittman and Quinn 1996). Research reveals that elevations in various thyroid hormones may occur at numerous lifestages including hatching and emergence (Tilson et al 1994). Thyroid hormone levels also are particularly sensitive to environmental cues

such as exposure to novel water chemistry (Dickhoff et al. 1992), and changes in lunar phase (Grau et al. 1991), water temperature (Lin et al. 1985), photoperiod (Hoar 1976), water flow rates (Youngson and Simpson 1984), and juvenile swimming rates (Nishioka et al. 1985). Migration may actually stimulate an increase in thyroid gland production as well (McCormick and Bjoernsson 1994). Hence, it appears that the imprinting process associated with developmental-, environmental-, and migratory-induced surges in hormone levels may serve to provide a sequence of cached odors which adult salmonids use to find their natal streams (Dickhoff et al. 1992).

The sequential imprinting process found in salmonids has implications in the analysis of the No Action/No Project Alternative. The sequential process indicates that as wild-spawned salmon and steelhead in Auburn Ravine emerge, rear, and migrate, they may become imprinted with numerous odors during their downstream journey. To illustrate, a juvenile steelhead migrating from Auburn Ravine toward the ocean may become imprinted at various points along its journey determined by developmental processes and changes in environmental conditions. These imprinting points may include Auburn Ravine itself, the tributary confluence with the Sacramento River and its confluence with the American River, as flow, water temperature, and water composition likely change at these points. Upon returning from the ocean, the adult steelhead may reverse the olfactory memory constructed during the ocean-bound migration. The wild-spawned salmonid will not necessarily seek its natal waters automatically, but instead locate a series of points sequentially until the natal stream, presumably the last point in the sequence, is found. It is unlikely that an immigrating Auburn Ravine adult would stray into the American River because the immigrating adult will continue to be drawn upstream in the much larger Sacramento River by olfactory cues associated with the next sequential points north of the point at which the American River empties into the Sacramento River. Thereafter, the immigrating adult will continue to follow the Sacramento River northward until the adult reaches a point at which olfactory cues indicate that the adult should follow waters flowing into the Sacramento River from the canals into which Auburn Ravine drains, each of which has its own unique olfactory cues. Thus, the sequential migration of Auburn Ravine salmonids will guide the return to their natal spawning grounds.

Similarly, it is unlikely that an American River fish will stray into Auburn Ravine as a result of the No Action/No Project Alternative. While the American River salmonids reared in a hatchery may have fewer opportunities to imprint due to the relatively constant environmental conditions within the hatchery environment (Dittman et al. 1996), American River fish should become imprinted with the smell of the American River as their natal spawning ground during developmental changes. As these fish reach the American River during upstream migration as adults, they will be bombarded with the smell of their natal stream. In some cases, this smell is the only imprinted smell available to them during their juvenile lives. Hence, it is unlikely that salmonids from the American River will disregard the inherent drive to enter this natal stream, simply because a minute amount of diluted American River water may exist in the Sacramento River at their confluence. In addition, the water transferred from the North Fork American River to Auburn Ravine, having been subjected to myriad organic influences associated with the Auburn Ravine watershed, is likely to smell drastically different than the substantial lower American River flows that enter into the Sacramento River at the confluence. Therefore, the No

Action/No Project Alternative would not be expected to increase the straying rates of American River or Auburn Ravine salmonids.

Although a majority of the transferred American River water would end up in Auburn Ravine only after contact with new odor causing agents or extensive treatment, some raw American River water still would be delivered into Auburn Ravine via the Auburn Ravine Tunnel in the historical amount. The majority of the American River raw water diversions associated with implementation of the No Action/No Project Alternative occur in June, July and August, with a maximum diversion in July. This pattern and volume of water diversion releases to Auburn Ravine is consistent with the existing condition, and would not result in a change in the total volume or seasonal distribution of North Fork American River water to Auburn Ravine.

Although it is not the only stage associated with imprinting, the PST likely represents the most sensitive imprinting period (Dittman et al. 1996). The initiation of the PST is related to the emigration process of salmonids from natal drainages. Fall-run chinook salmon in the Central Valley emigrate from January through June, peaking in April, while steelhead emigrate from December through possibly June (SWRI 2001). Hence, the periods of peak emigration of juvenile salmonids do not correlate with periods associated with peak raw water deliveries. Therefore, continuation of historical levels of raw water deliveries is not expected to significantly affect the imprinting of juvenile salmonids in Auburn Ravine.

Similarly, immigrating adult salmonids in Auburn Ravine are not expected to be exposed to the olfactory cues or increased flows associated with the seasonal delivery of raw North Fork American River water. Adult migrations of chinook salmon begin in September and may extend through January, while adult steelhead typically immigrate November through April, peaking in January (SWRI 2001). Because relatively small discharges of American River water from the Auburn Ravine Tunnel occur during these times, the continuation of historical levels of raw water deliveries would not be expected to affect immigrating adult salmonids. The timing of critical periods of salmonid life history and the timing of water deliveries to Auburn Ravine are temporally inconsistent.

It is not likely that Auburn Ravine historically harbored a persistent native population of salmonids. Low elevation streams like Auburn Ravine may have been essentially dry in summer and fall, at least in the foothill regions. Because of their intermittent nature, these streams were not conducive to significant or consistent fall-run chinook salmon or steelhead populations (McEwan 2001). The population of salmonids currently residing in Auburn Ravine likely represents a conglomeration of strays from Central Valley drainages, and the genetic characteristics of the Auburn Ravine salmonids are likely not distinct. Furthermore, hatchery stocking records indicate that Auburn Ravine already has been influenced by chinook salmon of American River origin (SWRI 2001). Additionally, NMFS considers Auburn Ravine steelhead to be within the Central Valley ESU, and does not recognize them as genetically distinct from other populations within the ESU.

Considering the overwhelming weight of evidence concerning homing and straying in the salmonid family, it is unlikely that the No Action/No Project Alternative would cause potentially significant impacts to the salmonids of Auburn Ravine.

While the mitigated diversion plan for the American River pump station project alternatives no longer requires a change in the volume or seasonal distribution of American River water diversions into Auburn Ravine, the Lincoln WWTRF discharges would increase the amount of flow in Auburn Ravine, which some believe could potentially induce a "false attraction" of salmonids.

The relationship between the American River Pump Station alternatives and the City of Lincoln WWTRF is described under the Proposed Project impact analysis (Impact 3.5-11). The Proposed Project impact analysis also considers the relationship between the American River Pump Station and the Placer County Public Works SMD No. 3 and two City of Roseville WWTPs, which discharge into Dry Creek and Pleasant Grove Creek. The impact analysis (Impact 3.5-11) concludes that these relationships represent a less than significant potential impact of the Proposed Project. The No Action/No project Alternative would supply less water to these facilities than the Proposed Project. Therefore, the No Action/No Project Alternative deliveries of North Fork American River water to the Lincoln WWTRF, Placer County Pubic Works SMD No. 3, and the City of Roseville WWTPs represent a less than significant impact.

Proposed Project

Impact 3.5-6: Construction effects on aquatic resources of the North Fork American River.

Under the Proposed Project, construction activities associated with the new pump station and proposed intake pipeline would disturb river floor sediment and potentially increase riverbank erosion. In addition, under the Proposed Project, a series of gradient control structures and a permanent fish screen structure would be constructed. The Proposed Project also would close the Auburn Dam construction bypass tunnel and restore flows to the dewatered channel. It has been determined that a cofferdam would not be required as part of this construction. Therefore, cofferdam construction mitigation measures recommended in the Draft EIS/EIR (September 2001) are no longer proposed.

The magnitude of potential impacts to aquatic organisms would be dependent on the timing and extent of sediment loading, and river flows during and immediately following construction. However, minimal effects are expected to occur because: (1) much of the construction for this alternative would be performed in the dewatered river channel prior to river restoration; (2) sediment control measures, including regulatory agency permit terms and conditions, would be incorporated into a construction management plan (Section 3.7, Water Quality); and (3) any potential effects would be temporary in nature. Therefore, construction-related riverbed and bank disturbance would result in a less-than-significant impact upon fish and aquatic habitat.

Development of the vehicle turnaround and three-space handicapped accessible parking area across from the bypass tunnel outlet would occur as part of the channel restoration activities, and would occur prior to rewatering the riverbed. Due to the distance from the river, there would be no direct contribution of soil or rock materials to the river. All materials to be removed from the channel would be deposited in designated excavation material disposal locations and stabilized prior to restoring the river channel. The parking area proposed for the former Auburn Dam batch

plant also is a sufficient distance from the river so that no direct contribution of construction materials to the water would be anticipated.

Implementation of construction BMPs for erosion control and grading activities would minimize the potential for direct release of materials to the river during road widening and trail improvement activities that would take place between the upper flat parking area and Oregon Bar at the river (Figure 2-7). Few improvements would be made from the point of the proposed vehicle turnaround area near Oregon Bar and the river itself. These improvements generally would include development of improved drainage courses for surface water runoff and would be performed manually to minimize the extent of vegetation and ground disturbance. Therefore, development of the public river access sites would result in a less-than-significant impact to fish communities present in the study area. Overall, construction effects on aquatic resources of the North Fork American River would be considered less than significant.

Impact 3.5-7: Use of river access parking area.

Use of the river access parking area potentially would involve up to 53 cars at one time, on a peak summer day. These vehicles could contribute oil or other contaminants to local surface water runoff. The parking areas would be designed to reduce the potential for direct contribution of vehicle-related materials to the river. Additionally, the river access improvements would include installation of sanitary facilities including portable restrooms and trash containers to minimize potential water quality impacts from increased human activity in the project area. Based on the limited use of the area and inclusion of drainage and sanitary improvements, increased use of the area is anticipated to have a less-than-significant effect on fish communities in the study area.

Moreover, the Proposed Project includes restoring the previously dewatered channel, resulting in increased habitat availability for fish resources in the project vicinity. The restored channel would be designed to self-regulate the transport of sediment moving into and out of the system, maintain the stability of bed and banks within the natural variability of erosion expected for the site, and promote development of diverse substrate and bar morphology similar to a natural river system. These design features would emphasize physical non-uniformity that provides diverse water depths and velocities and substrate complexity, promoting a diverse physical and aquatic environment that would eventually naturally support diverse riverine and riparian ecosystems. Therefore, overall, river restoration activities would result in improved fisheries communities and aquatic habitat in the project area.

Impact 3.5-8: Fish impingement and entrainment at the point of diversion.

The seasonal facility fish screen method is not in compliance with current CDFG screening criteria, and fish species present at the point of diversion are susceptible to entrainment. Although the Proposed Project would increase PCWA's rate and volume of diversion (from the existing diversion of 8,500 AFA over four months to 35,500 AFA over 12 months), loss of fish through impingement and entrainment would be expected to be reduced, due to the installation of a fish screen to be designed in consultation with CDFG fish screen experts. Therefore, the

Proposed Project would be expected to have a beneficial effect on larval and juvenile fish through reduction of entrainment at the point of diversion.

Reclamation and CDFG would evaluate the performance of the newly-constructed fish screen. PCWA would ensure the fish screen and pumping plant are operated and maintained properly for acceptable fish screen performance. This will include documentation of fish screen performance in an operations and maintenance log book, provision of quarterly reports to CDFG for the first two years of operation, and upon request thereafter, and coordination with CDFG staff for inspection and performance measurement purposes.

Impact 3.5-9: Alteration of fish habitat through creation of backwater upstream of the diversion and by restoration of the dewatered channel.

Under the Proposed Project, a series of gradient control structures would be constructed at the point of diversion to direct river flow to create flow velocities and river depth conducive to the proposed diversion. With the gradient structures at the point of diversion, water within the North Fork American River would be locally impounded, causing water levels to rise. The river stage at the point of diversion would increase up to approximately two feet, with changes in water depths decreasing with distance upstream. Preliminary design information indicates that the backwater effect would extend upstream approximately to Tamaroo Bar.

Creation of the gradient control structures would change the upstream aquatic habitat from a lotic (e.g., stream-like) environment to a slightly more lentic (e.g., lake-like) environment. However, the backwater effect would generally not eliminate riffle habitat, because the river in this vicinity generally consists of pools and runs. Reduced flow rates also could lead to sedimentation of the deeper pools and runs. These overall habitat conditions would tend to favor fish species such as centrarchids (e.g., green sunfish, and largemouth and smallmouth bass) more so than rainbow and brown trout, the fish species of primary management concern in the project area. In addition, the process of sedimentation potentially could alter macroinvertebrate species composition. These changes in aquatic habitat could represent a slight adverse impact to rainbow and brown trout populations.

However, a healthy aquatic community would continue to persist following creation of the backwater. Because rainbow and brown trout populations within the area are established through downstream migration from upstream spawning grounds rather than from spawning within the immediate area, recruitment of adult and sub-adult fish into the population would continue. The backwater would not be expected to significantly reduce the long-term population trends of rainbow and brown trout at the project site, compared to existing population levels. In addition, although macroinvertebrate community composition could be altered, macroinvertebrate populations would still be present. Furthermore, the backwater created by the Proposed Project would not be expected to adversely impact native fish species such as pikeminnow, Sacramento sucker, and hitch.

In addition to altered aquatic habitat, the created backwater also could potentially increase the availability of predator holding areas through reduced current velocities. However, because minimal, if any, salmonid spawning or early-lifestage rearing occurs within the project area,

because fry and/or juvenile salmonids do not emigrate in mass through the project area, and because predation on adult and sub-adult salmonids is limited by their larger size, increased availability of predator holding areas due to reduced current velocities would not significantly impact long-term salmonid population trends within the project area.

Finally, although current velocities would be reduced, the backwater would not be expected to significantly increase average water temperatures on the North Fork American River. Water temperatures at the project site are generally at or near their equilibrium temperature. In addition, because of the relatively rapid turnover rate of water within the backwater, average temperatures would generally not be expected to change measurably from the existing condition. As a result, the overall change in aquatic habitat would not significantly reduce the long-term population trends of rainbow and brown trout, a healthy aquatic environment would remain within the backwater, the backwater would not increase rates of predation, and the backwater would not substantially increase temperatures.

Finally, the Proposed Project includes restoring a previously dewatered channel, resulting in increased habitat availability for fish resources in the project vicinity. Therefore, habitat alteration in the project vicinity due to implementation of the Proposed Project represents a beneficial effect on fish resources and aquatic habitat.

Impact 3.5-10: Impact of structures on fish passage through the project area.

Under the Proposed Project, fish passage from upstream to downstream and habitat availability would be greatly improved through river restoration. Minimum instream requirements would continue to be met past the point of diversion, and additional flow would be released from upstream reservoirs to meet future demands resulting in flows through the project area that would be equal to or higher than existing flows. Fish also would be able to pass the gradient control structures to reach downstream sites. Overall, the Proposed Project would result in a beneficial impact for fish passage through the project area.

Impact 3.5-11: Effects on salmonid stocks in Auburn Ravine.

Implementation of the Proposed Project would result in greater pumping capacities and greater delivery of water into the Auburn Ravine Tunnel from the American River Pump Station than under the No Action/No Project Alternative. However, deliveries in excess of the historical delivery rate into Auburn Ravine would be double-pumped into the South Canal for delivery to the Foothill WTP, thereby avoiding potential flow-related changes and related impacts in Auburn Ravine. In addition, the Proposed Project would not result in a change in the source water composition in Auburn Ravine. Therefore, the Proposed Project and No Action/No Project Alternative are very similar in their potential impacts to the aquatic resources of Auburn Ravine. Please refer to the No Action/No Project Alternative impact analysis (Impact 3.5-5) for further detail regarding these issues.

While the potential impacts described in the No Action/No Project Alternative are very similar to the potential impacts of the Proposed Project, the Proposed Project does differ in its relationship to the City of Lincoln WWTRF, Placer County Public Works SMD No. 3, and two City of

Roseville WWTPs. Because the Proposed Project has a greater diversion capacity than the No Action/No Project Alternative, a greater amount of water potentially would be supplied to these facilities under the Proposed Project.

While the mitigated diversion plan for the American River Pump Station Project no longer requires a change in the volume or seasonal distribution of American River water diversions into Auburn Ravine, the Lincoln WWTRF treated effluent discharges would increase the amount of flow in Auburn Ravine, which some believe could potentially induce a "false attraction" of salmonids. The potential for the "false attraction" of salmonids was considered by the City of Lincoln in its Draft EIR for the WWTRF (City of Lincoln 1999). The City of Lincoln (1999) concluded that the existing flows in Auburn Ravine during the steelhead spawning season would likely be adequate for migration both upstream and downstream of the WWTRF outfalls. However, the City of Lincoln (1999) determined that the supplementation to existing flows in Auburn Ravine by WWTRF effluent during the fall-run chinook salmon spawning months (October and November) could potentially create a "false attraction" of fall-run chinook salmon. The Lincoln Draft EIR deemed the potential for fall-run chinook salmon "false attraction" potentially significant. As a result of the potentially significant impact created by the City of Lincoln WWTRF, the City of Lincoln committed to monitoring adult fall-run chinook salmon migrations in Auburn Ravine.

The City of Lincoln (1999) Draft EIR indicated that the WWTRF will have a maximum discharge into Auburn Ravine of 12 mgd, or 18.6 cfs. The Proposed Project would supply only a fraction of the WWTRF inflows. At maximum buildout, the Proposed Project would contribute an average of 2.0 cfs during the months of October and November, the months of concern regarding "false attraction." Therefore, the Proposed Project would approximate only 11 percent of the total WWTRF discharge. Without any contribution from the Proposed Project, the Lincoln WWTRF discharge would still exceed 16 cfs during October and November, which may constitute a potentially significant impact. The additional contribution of North Fork American River source water provided by the Proposed Project during October and November would not significantly exacerbate any "false attraction" that may be created by the Lincoln WWTRF discharge into Auburn Ravine. Therefore, the potential for "false attraction" of adult salmonids into Auburn Ravine, more particularly to the Lincoln WWTRF outfall, represents a less-than-significant impact of the Proposed Project.

In addition, the Proposed Project would supply municipally delivered treated water to the service areas of three other WWTPs including Placer County Public Works SMD No. 3, and two City of Roseville WWTPs. During October and November, the Proposed Project-related collective discharge from these three plants would average approximately 2.8 cfs, while the collective planned capacities of the three WWTPs total 65 cfs. Hence, the Proposed Project-related discharge represents less than five percent of the collective planned capacities of these three WWTPs. It also should be noted that American River water deliveries to this area would increase independent of the Proposed Project as a result of increased deliveries by Roseville and San Juan Water District (SJWD), both of which supply only American River water. Overall, the distribution of water from the Proposed Project to the service areas of the Placer County Department of Public Works SMD No. 3 and the two City of Roseville facilities represents a less-than-significant impact.

Overall, a less-than-significant impact is expected to occur as a result of the Proposed Project.

Upstream Diversion Alternative

With the exception of the restoration of the river channel, the Upstream Diversion Alternative facilities-related effects would generally be the same as described for the Proposed Project (see Impacts 3.5-6 to 3.5-11).

Impact 3.5-12: Construction and maintenance effects on aquatic resources of the North Fork American River.

Under the Upstream Diversion Alternative, construction and operation activities would disturb floor sediments and potentially increase erosion. The magnitude of potential impacts to aquatic organisms would be dependent on the timing and extent of sediment loading, and river flows during and immediately following construction.

During annual maintenance activities involving sediment removal from behind the diversion structure, impacts from the Upstream Diversion Alternative on aquatic resources would be similar to the Proposed Project. For a further discussion of this impact, refer to Impact 3.5-6. As described for the Proposed Project, environmental protection measures would be implemented to protect fish from water quality effects. Overall, construction impacts on fish resources would be less than significant.

Impact 3.5-13: Fish impingement and entrainment at the point of diversion.

As described for the Proposed Project, the year-round pump station under the Upstream Diversion Alternative would include a fish screen to be designed in consultation with CDFG fish screen experts, thereby minimizing the potential for impingement and entrainment of fish at the point of diversion. Therefore, the Upstream Diversion Alternative would be expected to have a beneficial effect on larval and juvenile fish through reduction of entrainment at the point of diversion. For a further discussion of this impact, refer to Impact 3.5-8.

Impact 3.5-14: Alteration of fish habitat through the creation of a backwater upstream of the diversion.

Under the Upstream Diversion Alternative, backwater would be formed upstream of the diversion structure. The river stage at the point of diversion would increase up to approximately two feet, with changes in stream depths decreasing with distance upstream (J. Kaufman, pers. comm. 1998). The backwater would extend upstream to Tamaroo Bar. The change in aquatic habitat from a lotic environment to a slightly more lentic environment could represent a slight adverse impact to rainbow and brown trout populations. However, the backwater would not be expected to significantly reduce long-term population trends of rainbow and brown trout in the project area. In addition, the backwater effect would not be expected to significantly contribute to increased predation on salmonids, or increases in water temperature. Therefore, because the overall change in aquatic habitat would not significantly reduce the long-term population trends of rainbow and brown trout, because the backwater would not increase rates of predation, and

because the backwater would not significantly increase water temperatures, the backwater effect would have a less-than-significant impact on fish resources and aquatic habitats. See additional discussion under Impact 3.5-9.

This alternative would not provide the added benefit of increasing open-water habitat in the project area because the bypass tunnel would continue to divert river flows through the project area.

Impact 3.5-15: Impacts of structures on fish passage through the project area.

Under the Upstream Diversion Alternative, fish movement through the project site would not be substantially changed from the existing or No Action/No Project Alternative conditions. Fish would be able to pass over the diversion structure. Fish screens at the point of diversion would be designed in consultation with CDFG fish screen experts and meet applicable criteria to maintain adequate approach and sweeping velocities and minimize impacts. Blockage of upstream fish migration due to velocity conditions in the bypass tunnel would not change under the Upstream Diversion Alternative. The Upstream Diversion Alternative effects on fish passage through the project area would represent a less-than-significant impact relative to the existing condition and compared to the No Action/No Project Alternative.

Impact 3.5-16: Effects on salmonid stocks in Auburn Ravine.

Operation of the Upstream Diversion Alternative would be the same as the Proposed Project relative to Auburn Ravine. Please refer to impact discussions 3.5-5 and 3.5-11.

Overall, a less-than-significant impact would be expected to occur as a result of the Upstream Diversion Alternatives.

Facilities-Related Cumulative Impacts

All future planned activities within the river channel would be responsible for implementing water quality protection measures according to regulatory and planning agency requirements. No significant cumulative impact upon water quality affecting fish resources would be anticipated.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.5-1, H-3.5-2, etc.).

The timing and quantity of the increased diversion would be the same under the Proposed Project and Upstream Diversion Alternative. Therefore, the diversion-related impacts are expected to be identical and so, are discussed below as Action Alternative impacts.

No Action/No Project Alternative

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant effects on fish habitat or aquatic resources, nor would it result in a significant or considerable contribution to the cumulative condition.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

Upper American River Fisheries Impacts

Impact 3.5-17: Flow impacts to fish resources on the North and Middle Forks of the American River upstream of the project site.

Simulated average long-term flows in the North and Middle Forks of the American River upstream of the project area under the existing condition and Action Alternatives are presented in Table H-3.5-1 (Appendix H to the Draft EIS/EIR). Simulation results show that the monthly mean flows upstream of the project site under the Action Alternatives would result in essentially equivalent monthly mean flows as in the existing condition for 801 months of the 840 months included in the analysis.

During the high-flow months (December to June), the change in streamflow due to the Action Alternatives would be negligible. During the low-flow period (July to November), project operations would result in both increases and decreases in monthly mean flow upstream of the project site. Reductions in flow during the low-flow period are of more concern than reductions in flow during the high-flow period, because fish resources during low flow may already be under stressed conditions. Reduction in monthly mean flows would occur between April and August and would range from no change in June to a decrease of 0.8 percent in July. All other months of the year would either experience no change or have an increase in flows of up to 0.7 percent. Over the long-term, implementation of the Action Alternatives relative to the existing condition would result in an increase in the upper American River flows upstream of the project site.

Figures H-3.5-1 through H-3.5-3 (Appendix H to the Draft EIS/EIR) show the exceedance curves for the flows on the North Fork American River upstream of the project site under the Action Alternatives relative to the existing condition. October through March flows would be essentially equivalent under the Action Alternatives relative to the existing condition. In April and May, the Action Alternatives would result in small reductions in flow when the flows would be within the 3,500 to 4,500 cfs range. The June and July exceedance curves are essentially equivalent between the Action Alternatives and existing conditions, with negligible reductions resulting from the Action Alternatives in July, for flows within the 500 to 1,100 cfs range. During June and July, the Action Alternatives would result in slightly higher flows than under the existing condition, for flows below 500 cfs. In the month of August, Action Alternative conditions would reduce upper American River flows within the 400 to 900 cfs range. For flows

below 400 cfs, flows would increase under the Action Alternatives relative to the existing condition. Anticipated reductions in flow on the North Fork American River would not be expected to adversely impact fisheries because relatively small or no reduction in monthly mean flows would occur, and the majority of trout that occur in the North Fork American River below the confluence with the Middle Fork American River are believed to be transitory. Changes in the upper American River would represent a less-than-significant impact to fish resources upstream of the project site.

Impact 3.5-18: Water temperature impacts to fish resources of the North and Middle Forks of the American River upstream of the project site.

Under the Action Alternatives, decreases in flow during the low-flow condition would not be expected to result in increases in water temperature of the upper American River. Temperature changes that would result from the Action Alternatives relative to the existing condition upstream of the project area would generally not be measurable. Therefore, potential water temperature changes resulting from the Action Alternatives under low- and high-flow conditions represent a less-than-significant impact on the long-term population of rainbow or brown trout upstream of the project site.

Impact 3.5-19: Flow impacts to fish resources of the North and Middle Forks of the American River downstream of the project site.

Table H-3.5-2 presents simulated monthly mean flows in the upper American River downstream of the project site under the Action Alternatives relative to the existing condition. The Action Alternatives would exhibit lower monthly mean flows in all months of the year (except January), with decreases ranging from less than one percent in the high-flow winter months to 6.4 percent in July. Differences in monthly mean flows in the high-flow period (i.e., December to June) (Figure H-3.5-4) would range from 0.5 percent to 4.5 percent. The low-flow months (i.e., July to November) (Figures H-3.5-4 and H-3.5-6) would be subjected to changes ranging from 1.3 to 6.4 percent, with lower reductions in the fall months and greater reductions in the summer months, when greater volumes of water would be diverted at the pump station.

October through March flows would be essentially equivalent under the Action Alternatives relative to the existing condition. In April and May, the Action Alternatives would result in small reductions in flow when flows would be within the 3,500 to 4,500 cfs flow range. Because of the greater diversion rates in the summer months, the exceedance curves representing the Action Alternatives and the existing condition, start separating in June and display a greater spread in July, August and September (Figure H-3.5-6). However, in low-flow conditions, implementation of the Action Alternatives would result in an increase in flows relative to the existing condition.

Anticipated reductions in streamflow would not be expected to adversely impact fisheries in the North and Middle forks of the American River below the project site because relatively small or no reduction in monthly mean flows would occur, and the majority of trout that occur in the North Fork American River below the confluence with the Middle Fork American River are believed to be transitory. Moreover, the Proposed Project includes restoring a previously

dewatered channel, resulting in increased habitat availability for fish resources in the North Fork American River for about 0.75 mile downstream of the project site, and probably result in a net beneficial impact. Although the Upstream Diversion Alternative would not include restoration of the previously dewatered channel, given the relatively unstable habitat conditions downstream of the project, much of which consist of the bypass tunnel itself, reductions in flow would represent a less-than-significant impact.

Impact 3.5-20: Water temperature impacts to fish resources on the North Fork American River downstream of the project site.

Under the Action Alternatives, decreases in flow during the low-flow condition would not be expected to result in measurable increases in water temperature of the upper American River. Therefore, potential water temperature changes resulting from the Action Alternatives under low- and high-flow conditions represent a less-than-significant impact on the long-term populations of rainbow or brown trout downstream of the project site.

Folsom Reservoir Fisheries Impacts

Impact 3.5-21: Impacts to Folsom Reservoir warmwater fisheries.

Hydrologic conditions under the Action Alternatives would result in almost no difference in the long-term average end-of-month water surface elevation in Folsom Reservoir during the March through September period (when warmwater fish spawning and initial rearing occurs). End-of-month water surface elevation at Folsom Reservoir would be essentially equivalent to the existing condition for 454 months of the 490 months included in the analysis. As shown in Table H-3.5-3, the average end-of-month elevation is the same in March, April, May and July with only a one-foot difference (reduction) in June, August and September. For the entire 70-year period of record, the largest single difference in end-of-month elevation (out of 490 months) during the March through September season would be a six-foot decrease relative to the existing condition.

Changes in water surface elevation in Folsom Reservoir during the March through September period would result in corresponding changes in the availability of reservoir littoral habitat containing inundated terrestrial vegetation (willows and button brush). Such shallow, near shore waters containing physical structure are important to producing and maintaining strong year-classes of warmwater fish annually. However, as shown in Table H-3.5-4, the difference in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Folsom Reservoir during the March through September period attributable to the Action Alternatives is estimated to be two percent or less. The small and infrequent reductions in the availability of littoral habitat would not be of sufficient magnitude to substantially reduce long-term, average initial year-class strength of the warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Folsom Reservoir's warmwater fisheries.

In addition, the Action Alternatives could alter the extent to which water surface elevations in Folsom Reservoir change during each month of the primary warmwater fish-spawning period

(March through July). As previously discussed, adverse impacts to spawning from nest-dewatering are assumed to have the potential to occur when reservoir elevation decreases by more than 9 feet within a given month. Modeling results, shown in Table H-3.5-5, indicate that the frequency with which potential nest-dewatering events could occur in Folsom Reservoir would not increase under the Action Alternatives, compared to the existing condition, during any month of the March through July spawning period. Because the frequency with which potential nest-dewatering events could occur in Folsom Reservoir under the Action Alternatives would not change during any month of the March through July warmwater fish-spawning period, impacts to warmwater fish nesting success would be considered less than significant. Overall, impacts to Folsom Reservoir warmwater fisheries would be considered less than significant.

Impact 3.5-22: Impacts to Folsom Reservoir's coldwater fisheries.

Folsom Reservoir end-of-month storage under the Action Alternatives would be essentially equivalent to the existing condition for 428 of the 560 months included in the analysis (i.e., April through November, when the reservoir stratifies). The Action Alternatives, relative to the existing condition, would result in small changes in Folsom Reservoir end-of-month storage during some years of the simulation for the April through November period. Long-term average end-of-month storage would be slightly reduced with implementation of the Action Alternatives relative to the existing condition (Table H-3.5-6). For any given month, the largest difference between long-term average end-of-month storage would be 4,000 AF, a less than one percent difference. Anticipated reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years, physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations, and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish. Therefore, changes in Folsom Reservoir end-of-month storage under the Action Alternatives represent a less-than-significant impact on coldwater fish resources.

Impact 3.5-23: Impacts to Nimbus Fish Hatchery.

CVP operations of Folsom Dam and Reservoir associated with the Action Alternatives would have very little effect on water temperatures entering the Nimbus Fish Hatchery from Lake Natoma during the May through September period, relative to the existing condition. Table H-3.5-7 shows that, under the Action Alternatives, the long-term average temperature of water released from Nimbus Dam would not differ by more than a calculated 0.1°F, relative to the existing condition, during any month of the year. Viewed from a different perspective, Table H-3.5-8 shows insignificant differences in the frequency with which temperatures exceed index temperatures of 60°F, 65°F and 68°F. These small and infrequent differences in water temperature which could occur during the May through September period (when hatchery temperatures reach annual highs) would have little, if any, effect on hatchery operations and resultant fish production. Therefore, implementation of the Action Alternatives would result in a less-than-significant impact.

Lower American River Fisheries Impacts

Flow- and temperature-related impacts are discussed separately below by species and lifestage. Organizationally, flow- and temperature-related impacts to fall-run chinook salmon and steelhead are discussed together, followed by impact discussions for splittail, American shad, and striped bass.

Impact 3.5-24: Impacts to fall-run chinook salmon and steelhead in the lower American River.

Minimal potential differences in lower American River flows and water temperatures under the Action Alternatives, relative to the existing condition, would not be expected to adversely affect fall-run chinook salmon and steelhead immigration, spawning and incubation, or juvenile rearing and emigration.

Flow-Related Impacts to Fall-Run Chinook Salmon/Steelhead Adult Immigration (September Through March)

Even at current minimum flow requirements (i.e., 250 cfs under D-893), flow-related physical impediments to adult salmonid upstream passage are not known to occur. Therefore, flow-related impacts to chinook salmon adult immigration would primarily be determined by flows at the mouth of the American River during the September through December period, when lower American River chinook salmon adults immigrate through the Sacramento River in search of their natal stream to spawn. The same would be true for steelhead during the December through March period. Reduced flows at the mouth are of concern primarily because less flow could result in insufficient olfactory cues for immigrating adult salmonids, thereby making it more difficult for them to "home" to the lower American River. Insufficient flow could result in higher rates of straying to other Central Valley rivers. Table H-3.5-9 shows the long-term average flow at the mouth differs by no more than 1.1 percent for all the months of the year under the Action Alternatives compared to the existing condition. The small difference in flows that would be expected to occur at the mouth under the Action Alternatives would not be of concern regarding attraction of adults immigrating into the lower American River.

Temperature-Related Impacts to Fall-Run Chinook Salmon/Steelhead Adult Immigration (September Through March)

Reclamation's Lower American River Temperature Model does not account for the influence of Sacramento River water intrusion on water temperatures at the mouth. Therefore, the remaining temperature assessments are based on temperatures modeled at the mouth of the lower American River and at Freeport on the Sacramento River. The long-term average water temperatures modeled for the Action Alternatives would be essentially equivalent to those under the existing condition at the American River mouth and at Freeport on the Sacramento River during all months of the September through March adult immigration period, as shown in Table H-3.5-10. Monthly mean water temperatures at the American River mouth would be essentially equivalent to the existing condition for 475 months of the 483 months included in the analysis. Monthly mean water temperatures at Freeport on the Sacramento River would be essentially equivalent to the existing condition for all of the 483 months included in the analysis. Therefore, changes in

temperature under the Action Alternatives would represent a less-than-significant impact to fall-run chinook salmon/steelhead adult immigration.

Flow-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

All flow-related impact assessments regarding fall-run chinook salmon spawning and incubation were based on flows below Nimbus Dam and at Watt Avenue, with a greater emphasis placed on flows below Nimbus Dam. Aerial redd surveys conducted by CDFG in recent years have shown that 98 percent of all spawning occurs upstream of Watt Avenue, and 88 percent of spawning occurs upstream of RM 17 (located just upstream of Ancil Hoffman Park). Hence, the majority of spawning occurs upstream of RM 17.

Monthly mean flows below Nimbus Dam and at Watt Avenue under the Action Alternatives would be essentially equivalent to the existing condition for 304 months of the 350 months included in the analysis. The long-term average flow below Nimbus Dam would be within one percent of the flow under the existing condition during all months of the October through February period, as shown in Table H-3.5-11. Changes in long-term average flows at Watt Avenue would be within one percent for each month of the October through February period, as shown in Table H-3.5-12.

Figures H-3.5-7 through H-3.5-11 show exceedance curves for the American River release from Nimbus Dam for the October through February period. These curves demonstrate that the Action Alternatives' flows would be similar to those under the existing condition. Differences in flows in the lower flow ranges are more crucial for salmon survival. During October, the Action Alternatives result in flows nearly identical to the existing condition flows. Minimal differences in flow occur during November, December, and February when both slight increases and decreases resulting from the Action Alternatives occur when flows under the existing condition are 2,000 cfs or less. In January, the Action Alternatives would result in a flow decrease of 100 to 200 cfs in about half of the years when the existing condition flow is less than 2,000 cfs.

These findings indicate that, during the October through January period (when the majority of fall-run chinook salmon spawning occurs), the Action Alternatives could slightly reduce (i.e., 100 to 200 cfs) flows below Nimbus Dam and Watt Avenue in a few years when flows under the existing condition would be below 2,000 cfs. Flow reductions below 2,000 cfs could reduce the amount of available chinook salmon spawning habitat, which could result in increased redd superimposition during years when adult returns are high enough for spawning habitat to be limiting. However, these reductions in flow would not be expected to be of substantial magnitude or occur with enough frequency to have a significant adverse effect on long-term initial year-class strength of lower American River fall-run chinook salmon.

Temperature-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

Under the Action Alternatives, the long-term average water temperatures would be equivalent to those under the existing condition during October at Watt Avenue, and during the November

through February period below Nimbus Dam, as shown in Table H-3.5-13. Watt Avenue is the location of concern in October because air temperatures tend to warm the river as it moves downstream. Conversely, water temperatures below Nimbus Dam are usually warmer than water temperatures at Watt Avenue in the winter season.

The October water temperatures at Watt Avenue would be essentially equivalent to the existing condition for 67 months of the 69 months included in the analysis. The October water temperature at Watt Avenue would increase by more than 0.3°F in only two years of the simulation, once by 0.6°F, and once by 0.4°F. The November through February monthly mean water temperatures below Nimbus Dam would be essentially equivalent to the existing condition for 273 of the 276 months included in the analysis. November water temperatures below Nimbus Dam would increase by more than 0.3°F in only two years of the 69 years modeled, and by an estimated 0.4°F in only one year during the month of December. Under the Action Alternatives, there would not be any additional occurrences of October water temperatures at Watt Avenue above 56°F, relative to the existing condition. Below Nimbus Dam, there would only be one additional occurrence during November in which water temperatures under the Action Alternatives would exceed 56°F, relative to the existing condition. December, January and February water temperatures below Nimbus Dam would be below 56°F in all 69 years modeled.

The long-term average annual early lifestage survival for fall-run chinook salmon in the American River would be 84.9 percent under the existing condition and 85 percent under the Action Alternatives. Table H-3.5-14 shows the annual survival estimates for the 69 years modeled. Substantial increases or decreases in survival would not occur in any individual year of the 69-year simulation.

Based on these modeling results, any small temperature changes in the lower American River resulting from the Action Alternatives during the October through February period would not adversely affect spawning and incubation success of fall-run chinook salmon.

Flow- and Temperature-Related Impacts to Steelhead Spawning and Incubation (December Through March)

Monthly mean flows below Nimbus Dam and at Watt Avenue associated with the Action Alternatives would be essentially equivalent to the existing condition for 235 months of the 280 months included in the analysis. Also, monthly mean water temperatures below Nimbus Dam and at Watt Avenue would be similar to the existing condition for 271 months of the 276 months included in the analysis. Moreover, under the Action Alternatives water temperatures below Nimbus Dam would remain below 56°F for all months of the 69 years modeled for the spawning and incubation period for steelhead. December, January, and February water temperatures at Watt Avenue under the Action Alternatives would be below 56°F in all 69 years modeled. Under the Action Alternatives, there would only be one additional occurrence during March in which water temperatures at Watt Avenue would be greater than 56°F, relative to the existing condition, for all the 69 years modeled. Therefore, no flow- or temperature-related impacts to steelhead spawning or incubation would be expected to occur resulting from the Action

Alternatives. For flow data supporting this impact determination, see Tables H-3.5-11, H-3.5-12 and Figures H-3.5-9 through H-3.5-15. For the water temperature data supporting this impact determination, see Tables H-3.5-15 and H-3.5-16. (These tables and figures are included in Appendix H to the Draft EIS/EIR).

Flow-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Because the majority of juvenile salmonid rearing is believed to occur upstream of Watt Avenue, and because depletions generally exceed tributary accretions to the river throughout the March through June period (generally resulting in lower flows at Watt Avenue than below Nimbus Dam), all flow-related impact assessments for fall-run chinook salmon and steelhead rearing are based on flows at Watt Avenue.

Small changes in monthly mean flows would be expected to occur at Watt Avenue under the Action Alternatives relative to the existing condition. The long-term average flow at Watt Avenue would be within two percent of the flow under the existing condition for any given month during the March through June period (Table H-3.5-15). Flow exceedance curves for March through June at Watt Avenue are shown in Figures H-3.5-15 through H-3.5-18. An approximate decrease of 150 cfs represents the largest decrease in flow during the March through June period when flows under the existing condition are 2,000 cfs or less. Decreases of 150 cfs would occur about four percent of the time during March, five percent of the time during May, and four percent of the time during June. These small differences in flow would not be expected to adversely affect long-term juvenile fall-run chinook salmon or steelhead rearing success.

Temperature-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Modeling of the Action Alternatives indicates that the long-term average water temperature at Watt Avenue would not change by more than 0.1°F during any month of the March through June period, compared to the existing condition, as shown in Table H-3.5-15. Monthly mean water temperatures at Watt Avenue would be essentially equivalent to the existing condition for 268 of the 276 months included in the analysis. Moreover, under the Action Alternatives, there would not be any additional occurrences during May and only one additional occurrence during June for all the 69 years modeled in which water temperatures would be above 65°F, relative to the existing condition. March and April water temperatures at Watt Avenue under the Action Alternatives would remain below 65°F for all the 69 years modeled. Consequently, although small temperature increases at Watt Avenue would occur during the March through June period, resultant water temperatures would not be expected to adversely affect the success of juvenile salmon rearing.

Flow-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

The primary period of fall-run chinook salmon juvenile emigration occurs from February to June, with the majority of juvenile steelhead emigration occurring during this same period.

Generally little, if any, emigration occurs during July and August. Flow-related impacts to salmonid immigration discussed above addressed flow changes in February and March. As previously concluded for adult immigration, potential changes in flows under the Action Alternatives during February through March would not adversely affect juvenile fall-run chinook salmon or steelhead rearing and, therefore, also would not adversely affect emigration. Hence, this discussion focuses primarily on the April through June period.

Small decreases in monthly mean flows would be expected to occur at the American River mouth associated with implementation of the Action Alternatives compared to the existing condition. Under the Action Alternatives, the simulated long-term average flow at the mouth would decrease slightly (about one percent) in May and June (Table H-3.5-9). Figures H-3.5-19, H-3.5-20, and H-3.5-21 show the difference in flows simulated under the Action Alternatives at the lower flow ranges.

Juvenile salmonid emigration surveys conducted by CDFG have shown no direct relationship between peak emigration of juvenile chinook salmon and peak spring flows (Snider et al. 1997). Moreover, emigrating fish are more likely to be adversely affected by events when flows are high, then ramp down quickly (resulting in isolation and stranding). Adverse changes in flow ramping rates would not be expected to occur under the Action Alternatives. Consequently, although small flow reductions at the mouth would occur in a few years during the April through June period, resultant flows would not be expected to adversely affect the success of juvenile salmonid emigration.

Temperature-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

With the possible exception of a small percentage of fish that may rear near the mouth of the lower American River, impacts due to elevated water temperatures at the mouth to fall-run chinook salmon and steelhead would be limited to the several days that it takes emigrants to pass through the lower portion of the river and into the Sacramento River en route to the Delta. Water temperatures near the mouth during the primary emigration period (February into June) are often largely affected by intrusion of Sacramento River water, which is not accounted for by Reclamation's Lower American River Temperature Model. Consequently, actual temperatures near the mouth would likely be somewhere between temperatures modeled for the mouth, and temperatures modeled for the Sacramento River at Freeport (RM 46), located 14 miles downstream of the lower American River's confluence. For this reason, the long-term average temperatures are discussed for both of these locations.

Monthly mean temperatures at the American River mouth under the Action Alternatives are essentially equivalent to or less than the existing condition for 332 months of the 345 months included in the analysis. Monthly mean temperatures at Freeport on the Sacramento River are essentially equivalent to or less than the existing condition for all of the months of the 345 months included in the analysis. The long-term average water temperature at the American River mouth and on the Sacramento River at Freeport during February through June under the Action Alternatives would be similar to temperatures under the existing condition, as shown in Table H-3.5-10. In the 69-year simulation, water temperature increased 0.4°F or more at the mouth in

only three years during March, two years during April, two years during May and five years during June. At Freeport on the Sacramento River, long-term average temperature increases greater than 0.1°F in the months of February through June would not occur, relative to the existing condition. Moreover, under the Action Alternatives, there would not be any additional occurrences during April and May and one additional occurrence during June in which water temperatures at the mouth of the lower American River would be above 65°F, relative to the existing condition. At Freeport, under the Action Alternatives, there would not be any additional occurrences during May and June in which water temperatures would be above 65°F, relative to the existing condition. Under the Action Alternatives, April water temperatures at Freeport would remain below 65°F for all the 69 years modeled.

Based on the results discussed above, water temperatures under the Action Alternatives would not adversely affect emigration during the February through June period, relative to the existing condition.

Flow-Related Impacts to Steelhead Rearing (July Through September)

Small decreases in monthly mean flows would be expected to occur below Nimbus Dam under the Action Alternatives relative to the existing condition. The long-term average flow below Nimbus Dam would decrease by less than two percent compared to the existing condition for the July through September period (Table H-3.5-11). The difference in flow would be similar at Watt Avenue (Table H-3.5-12).

Figures H-3.5-22 through H-3.5-24 provide flow exceedance curves for American River release from Nimbus Dam during July, August and September. These curves demonstrate that flows would be slightly different under the Action Alternatives compared to the existing condition. The exceedance curves show flows under the Action Alternatives to be both less than and greater than the flows under the existing condition when flows are 1,500 cfs or less.

Based on these findings, flow reductions under the Action Alternatives are not expected to reduce juvenile steelhead rearing habitat. Further, steelhead populations in the lower American River are believed to be limited by instream temperature conditions during the July through September period, rather than by flows. Therefore, small and infrequent reductions in flow would not be expected to adversely affect long-term rearing success of juvenile steelhead.

Temperature-Related Impacts to Steelhead Rearing (July Through September)

The long-term average water temperatures below Nimbus Dam, Watt Avenue, and the mouth would be the same during July, August and September under the Action Alternatives and the existing condition (Tables H-3.5-7, H-3.5-15, and H-3.5-16, respectively). Monthly mean water temperatures below Nimbus Dam would be essentially equivalent to the existing condition for 194 months of the 207 months included in the analysis. Monthly mean water temperatures at Watt Avenue would be essentially equivalent to the existing condition for 198 months of the 207 months included in the analysis. Moreover, under both the Action Alternatives and the existing condition, there would be the same number of occurrences in which water temperatures would be above 65°F during the July through September period at Watt Avenue. Monthly mean water

temperatures at the mouth of the American River under the Action Alternatives would be essentially equivalent to the existing condition for 200 months of the 207 months included in the analysis. Therefore, small and infrequent increases in water temperature would not be expected to adversely affect long-term rearing success of juvenile steelhead.

Impact 3.5-25: Impacts to splittail in the lower American River.

Monthly mean flows at Watt Avenue under the Action Alternatives would be essentially equivalent to or greater than the existing condition for 216 months of the 280 months included in the analysis. The long-term average flow at Watt Avenue during the period February through May would range between 0.5 percent to two percent less than under the existing condition, as shown in Table H-3.5-12.

Using flows at Watt Avenue, the acreage of usable riparian vegetation inundated between RM 8 and RM 9 was used as an index of the relative amount of inundated riparian vegetation that would occur in the lower portion of the river for a given flow rate. The amount of riparian habitat inundated in this portion of the river under the Action Alternatives would remain unchanged in 70 years (100 percent of the time) during February, 68 years (97 percent of the time) during March, 63 years (90 percent of the time) during April, and 62 years (89 percent of the time) during May. Therefore, substantial change in the frequency of habitat reductions would not be expected to occur during March, April, or May of any year. In some years, riparian vegetation would not be inundated under the Action Alternatives or the existing condition.

During the February through May splittail spawning period, the long-term average usable inundated riparian habitat between RM 8 and RM 9 under the Action Alternatives would not decrease relative to the existing condition. In addition, flow changes under the Action Alternatives would have little, if any, effect on the availability of in-channel spawning habitat availability, or the amount of potential spawning habitat available from the mouth up to RM 5, the reach of the river influenced by Sacramento River stage. Ultimately, these reductions in flow would not be expected to be of substantial magnitude and/or to occur with enough frequency to have a significant adverse effect on the long-term population trends of lower American River splittail.

Monthly mean temperatures at Watt Avenue under the Action Alternative are essentially equivalent to or less than the existing condition for 270 months of the 276 months included in the analysis. Over the 69-year period of simulation, February through May water temperatures at Watt Avenue under the Action Alternatives would be above 68°F, the upper limit of the reported preferred range for splittail spawning, in only one month of one year, relative to the existing condition. Therefore, temperature-related impacts to splittail spawning would be considered less than significant because no substantial change in the frequency of water temperature exceeding the reported preferred range for splittail spawning would occur.

Impact 3.5-26: Impacts to American shad in the lower American River.

Table H-3.5-9 shows the average flow at the American River mouth would be about one percent less during May and June under the Action Alternatives relative to the existing condition. Flow

reductions in May and June under the Action Alternatives could potentially reduce the number of adult shad attracted into the river during a few years. However, American shad spawn opportunistically where suitable conditions are found, so that production of American shad within the Sacramento River system would not be affected. Any flow-related impacts to American shad are considered to be less than significant. In addition, analysis was performed to determine the probability that lower American River flows at the mouth in May and June would be greater than 3,000 cfs, the flow level defined by CDFG as that which would be sufficient to maintain the sport fishery for American shad. The simulations showed no difference in the number of years that the flow at the mouth would be below 3,000 cfs in May and June.

Monthly mean water temperatures in May and June below Nimbus Dam and at the mouth would be within the reported preferred range for American shad spawning of 60°F to 70°F only one year less under the Action Alternatives as compared to the existing condition. Because the frequency with which suitable temperatures for American shad spawning would not substantially differ, temperature-related impacts to American shad also are considered to be less than significant. Overall, the impacts associated with implementation of the Action Alternatives would be less than significant.

Impact 3.5-27: Impacts to striped bass in the lower American River.

The flow-related impact assessment conducted for fall-run chinook salmon and steelhead addresses potential flow-related impacts to striped bass juvenile rearing, which occurs during the months of May and June. In addition, an analysis was performed to determine the probability that lower American River flows at the mouth would be below 1,500 cfs, the flow level defined by CDFG as that which would be sufficient to maintain the sport fishery for striped bass. Under the Action Alternatives, monthly mean flows in the lower American River would be below the 1,500 cfs attraction flow index at the mouth during one additional year (one percent more often) during the May through June period, relative to the existing condition. Because flows at the mouth that are believed to be sufficient to maintain the striped bass fishery would be met or exceeded in most years during both May and June, and because substantial changes in the strength of the striped bass fishery would not be expected to occur when May and/or June monthly mean flows fall below 1,500 cfs, flow-related impacts to the striped bass fishery that could potentially occur under the Action Alternatives would be less than significant.

The number of years that monthly mean water temperatures would be within the reported preferred range for striped bass juvenile rearing of 61°F to 73°F would increase by one year during both May and June below Nimbus Dam, and decrease by one year in both months at the mouth. Because the frequency of suitable temperatures for juvenile striped bass rearing in the lower American River would remain essentially unchanged, temperature-related impacts to juvenile striped bass rearing also are considered to be less than significant. Overall, potential impacts to striped bass would be less than significant.

Impact 3.5-28: Impacts to Shasta and Trinity reservoirs' warmwater fisheries.

Hydrologic conditions under the Action Alternatives would result in no change in the long-term average end-of-month water surface elevation in Shasta Reservoir during the March through

September period when warmwater fish spawning and initial rearing may be expected. End-of-month elevation at Shasta Reservoir would be essentially equivalent to or greater than the existing condition for 471 months of the 490 months included in the analysis. Reductions in average end-of-month elevation of one foot or more would occur four percent of the time during the March through September period.

Changes in water surface elevation in Shasta Reservoir during the March through September period would result in corresponding changes in the availability of reservoir littoral habitat. Differences in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Shasta Reservoir under the Action Alternatives would be negligible, as shown in Table H-3.5-17. These small and infrequent reductions in the availability of littoral habitat, under the Action Alternatives, would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Shasta Reservoir's warmwater fisheries.

In addition, implementation of the Action Alternatives could alter the rates by which water surface elevation in Shasta Reservoir change during each month of the primary warmwater fish-spawning period (March through July). However, Table H-3.5-18 shows that the frequency with which potential nest-dewatering events would occur in Shasta Reservoir during the spawning period would be minimal. Because the frequency with which potential nest-dewatering events could occur in Shasta Reservoir under the Action Alternatives would not change substantially during the warmwater fish-spawning period, impacts to warmwater fish-nesting success are considered to be less than significant. Overall, potential impacts to Shasta Reservoir's warmwater fisheries would be less than significant.

Hydrologic conditions under the Action Alternatives would not result in substantial changes in the long-term average end-of-month water surface elevation in Trinity Reservoir during the March through September period.

End-of-month elevation at Trinity Reservoir under the Action Alternatives would be essentially equivalent to or greater than the existing condition for 479 months of the 490 months included in the analysis. Reductions in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Trinity Reservoir under the Action Alternatives would be negligible, with reductions in long-term average amount of littoral habitat of 0.1 percent or less during the March through September period. This would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Trinity Reservoir's warmwater fisheries.

In addition, the frequency with which potential nest-dewatering events could occur in Trinity Reservoir would not change under the Action Alternatives, relative to that under the existing condition, during any month of the March through July spawning period (Table H-3.5-19). Overall, impacts to Trinity Reservoir's warmwater fish populations would be less than significant.

Impact 3.5-29: Impacts to Shasta and Trinity reservoirs' coldwater fisheries.

Hydrologic conditions under the Action Alternatives would not result in a change in long-term average Shasta Reservoir storage, relative to the existing condition, during any month of the April through November period, as shown in Table H-3.5-20. Shasta Reservoir end-of-month storage under the Action Alternatives would be essentially equivalent to the existing condition for 533 months of the 560 months included in the analysis. In individual years during the April through November period (when Shasta Reservoir thermally stratifies), reductions in Shasta Reservoir end-of-month storage of more than three percent occurred in seven individual months under the Action Alternatives relative to the existing condition. The largest individual storage reduction for any given month over the 70-year period of record for the April through November period would be 4.6 percent. Because changes to Shasta Reservoir storage would not be substantial or frequent, because physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations within the reservoir, and because anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base used by the reservoir's coldwater fish populations, seasonal reductions in storage that could occur under the Action Alternatives would have less-than-significant impacts to Shasta Reservoir's coldwater fisheries.

Under the Action Alternatives , the long-term average monthly storage in Trinity Reservoir would be essentially unchanged during all months of the April through November period (when Trinity Reservoir thermally stratifies). Trinity Reservoir storage would be essentially equivalent to the existing condition for 537 of the 560 months included in the analysis. Reductions in Trinity Reservoir storage would be less than 1.4 percent for any individual month of the 70-year period of record. Because changes to Trinity Reservoir storage would not be substantial, physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations within the reservoir, and anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base utilized by the reservoir's coldwater fish populations, seasonal reductions in storage expected to occur under the Action Alternatives would have less-than-significant impacts to Trinity Reservoir's coldwater fisheries

Sacramento River Fisheries Impacts

Impact 3.5-30: Flow-related impacts in the upper Sacramento River.

The long-term average Sacramento River flow released from Keswick Dam under the Action Alternatives would be essentially equivalent to the existing condition during all months of the year, as shown in Table H-3.5-21. Monthly mean flows below Keswick Dam in the upper Sacramento River would be essentially equivalent to the existing condition in 804 of the 840 months included in the analysis.

The minimum flow objective for Keswick Dam releases stipulated in the NMFS Biological Opinion (1993, as revised in 1995) for the protection of winter-run chinook salmon rearing and downstream passage is 3,250 cfs between October 1 and March 31. Modeling output shows that monthly mean flows below Keswick Dam would not be reduced below 3,250 cfs in any month of

the October through March period in any of the 70 years modeled under the Action Alternatives or the existing condition.

These findings indicate that flow changes below Keswick Dam that would occur under the Action Alternatives would result in less-than-significant impacts to upper Sacramento River fish resources.

Impact 3.5-31: Flow-related impacts in the lower Sacramento River.

Monthly mean flows at Freeport in the lower Sacramento River under the Action Alternatives would be essentially equivalent to the existing condition for 798 months of the 840 months included in the analysis. The long-term average flow at Freeport would be within 0.2 percent of the average under the existing condition during all months of the year, as shown in Table H-3.5-22. Flow reductions of more than five percent would occur in only one month (i.e., August) of one year under the Action Alternatives relative to the existing condition. Therefore, neither physical habitat availability for fish residing in the lower Sacramento River nor immigration of adult or emigration of juvenile anadromous fish would be substantially affected under the Action Alternatives relative to the existing condition. Consequently, any flow-related impacts to lower Sacramento River fisheries or migrating anadromous fish that could occur under the Action Alternatives are considered to be less than significant. Overall, this constitutes a less-than-significant impact.

Impact 3.5-32: Water temperature-related impacts in the upper Sacramento River.

The Action Alternatives would not result in changes to the long-term average temperature at Keswick Dam or Bend Bridge for any month of the year. In 818 of the 828 months simulated, monthly mean temperatures at Keswick Dam would be essentially equivalent to or less than, the existing condition. Monthly mean temperatures at Bend Bridge under the Action Alternatives would be essentially equivalent to the existing condition for 821 months of the 828 months included in the analysis. Also, relative to the existing condition, there would be only two additional months throughout the entire simulation where the temperature could exceed 56°F or 60°F at Keswick Dam or Bend Bridge under the Action Alternatives, as shown in Table H-3.5-23. Therefore, the Action Alternatives would not result in significant additional exceedances of the temperature criteria identified in the NMFS Biological Opinion for Winter-run Chinook Salmon. In addition, there would not be any substantial decreases in annual early lifestage survival of fall-run, late fall-run, winter-run, or spring-run chinook salmon in any individual year relative to the existing condition. Based on these findings, temperature-related impacts to upper Sacramento River fisheries under the Action Alternatives would be less than significant.

Impact 3.5-33: Water temperature-related impacts in the lower Sacramento River.

Monthly mean temperatures at Freeport under the Action Alternatives would be essentially equivalent to the existing condition for 827 of the 828 months included in the analysis. The long-term average water temperature at Freeport in the lower Sacramento River would not change more than 0.1°F during any month of the year, as shown in Table H-3.5-24. Also, the number of years in which water temperature at this location would exceed 56°F, 60°F, and 70°F

would be similar to the existing condition during the period March through November, as shown in Table H-3.5-25. Further, in only one month of one year of the 69-year period of simulation would the water temperature at Freeport increase by more than 0.3°F relative to the existing condition. Overall, potential water temperature impacts to fish species within the lower Sacramento River would be considered less than significant.

Impact 3.5-34: Impacts to Delta fish populations.

Delta outflow is considered to have a substantial effect on a number of fish species relying on Delta habitats for one or more of their lifestages. Reductions in the long-term average Delta outflow of up to 0.3 percent for any given month could occur under the Action Alternatives relative to the existing condition, as shown in Table H-3.5-26. Delta outflow during the period of February through June is believed to be of greatest concern for potential effects to spawning and rearing habitat and downstream transport flows for delta smelt, longfin smelt, splittail, striped bass, salmonids, and other aquatic species in the Delta. Throughout the entire 70-year period of record included in the analysis, Delta outflow reductions of more than three percent occurred during only seven individual months (out of 840 months) under the Action Alternatives relative to the existing condition. However, during the critical February through June period, Delta outflow reductions of more than three percent did not occur.

Under the Action Alternatives, there would be no shift in the long-term average position of X2 relative to the existing condition. The maximum upstream shift for any individual month of any year (i.e., 840 months) in the position of X2 would be 0.7 km. In fact, during the February through June period considered important for providing appropriate spawning and rearing conditions and downstream transport flows for various fish species, the maximum upstream shift for any individual month of any year in the position of X2 would be 0.2 km.

The model simulations conducted for the Action Alternatives included conformance with X2 requirements set forth in the SWRCB Interim Water Quality Control Plan. Also, the Delta export-to-inflow ratios under the Action Alternatives would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Overall, impacts to Delta fish populations would be less than significant.

Impact 3.5-35: Impacts to Oroville Reservoir or Feather River fish populations.

The Action Alternatives would not result in substantial changes in storage, elevation, or temperature at Oroville Reservoir, or in substantial changes in flows or temperatures of the Feather River, relative to the existing condition. Any small changes that might occur in storage, elevation, flow, or temperature would constitute less-than-significant impacts on fish resources.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Upper American River Fisheries Impacts

Impact 3.5-36: Flow-related impacts to fish resources of the North and Middle Forks of the American River upstream of the project site.

When compared to the No Action/No Project Alternative, average long-term monthly mean flows in the upper American River above the project site under the Action Alternatives would be essentially equivalent all months of the year (Table H-3.5-27). Changes in average long-term monthly mean flows would vary from a decrease of 0.6 percent to an increase of 0.6 percent. The greatest changes would occur in the summer months, when higher volumes of water would be diverted at the pump station.

Flows would be essentially equivalent during the October through April period under the Action Alternatives and the No Action/No Project Alternative. Figures H-3.5-25 through H-3.5-27 show exceedance curves for the upper American River above the project site. In May and June, the Action Alternatives would result in small reductions in flows when the flows would be within the 3,500 to 4,500 cfs range and 2,500 to 3,000 cfs range, respectively, under the No Action/No Project Alternative. Conversely, there would be an increase in flows under low-flow conditions. Under the Action Alternatives, July flows would be slightly decreased when flows are within the 500 to 800 cfs range, and increased when flows are lower than 500 cfs. Under the Action Alternatives, August and September would present the largest reduction in flows, with slight reductions, when flows are within the 400 to 900 cfs range under the No Action/No Project Alternative. By contrast, under the Action Alternatives, flows that are below approximately 400 cfs under the No Action/No Project Alternative would increase during August and September. Because relatively small changes in average long-term monthly mean flows would occur, and the majority of trout that occur in the North Fork American River below the confluence with the Middle Fork American River are believed to be transitory, any change in flows associated with the Action Alternatives would represent a less-than-significant impact.

Impact 3.5-37: Water temperature-related impacts to fish resources of the North and Middle Forks of the American River upstream of the project site.

Under the Action Alternatives, small changes in flow during the low-flow condition would not be expected to result in substantial increases in water temperature, relative to the No Action/No Project Alternative. Temperature changes that would result from the Action Alternatives upstream of the project area would generally be less than measurable. Therefore, water temperatures resulting from the Action Alternatives under low- and high-flow conditions would represent a less-than-significant impact on the long-term populations of rainbow or brown trout upstream of the project site compared to the No Action/No Project Alternative.

Impact 3.5-38: Flow-related impacts to fish resources on the North and Middle Forks of the American River downstream of the project site.

Table H-3.5-28 presents simulated average long-term monthly mean flows in the upper American River downstream of the project site under the No Action/No Project Alternative and the Action Alternatives. Under the Action Alternatives, the average long-term monthly mean flows in the American River downstream of the project site would be lower in all but one month of the year, with decreases ranging from less than one percent in the high-flow winter months to 5.8 percent in September. Differences in average long-term monthly mean flows in the high-flow period (i.e., December to June) would range from 0.2 percent to 2.6 percent. During the low-flow months (i.e., July to November), changes in flow would range from an increase of 0.6 percent in November to a decrease of 5.8 percent in September. The greatest changes would occur in the summer months, when higher volumes of water would be diverted at the pump station.

October through April flows would be essentially equivalent under the Action Alternatives and the No Action/No Project Alternative (Figures H-3.5-28 and H-3.5-29). In May and June, the Action Alternatives would result in small reductions in flows when flows would be within the 3,500 to 4,500 cfs range and within the 2,000 to 3,000 cfs range, respectively. Conversely, the Action Alternatives would result in an increase in flows, when flows under the No Action/No Project Alternative would be lower than 500 cfs. July, August, and September would present the largest decrease, in which all but the flows in the lowest range would be reduced under the Action Alternatives relative to the No Action/No Project Alternative. Because small changes in monthly mean flows would occur, anticipated reductions in streamflow would not be expected to adversely impact fish resources in the North and Middle Forks of the American River below the project site. Moreover, the Proposed Project includes restoring the previously dewatered channel and increasing fish habitat availability for about three-quarters of a mile downstream of the project site, and probably result in a net beneficial impact. Although the Upstream Diversion Alternative would not include restoration of the previously dewatered channel, given the relatively unsuitable habitat conditions downstream of the project site, much of which consist of the bypass tunnel itself, reductions in flow would represent a less-than-significant impact to fish resources in the upper American River downstream of the project site.

Impact 3.5-39: Water temperature-related impacts to fish resources on the North Fork American River downstream of the project site.

Relatively small flow changes associated with the Action Alternatives would not be expected to result in substantial increases in water temperature. Therefore, potential changes in water temperatures resulting from the Action Alternatives would represent a less-than-significant impact to populations of rainbow or brown trout downstream from the project site, compared to the No Action/No Project Alternative.

Folsom Reservoir Fisheries Impacts

Impact 3.5-40: Impacts to Folsom Reservoir warmwater fisheries.

Hydrologic conditions under the Action Alternatives compared to the No Action/No Project Alternative would not result in substantial differences in the long-term average end-of-month water surface elevation in Folsom Reservoir during the March through September period (when warmwater fish spawning and initial rearing occurs). As shown in Table H-3.5-29, the long-term average elevation is equivalent in all months except July, where there is a one-foot difference. In individual years during the 70-year period of record, the largest single difference in elevation during the March through September season is 13 feet. In 451 months out of the 490 months simulated during this period, the elevation of Folsom Reservoir would increase or remain essentially equivalent to elevations under the No Action/No Project Alternative.

As shown in Table H-3.5-30, the difference in long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Folsom Reservoir during the March through September period under the Action Alternatives ranges from 1.4 percent more habitat available during the month of March to 3.1 percent less habitat available during the month of September, relative to the No Action/No Project Alternative. These small changes in the availability of littoral habitat would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of the warmwater fish populations of management concern. Consequently, seasonal reductions in littoral habitat availability would represent a less-than-significant impact to Folsom Reservoir's warmwater fisheries.

Modeling results, shown in Table H-3.5-31, indicate that the frequency with which potential nest-dewatering events could occur in Folsom Reservoir would change only slightly (i.e., two more occurrences) when compared to the No Action/No Project Alternative, during any month of the March through July spawning period. Because the frequency with which potential nest-dewatering events could occur in Folsom Reservoir during the March through July warmwater fish spawning period would change only slightly, impacts to warmwater fish nesting success are considered to be less than significant under the Action Alternatives relative to the No Action/No Project Alternative. Overall, impacts to Folsom Reservoir warmwater fisheries are considered less than significant.

Impact 3.5-41: Impacts to Folsom Reservoir's coldwater fisheries.

The Action Alternatives would result in small changes in Folsom Reservoir end-of-month storage during some years of the simulation compared to the No Action/No Project Alternative. Long-term average end-of-month storage would be slightly reduced under the Action Alternatives relative to the No Action/No Project Alternative. For any given month, the largest difference between the long-term average end-of-month storage would be 4,000 AF, or less than one percent difference. In 663 out of 840 months included in the analysis, Folsom Reservoir end-of-month storage under the Action Alternatives was greater than or essentially equivalent to the No Action/No Project Alternative. Anticipated reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal

reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish. Therefore, changes in Folsom Reservoir under the Action Alternatives relative to the No Action/No Project Alternative would represent a less-than-significant impact on coldwater fish resources.

Impact 3.5-42: Impacts to Nimbus Fish Hatchery.

CVP operations of Folsom Dam and Reservoir under the Action Alternatives would have very little effect on temperatures of water entering the Nimbus Fish Hatchery from Lake Natoma during the May through September period, relative to the No Action/No Project Alternative. In 789 out of the 828 months simulated, monthly mean temperatures below Nimbus Dam were essentially the same or less under the Action Alternatives as compared to the No Action/No Project Alternative. Table H-3.5-33 shows that the long-term average temperature of water released from Nimbus Dam is essentially equivalent to the No Action/No Project Alternative, during any month of the year. Table H-3.5-34 shows insignificant differences in the frequency with which temperatures exceed index temperatures of 60°F, 65°F and 68°F. These small and infrequent differences in temperature which could occur during the May through September period (when hatchery temperatures reach annual highs) would have little, if any, effect on hatchery operations and resultant fish production. Therefore, changes under the Action Alternatives relative to the No Action/No Project Alternative would result in a less-than-significant impact.

Lower American River Fisheries Impacts

Flow- and temperature-related impacts are discussed separately below by species and lifestage. Organizationally, flow- and temperature-related impacts to fall-run chinook salmon and steelhead are discussed together, followed by impact discussions for splittail, American shad, and striped bass.

Impact 3.5-43: Impacts to fall-run chinook salmon and steelhead in the lower American River.

Minimal potential differences in lower American River flows and water temperatures under the Action Alternatives would not be expected to adversely affect fall-run chinook salmon and steelhead immigration, spawning and incubation, and juvenile rearing and emigration relative to the No Action/No Project Alternative.

Flow-Related Impacts to Fall-Run Chinook Salmon/Steelhead Adult Immigration (September Through March)

Table H-3.5-35 shows that the long-term average flow at the mouth of the American River differs by less than one percent under the Action Alternatives, compared to the No Action/No Project Alternative, during all months of the adult immigration period (September through March). In 419 out of 490 months simulated in this period, the flow at the mouth was greater or essentially equivalent under the Action Alternatives as compared to the No Action/No Project Alternative. The difference in flow rate that would be expected to occur at the mouth under the

Action Alternatives indicates that such differences would not be of concern regarding attraction of adults immigrating into the lower American River.

Temperature-Related Impacts to Fall-Run Chinook Salmon/Steelhead Adult Immigration (September Through March)

The long-term average water temperatures modeled for the Action Alternatives would not differ by more than 0.1°F from those under the No Action/No Project Alternative at the mouth and at Freeport on the Sacramento River during all months of the September through March adult immigration period, as shown in Table H-3.5-36. Moreover, under the Action Alternatives, water temperatures at the lower American River mouth would remain essentially equivalent to those under the No Action/No Project Alternative in 468 out of 483 months included in the analysis. Water temperatures at Freeport under the Action Alternatives would remain essentially equivalent to the No Action/No Project Alternative in all of the 483 months included in the analysis.

September through March water temperatures in the lower portion of the lower American River under the Action Alternatives would be almost identical to the No Action/No Project Alternative. Therefore, potential temperature-related impacts to fall-run chinook salmon/steelhead adult immigration would be less than significant.

Flow-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

The long-term average flow below Nimbus Dam under the Action Alternatives would be within 1.5 percent of the flow under the No Action/No Project Alternative during all months of the October through February period, as shown in Table H-3.5-37. In 299 of the 350 months simulated during this period, the flow below Nimbus Dam was either essentially equivalent or greater than the No Action/No Project Alternative. In addition, changes in long-term average flows at Watt Avenue under the Action Alternatives would be within 1.5 percent of the flow under the No Action/No Project Alternative for each month of the October through February period, as shown in Table H-3.5-38.

Figures H-3.5-30 through H-3.5-34 show exceedance curves for the American River release from Nimbus Dam for the October through February period. These curves demonstrate that flows under the Action Alternatives would be similar to those under the No Action/No Project Alternative. Differences in flows in the lower flow ranges are more crucial for salmon survival.

These findings indicate that for flows below 2,000 cfs under the No Action/No Project Alternative, the Action Alternatives could slightly reduce flows below Nimbus Dam and at Watt Avenue in a few years during the October through January period (when the majority of fall-run chinook salmon spawning occurs). Reductions in flows below 2,000 cfs could reduce the amount of available chinook salmon spawning habitat, which could result in increased redd superimposition during years when adult returns are high enough for spawning habitat to be limiting. However, these reductions in flow would not be expected to be of substantial magnitude or occur with enough frequency to have a significant adverse effect on long-term

initial year-class strength of lower American River fall-run chinook salmon, and therefore, represents a less-than-significant impact.

Temperature-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

Under the Action Alternatives, the long-term average water temperatures would be equivalent or lower than those under the No Action/No Project Alternative during October at Watt Avenue, and during the November through February period below Nimbus Dam, as shown in Table H-3.5-39. In fact, in 338 out of the 345 months included in the analysis, the water temperatures at these locations were essentially equivalent to or lower under the Action Alternatives as compared to the No Action/No Project Alternative.

Among individual years, monthly mean water temperature during October at Watt Avenue would increase by more than 0.3°F in five years of the simulation (i.e., five years out of 69) relative to the No Action/No Project Alternative. November water temperatures below Nimbus Dam would increase by more than 0.3°F in only two years of the 69 years modeled. Under the Action Alternatives, there would not be any additional occurrences of October water temperatures at Watt Avenue above 56°F, relative to the No Action/No Project Alternative. Below Nimbus Dam, there would only be one additional occurrence during November in which water temperatures would exceed 56°F, relative to the No Action/No Project Alternative. Water temperatures below Nimbus Dam during December, January and February would be below 56°F in all 69 years modeled.

The long-term average annual early lifestage survival for fall-run chinook salmon in the American River would be 92.8 percent under the No Action/No Project Alternative and 92.9 percent under the Action Alternatives. Table H-3.5-40 shows the annual survival estimates for the 69 years modeled. Substantial increases or decreases in survival would not occur in any individual year of the 69-year simulation.

Based on these modeling results, small temperature changes in the lower American River resulting from the Action Alternatives during the October through February period represent a less-than-significant impact spawning and incubation success of fall-run chinook salmon, relative to the No Action/No Project Alternative.

Flow- and Temperature-Related Impacts to Steelhead Spawning and Incubation (December Through March)

Monthly mean flows below Nimbus Dam and at Watt Avenue under the Action Alternatives would be essentially equivalent to or greater than the No Action/No Project Alternative for 235 out of 280 months included in the analysis. Additionally, monthly mean temperatures below Nimbus Dam would be similar to or less than the No Action/No Project Alternative for 273 of the 276 months included in the analysis. Monthly mean water temperatures at Watt Avenue would be essentially equivalent for 272 of the 276 months included in the analysis. Moreover, under the Action Alternatives, water temperatures below Nimbus Dam would remain below 56°F for all months of the 69 years modeled for the spawning and incubation period for steelhead.

December, January, and February water temperatures at Watt Avenue under the Action Alternatives would be below 56°F in all 69 years modeled. Under the Action Alternatives, there would be one less occurrence in which water temperatures at Watt Avenue would be greater than 56°F, relative to the No Action/No Project Alternative, for all the 69 years modeled. Therefore, flow and temperature-related changes during the steelhead spawning and incubation period represent a less-than-significant impact. For flow data supporting this impact determination, see Table H-3.5-37, H-3.5-38 and Figures H-3.5-32 through H-3.5-39. For the temperature data supporting this impact determination, see Table H-3.5-39.

Flow-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Under the Action Alternatives, the long-term average flow at Watt Avenue would be within one percent of the flow under the No Action/No Project Alternative during the March through June period (Table H-3.5-38). In 231 out of 280 months simulated, the flow would be essentially equivalent or greater under the Action Alternatives relative to the No Action/No Project Alternative. Flow exceedance curves for March through June at Watt Avenue are shown in Figures H-3.5-39 through H-3.5-42. These small differences in flow would not be expected to adversely affect long-term juvenile fall-run chinook salmon or steelhead rearing success and, therefore, represent a less-than-significant impact.

Temperature-Related Impacts to Fall-run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Modeling associated with the Action Alternatives indicates that the long-term average water temperature at Watt Avenue would not change by more than 0.1°F during any month of the March through June period, compared to the No Action/No Project Alternative, as shown in Table H-3.5-41. Data in Appendix I of the Draft EIS/EIR shows that water temperature at Watt Avenue would increase more than 0.3°F in one year of the 69-year simulation during the month of March, in five years during the month of April, in four years during the month of May, and in no years during the month of June relative to the No Action/No Project Alternative. These relatively infrequent increases in water temperature during March, April, and May result in monthly mean water temperatures at or below 65°F for each instance under the Action Alternatives. Moreover, water temperature decreases of more than 0.3°F occur in five years of the 69-year simulation period for the month of June under the Action Alternatives, relative to the No Action/No Project Alternative. Under the Action Alternatives, there would be one less occurrence during June in which water temperatures would be above 56°F, relative to the No Action/No Project Alternative. Therefore, temperature changes associated with the Action Alternatives relative to the No Action/No Project Alternative would represent a less-than-significant impact to fall-run chinook salmon and steelhead juvenile rearing.

Flow-Related Impacts to Fall-run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

As can be concluded from previous discussions of fall-run chinook salmon and steelhead adult immigration, potential changes in flows under the Action Alternatives during February and

March also would not adversely affect juvenile fall-run chinook salmon or steelhead emigration. Hence, this discussion focuses primarily on the April through June period.

Under the Action Alternatives relative to the No Action/No Project Alternative, the simulated long-term average flow at the mouth would decrease slightly, about 0.3 percent, in May and increase slightly in June (Table H-3.5-35). Figures H-3.5-43, H-3.5-44 and H3.5-45 show the difference in flows simulated at the lower flow ranges. In 121 out of the 140 months simulated for May and June, the flow at the mouth of the American River under the Action Alternatives would be greater or essentially equivalent to the No Action/No Project Alternative. Although small flow reductions at the mouth would occur in a few years during the April through June period, the Action Alternatives would not be expected to adversely affect the success of juvenile salmonid emigration, relative to the No Action/No Project Alternative and, therefore, represents a less-than-significant impact.

Temperature-Related Impacts to Fall-run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

The long-term average water temperature at the American River mouth and on the Sacramento River at Freeport during February through June under the Action Alternatives would be within 0.1°F of temperatures under the No Action/No Project Alternative, as shown in Table H-3.5-36. In the 69-year simulation, monthly mean water temperature at the mouth increased more than 0.3°F in one year during March, four years during April, four years during May, and one year during June. With the exception of one instance during April, these relatively infrequent increases in monthly mean water temperature during March, April, and May result in water temperatures at or below 65°F for each instance under the Action Alternatives. Under the Action Alternatives, there would only be one additional occurrence during June in which water temperatures at the lower American River mouth would be above 65°F, relative to the No Action/No Project Alternative. Moreover, water temperature decreases of more than 0.3°F occur in five years of the 69-year simulation period for the month of June under the Action Alternatives, relative to the No Action/No Project Alternative. At Freeport on the Sacramento River, there would be only one individual month when the temperature increased more than 0.3°F in the months of February through June relative to the No Action/No Project Alternative. Under the Action Alternatives, there would not be any additional occurrences during April and June, and one additional occurrence during May in which water temperatures at Freeport would be above 65°F, relative to the No Action/No Project Alternative.

Based on the results discussed above, potential water temperature changes resulting from the Action Alternatives relative to the No Action/No Project Alternative represent a less-than-significant impact to the February through June juvenile salmonid emigration period.

Flow-Related Impacts to Steelhead Rearing (July Through September)

Under the Action Alternatives, the long-term average flow below Nimbus Dam would decrease by less than two percent for any month of the July through September period (Table H-3.5-37) relative to the No Action/No Project Alternative. In 130 out of 210 months simulated, the flow would be essentially the same or greater under the Action Alternatives as compared to the No

Action/No Project Alternative. The difference in flow would be similar at Watt Avenue (Table H-3.5-38).

Figures H-3.5-46 through H-3.5-48 provide flow exceedance curves for American River release from Nimbus Dam during July, August and September. These curves demonstrate that flows would be slightly different under the Action Alternative compared to the No Action/No Project Alternative. The exceedance curves show flows under the Action Alternatives to be both less than and greater than the flows under the No Action/No Project Alternative when flows are 1,500 cfs or less.

Based on these findings, flow changes under the Action Alternatives compared to the No Action/No Project Alternative are not expected to reduce juvenile steelhead rearing habitat. Further, steelhead populations in the lower American River are believed to be limited by instream temperature conditions during the July through September period, as opposed to flows. Therefore, small and infrequent reductions in flow would not be expected to adversely affect long-term rearing success of juvenile steelhead and, therefore, represents a less-than-significant impact.

Temperature-Related Impacts to Steelhead Rearing (July Through September)

The long-term average water temperatures below Nimbus Dam, at Watt Avenue, and at the mouth would be the same during July, August and September under the Action Alternatives and the No Action/No Project Alternative (Tables H-3.5-33, H-3.5-41, and H-3.5–42, respectively). Water temperatures below Nimbus Dam are essentially equivalent to or less under the Action Alternatives as compared to the No Action/No Project Alternative in 190 out of the 207 months simulated in this three-month period.

There is little difference in water temperatures between the Action Alternatives and the No Action/No Project Alternative during the juvenile steelhead over-summering rearing months of July through September (Figures H-3.5-49, H-3.5-50, and H-3.5-51). The Action Alternatives would not result in additional occurrences during August, one additional occurrence during July and two occurrences less during September, in which water temperatures at Watt Avenue would be above 65°F, relative to the No Action/No Project Alternative. Therefore, potential changes in water temperature that may occur under the Action Alternatives represent a less-than-significant impact to juvenile steelhead over-summer rearing.

Impact 3.5-44: Impacts to splittail in the lower American River.

Under the Action Alternatives, the long-term average flow at Watt Avenue during the period February through May would be 0.3 percent to 0.9 percent less than under the No Action/No Project Alternative, as shown in Table H-3.5-38. However, in 237 out of 280 months simulated for this period, flows would be essentially equal to or greater than the No Action/No Project Alternative.

The long-term average usable splittail habitat at Watt Avenue would not change for any month of the February through May period under the Action Alternatives relative to the No Action/No Project Alternative.

The amount of inundated riparian habitat under the Action Alternatives would decrease relative to the No Action/No Project Alternative by more than two percent in six years, two years, three years, and three years during the months of February, March, April, and May, respectively. These potential habitat reductions, however, would be small. For the 14 months out of the 280 months included in the analysis in which usable splittail habitat would be reduced by more than two percent, the absolute reduction in habitat would be 0.1 acre. In addition, flow changes would have little, if any, effect on the availability of in-channel spawning habitat availability, or the amount of potential spawning habitat available from the mouth up to RM 5, the reach of the river influenced by Sacramento River stage. Ultimately, these reductions in flow would not be expected to be of substantial magnitude and/or to occur with enough frequency to have a significant adverse effect on the long-term population trends of lower American River splittail.

During the February through March period of the 69-year simulation, water temperatures at Watt Avenue do not rise above 67°F, the reported preferred range for splittail spawning, as a result of the Action Alternatives. The impacts would be less than significant because no substantial change in the frequency of water temperature exceeding the reported preferred range for splittail spawning would occur. Overall, potential flow and water temperature changes resulting from the Action Alternatives relative to the No Action/No Project Alternative represent a less-than-significant impact to splittail.

Impact 3.5-45: Impacts to American shad in the lower American River.

Table H-3.5-35 shows that the long-term average flow at the American River mouth would be 0.3 percent less in May and 0.1 percent more in June under the Action Alternatives relative to the No Action/No Project Alternative. In addition, further analysis was performed to determine the probability that flows at the mouth in May and June would be greater than 3,000 cfs, the flow level defined by CDFG as that which would be sufficient to maintain the sport fishery for American shad. The simulations showed no difference in the number of years that the flow at the mouth would be greater than 3,000 cfs in May and June.

Flow reductions in May and June under the Action Alternatives could potentially reduce the number of adult shad attracted into the river during a few years relative to the No Action/No Project Alternative. However, American shad spawn opportunistically where suitable conditions are found, so that production of American shad within the Sacramento River system would not be affected. Any flow-related impacts to American shad are considered to be less than significant.

The number of years that monthly mean water temperatures in May and June would be within the reported preferred range for American shad spawning of 60°F to 70°F would remain unchanged below Nimbus Dam, and change by one additional year at the mouth under the Action Alternatives compared to the No Action/No Project Alternative. Because the frequency with which suitable temperatures for American shad spawning would not differ substantially,

temperature-related impacts to American shad also are considered to be less than significant. Overall, the impacts would be less than significant.

Impact 3.5-46: Impacts to striped bass in the lower American River.

Under the Action Alternatives, the number of years that monthly mean flows would be below the 1,500 cfs attraction flow index at the mouth in May and June would remain unchanged, relative to the No Action/No Project Alternative. Because flows at the mouth that are believed to be sufficient to maintain the striped bass fishery would be met or exceeded in most years during both May and June, and because substantial changes in the strength of the striped bass fishery would not be expected to occur in all years when May and/or June monthly mean flows fall below 1,500 cfs, flow-related impacts to the striped bass fishery that could potentially occur under the Action Alternatives compared to the No Action/No Project Alternative would be less than significant.

Monthly mean water temperatures would be within the reported preferred range for striped bass juvenile rearing of 61°F to 73°F two less years in both May and June below Nimbus Dam, and one additional year in May at the mouth under the Action Alternatives relative to the No Action/No Project Alternative over the 69-year period of record. Because the frequency of suitable temperatures for juvenile striped bass rearing in the lower American River would not change significantly, temperature-related impacts to juvenile striped bass rearing also are considered to be less than significant. Overall, potential impacts to striped bass would be less than significant.

Shasta and Trinity Reservoirs Fisheries Impacts

Impact 3.5-47: Impacts to Shasta and Trinity reservoirs' warmwater fisheries.

Hydrologic conditions under the Action Alternative relative to the No Action/No Project Alternative would not result in more than a one-foot decrease in the long-term average end-of-month water surface elevation in Shasta Reservoir during the March through September period, when warmwater fish spawning and initial rearing may be expected. In 435 of the 490 months simulated during this period, the end-of-month elevation of Shasta Reservoir was essentially unchanged or greater than the No Action/No Project Alternative. In 11 percent of the years during this period, the elevation of Shasta Reservoir would be more than one foot lower under the Action Alternatives compared to the No Action/No Project Alternative.

The difference in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Shasta Reservoir under the Action Alternatives as compared to the No Action/No Project Alternative would be negligible, as shown in Table H-3.5-43. In 461 of the 490 months simulated during this period, the amount of littoral habitat would be essentially equivalent to or greater than the No Action/No Project Alternative. The small and infrequent reductions in the availability of littoral habitat would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Shasta Reservoir's warmwater fisheries.

In addition, changes under the Action Alternatives as compared to the No Action/No Project Alternative could alter the rates by which end-of-month water surface elevation in Shasta Reservoir change during each month of the primary warmwater fish-spawning period (March through July). However, Table H-3.5-44 shows that the change in frequency with which potential nest-dewatering events would occur in Shasta Reservoir during the spawning period would be minimal. Because the frequency with which potential nest-dewatering events could occur in Shasta Reservoir under the Action Alternatives relative to the No Action/No Project Alternative would not change substantially during the warmwater fish-spawning period, impacts to warmwater fish-nesting success are considered to be less than significant. Overall, potential impacts to Shasta Reservoir's warmwater fisheries would be less than significant.

Hydrologic conditions under the Action Alternatives as compared to the No Action/No Project Alternative would not result in any change in the long-term average end-of-month water surface elevation in Trinity Reservoir during the March through September period. In 456 of the 490 months simulated during this period, the end-of-month elevation of Trinity Reservoir was essentially equal to or greater than the No Action/No Project Alternative.

Reductions in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Trinity Reservoir under the Action Alternatives as compared to the No Action/No Project Alternative would be negligible, with the greatest reduction being 0.4 percent during the month of July for the March through September period. This would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Trinity Reservoir's warmwater fisheries.

In addition, changes under the Action Alternatives as compared to the No Action/No Project Alternative could alter the rates by which water surface elevation in Trinity Reservoir change during each month of the primary warmwater fish-spawning period (March through July). However, the frequency with which potential nest-dewatering events could occur in Trinity Reservoir would not change under the Action Alternatives relative to the No Action/No Project Alternative, during any given month of the March through July spawning period. Overall, impacts to Trinity Reservoir's warmwater fish populations would be less than significant.

Impact 3.5-48: Impacts to Shasta and Trinity reservoirs' coldwater fisheries.

Hydrologic conditions under the Action Alternatives as compared to the No Action/No Project Alternative would not result in any significant change in long-term average Shasta Reservoir end-of-month storage during any given month of the April through November period (when Shasta Reservoir thermally stratifies), as shown in Table H-3.5-45. In 495 of the 560 months modeled during this period, Shasta Reservoir storage was essentially equivalent to or greater than the No Action/No Project Alternative. Shasta Reservoir storage would be decreased under the Action Alternatives relative to the No Action/No Project Alternative by more than 3 percent in 28 individual months, or about 5 percent of the time. Because changes to Shasta Reservoir storage would not be substantial or frequent and because anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base used by the reservoir's coldwater fish populations, seasonal reductions in storage expected to occur under

the Action Alternatives relative to the No Action/No Project Alternative would have less-than-significant impacts to Shasta Reservoir's coldwater fisheries.

Under the Action Alternatives as compared to the No Action/No Project Alternative, the long-term average end-of-month storage in Trinity Reservoir would be unchanged or decrease by 0.1 percent during the April through November period. In only 43 of the 560 months simulated during this period, would the Trinity storage be reduced by more than one percent when compared to the No Action/No Project Alternative. For any individual month, the greatest reduction in storage for all the months simulated of the April through November period would be 7,000 AF during the month of July. Because changes to Trinity Reservoir storage would not be substantial and anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base utilized by the reservoir's coldwater fish populations, seasonal reductions in storage expected to occur under the Action Alternatives as compared to the No Action/No Project Alternative would have less-than-significant impacts to Trinity Reservoir's coldwater fisheries.

Sacramento River Fisheries Impacts

Impact 3.5-49: Flow-related impacts in the upper Sacramento River.

The long-term average Sacramento River flow released from Keswick Dam under the Action Alternatives would be essentially equivalent to that under the No Action/No Project Alternative during all months of the year, as shown in Table H-3.5-46. In only 37 out of the 840 months simulated, the release at Keswick Dam would decrease by more than one percent compared to the No Action/No Project Alternative.

The minimum flow objective for Keswick Dam releases stipulated in the NMFS Biological Opinion (1993, as revised in 1995) for the protection of winter-run chinook salmon rearing and downstream passage is 3,250 cfs between October 1 and March 31. Modeling output shows that monthly mean flows below Keswick Dam would not be below 3,250 cfs in any month of the October through March period in any of the 70 years modeled under the Action Alternatives or the No Action/No Project Alternative.

These findings indicate that flow changes below Keswick Dam that would occur under the Action Alternatives as compared to the No Action/No Project Alternative would result in a less-than-significant impact to upper Sacramento River fish resources.

Impact 3.5-50: Flow-related impacts in the lower Sacramento River.

The long-term average flows at Freeport under the Action Alternatives would be within 0.3 percent of the long-term average flows under the No Action/No Project Alternative during all individual months of the year, as shown in Table H-3.5-47. In 785 of the 840 months simulated, the flow at Freeport is essentially equivalent to or is greater than the No Action/No Project Alternative. In only four months, or less than 0.5 percent of the time, the flows under the Action Alternatives decreased relative to the No Action/No Project Alternative by more than five percent. Therefore, neither physical habitat availability for fish residing in the lower Sacramento

River nor immigration of adult or emigration of juvenile anadromous fish would be substantially affected by the Action Alternatives relative to the No Action/No Project Alternative. Consequently, flow-related impacts to lower Sacramento River fisheries or migrating anadromous fish that could occur under the Action Alternatives would be considered less than significant. Overall, this constitutes a less-than-significant impact.

Impact 3.5-51: Water temperature-related impacts in the upper Sacramento River.

The Action Alternatives would not result in more than a 0.1ºF change in the long-term average water temperature at Keswick Dam or Bend Bridge for any month of the year relative to the No Action/No Project Alternative. In 805 of the 828 months simulated, the monthly mean water temperature at Keswick Dam would be essentially equivalent to or lower than the No Action/No Project Alternative. Moreover, there would be fewer months when the temperatures exceed 56°F at Keswick Dam or 60°F at Bend Bridge relative to the No Action/No Project Alternative, as shown in Table H-3.5-48. Therefore, the Action Alternatives compared to the No Action/No Project Alternative would not result in significant additional exceedances of the temperature criteria identified in the NMFS Biological Opinion for Winter-run Chinook Salmon. In addition, there would not be any substantial decreases in annual early lifestage survival of fall-run, late fall-run, winter-run, or spring-run chinook salmon in any individual year relative to the No Action/No Project Alternative (Table H-3.5-40). Based on these findings, temperature-related impacts to upper Sacramento River fisheries would be less than significant.

Impact 3.5-52: Water temperature-related impacts in the lower Sacramento River.

The long-term average water temperature at Freeport in the lower Sacramento River would not change more than 0.1°F under the Action Alternatives compared to the No Action/No Project Alternative during any month of the year, as shown in Table H-3.5-49. The number of years that temperatures at this location would exceed 56°F, 60°F, and 70°F would be only slightly greater (i.e., one more occurrence for the 56ºF index, two more occurrences for the 60ºF index, and one more occurrence for the 70ºF index) than the No Action/No Project Alternative during the period of March through November, as shown in Table H-3.5-50. Monthly mean water temperatures at Freeport would be essentially equivalent to the No Action/No Project Alternative for 825 months of the 828 months included in the analysis. Overall, potential impacts to fish species within the lower Sacramento River would be considered less than significant.

Impact 3.5-53: Impacts to Delta fish populations.

Reductions in the long-term average Delta outflow of up to 0.3 percent for any given month would occur under the Action Alternatives relative to the No Action/No Project Alternative, as shown in Table H-3.5-51. Delta outflow during the period of February through June is believed to be of greatest concern for potential effects to spawning and rearing habitat and downstream transport flows for delta smelt, longfin smelt, splittail, striped bass, salmonids, and other aquatic species in the Delta. In 40 of the 840 months simulated, Delta outflow was reduced by more than one percent relative to the No Action/No Project Alternative. There were only eight months out of the 840 months included in the analysis, or less than one percent of the time, when the

Delta outflow would decrease by more than three percent under the Action Alternatives relative to the No Action/No Project Alternative.

Under the Action Alternatives, there would not be an upstream shift the long-term average position of X2 relative to the long-term average position under the No Action/No Project Alternative for 11 months of the year. The remaining month (November) would only experience a 0.1 km upstream shift in the long-term average position of X2. Furthermore, during the February through June period considered important for providing appropriate spawning and rearing conditions and downstream transport flows for various fish species, the maximum upstream shift in the position of X2 in any individual month of the 70-year period of record would be 1.1 km during the month of May.

The model simulations conducted for the Action Alternatives included conformance with export requirements set forth in the SWRCB Interim Water Quality Control Plan. Also, the Delta export-to-inflow ratios under the Action Alternatives relative to the No Action/No Project Alternative would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Overall, impacts to Delta fish populations would be less than significant.

Impact 3.5-54: Impacts to Oroville Reservoir or Feather River fish populations.

The Action Alternatives would not result in substantial changes in storage, elevation, or temperature at Oroville Reservoir, or in flow or water temperature in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered less than significant impacts upon fish resources.

Cumulative Impacts

Upper American River Fisheries Impacts

Impact 3.5-55: Flow-related impacts to fish resources of the North and Middle Forks of the American River upstream of the project site.

Table H-3.5-52 presents simulated average long-term monthly mean flows in the American River upstream of the project site under existing and cumulative conditions. Cumulative conditions would exhibit lower monthly mean flows above the project site during the six months of highest diversion (i.e., April to September). Percentage decrease in these months would range from 0.2 percent in April to 3.7 percent in August. During the other months, flows would increase by up to 2.8 percent.

Figures H-3.5-52 to H-3.5-54 show exceedance curves for flows upstream of the project site. October through March flows would be essentially equivalent under the existing and cumulative conditions. In April and May, the cumulative condition would result in small reduction in flows, when flows would be within the 3,500 to 4,500 cfs range, and an increase in flows when flows would be above 1,000 cfs. June exceedance curves are nearly identical except for a slight decrease in flows, when flows under the existing condition would be within the 2,000 to 3,000 cfs range, and a slight increase in flows when flows under the existing condition would be lower

than 500 cfs. The July exceedance curves show that there would be essentially no change when flows under the existing condition would be greater than 1,100 cfs, a slight decrease when flows under the existing condition would be between 400 and 1,100 cfs, and a slight increase in flows, when flows under the existing condition would be below 400 cfs. The cumulative condition would result in lower flows in August, when flows would be above 400 cfs under the existing condition, but result in higher flows when flows under the existing condition would be at levels below 400 cfs. Because small changes in monthly mean flows would occur, and the majority of trout that occur in the North Fork American River below the confluence with the Middle Fork American River are believed to be transitory, potential fisheries-related impacts associated with the cumulative condition would be less than significant, relative to the existing condition.

Impact 3.5-56: Water temperature-related impacts to fish resources of the North and Middle Forks of the American River upstream of the project site.

Under the cumulative condition, small changes in flow would not be expected to result in measurable increases in water temperature upstream of the project site. Therefore, potential water temperature changes associated with the cumulative condition under both low- and high-flow conditions would represent a less-than-significant impact to fishery resources upstream of the project site.

Impact 3.5-57: Flow-related impacts to fish resources of the North Fork American River downstream of the project site.

Table H-3.5-53 presents simulated average long-term monthly mean flows in the upper American River downstream of the project site under both the existing and the cumulative conditions. The cumulative condition would exhibit slightly lower monthly mean flows in all but two months of the year, with decreases ranging from less than one percent in the high-flow winter months to 10.2 percent in August. Differences in average long-term monthly mean flows in the high-flow period (December to June) would range from an increase of 0.1 percent to a decrease of 6.2 percent. The low-flow months (July to November) changes would range from an increase of 0.6 percent in the fall to a decrease of 10.2 percent in the peak diversion period.

Figures H-3.5-55 through H-3.5-57 show exceedance curves for upper American River flows below the project site. Flows in the October through March period would be essentially equivalent under the existing and the cumulative conditions. In April, the cumulative condition would result in small reductions in flows, when flows are within the 2,000 to 4,500 cfs range under the existing condition. Because of the higher diversion rates in the summer months, the exceedance curves representing the existing and cumulative conditions start separating in May and display a larger difference in July, August and September.

Because the Proposed Project would result in small changes in monthly mean flows; project operations would provide higher flows under low-flow conditions; and because restoration of the previously dewatered channel would increase fish habitat availability for about three-quarters of a mile at the project site, potential changes associated with the cumulative condition would represent a less-than-significant impact, and probably result in a net beneficial impact to upper American River fish resources at the project area. Although the Upstream Diversion Alternative

would not include restoration of the previously dewatered channel, given the relatively unsuitable habitat conditions downstream of the project site, much of which consists of the bypass tunnel itself, reductions in flow would represent a less-than-significant impact.

Impact 3.5-58: Water temperature-related impacts to fish resources of the North Fork American River downstream of the project site.

Under the cumulative condition, the small changes in flow would not be expected to result in substantial increases in water temperature when compared to the existing condition. In addition, project operations would provide higher flows than the existing condition under low-flow situations. Therefore, water temperature changes associated with the cumulative condition represent a less-than-significant impact to fish resources of the North Fork American River downstream of the project site.

Folsom Reservoir Fisheries Impacts

Impact 3.5-59: Impacts to Folsom Reservoir warmwater fisheries.

Hydrologic conditions under the cumulative condition as compared to the existing condition would result in reduced long-term average end-of-month water surface elevation in Folsom Reservoir during the months of the March through September period (when warmwater fish spawning and initial rearing occurs) (Table H-3.5-54). The largest decrease in water surface elevation during the March through September season would be 8 feet for any individual year for the 70-year period included in the analysis.

As shown in Table H-3.5-55, the difference in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Folsom Reservoir for any month during the March through September period attributable to the cumulative condition is estimated to range from five to 31 percent. These reductions in the availability of littoral habitat could result in increased predation on young-of-the-year warmwater fisheries, thereby reducing long-term initial year-class strength of the warmwater fish populations. Unless willows and other near-shore vegetation become established at lower reservoir elevations in the future in response to seasonal reductions in water levels, long-term year class production of warmwater fisheries could be reduced. Consequently, seasonal reductions in littoral habitat availability may represent a potentially significant impact to Folsom Reservoir's warmwater fisheries.

Modeling results, shown in Table H-3.5-56, indicate that the largest increase in the frequency with which potential nest-dewatering events could occur in Folsom Reservoir under the cumulative condition, compared to the existing condition, would occur during June, from 17 out of 70 years to 27 out of 70 years. Because the frequency with which potential nest-dewatering events could occur in Folsom Reservoir under the cumulative condition would change during the March through July warmwater fish-spawning period, impacts to warmwater fish nesting success may be significant. Overall, water surface elevation changes associated with the cumulative condition, relative to the existing condition, represent a potentially significant impact to the warmwater fisheries of Folsom Reservoir.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that the cumulative condition (future with the project), as compared to the future with the seasonal pumps at existing diversion level (i.e., 8,500 AF) (future base) condition, would result in almost no difference in the long-term average end-of-month water surface elevation in Folsom Reservoir during the March through September period. As shown in Table H-3.5-57, the average long-term water surface elevation is essentially equivalent in March, April, May, August and September, with only about a one-foot difference in June and July. The largest decrease in water surface elevation for any individual month (out of 490 months included in the analysis) during the March through September period would be 8 feet during the month of September.

Under the cumulative condition relative to the future base condition, seasonal reductions in littoral habitat availability would be expected to be small and infrequent and, therefore, not of sufficient magnitude to substantially reduce long-term, average initial year-class strength of the warmwater fish populations. For any individual year (out of the 70-year period included in the analysis), the difference in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Folsom Reservoir during the March through September period attributable to the cumulative condition relative to the future base condition is estimated to be 4.4 percent or less (Table H-3.5-58).

In addition, the frequency with which potential nest-dewatering events could occur in Folsom Reservoir under the cumulative condition, relative to the future base condition, would not change significantly during the March through July warmwater fish-spawning period. For example, modeling results (Table H-3.5-59) indicate an equal number of occurrences for the month of July relative to the future base condition. Based on these and the above-discussed results, the implementation of the year-round pump station project would not significantly contribute to potentially significant cumulative impacts to Folsom Reservoir warmwater fisheries.

Impact 3.5-60: Impacts to Folsom Reservoir's coldwater fisheries.

The cumulative condition would result in slightly different Folsom Reservoir end-of-month storage during many years of the simulation. Table H-3.5-60 shows the difference in long-term average storage in Folsom Reservoir between the existing condition and the cumulative condition. For all months of the year, the largest decrease in long-term average end-of-month storage would be 60,000 AF (or approximately 11 percent) during the month of September. These relatively small anticipated reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish. Therefore, relatively small storage reductions associated with the cumulative condition represent a less-than-significant impact to coldwater fish resources of Folsom Reservoir.

Impact 3.5-61: Impacts to Nimbus Fish Hatchery.

Operations of Folsom Dam and Reservoir under the cumulative condition would have very little effect on temperatures of water entering Nimbus Fish Hatchery from Lake Natoma during the May through September period, relative to the existing condition. Table H-3.5-61 shows that under the cumulative condition, the long-term average temperature of water released from Nimbus Dam would not increase by more than 0.3°F, relative to the existing condition, during any month of the year. Table H-3.5-62 also shows small differences in the frequency with which temperatures exceed index temperatures of 60°F, 65°F and 68°F. These small and infrequent differences in temperature which could occur during the May through September period (when hatchery temperatures reach annual highs) would have little, if any, effect on hatchery operations and resultant fish production. Therefore, changes in the cumulative condition would represent a less-than-significant impact to Nimbus Hatchery operations and resultant fish production.

Lower American River Fisheries Impacts

Flow- and temperature-related impacts are discussed separately below by species and lifestage. Organizationally, flow- and temperature-related impacts to fall-run chinook salmon and steelhead are discussed together, followed by impact discussions for splittail, American shad, and striped bass.

Impact 3.5-62: Impacts to fall-run chinook salmon in the lower American River.

The cumulative condition would result in periods of reduced flows in the lower American River during the October through December fall-run chinook spawning period, relative to the existing condition. Further flow reductions occurring at already low-flow levels could result in increased redd superimposition and eventual lower-year-class strength. Flow reductions also would occur for the driest 20 percent of the years during May. These flow reductions may adversely affect long-term juvenile fall-run chinook salmon rearing habitat availability. In addition, water temperature increases would occur during March through June, potentially representing a significant impact to juvenile fall-run chinook salmon rearing. Consequently, the overall effect of the cumulative condition relative to the existing condition is considered to represent a potentially significant impact to fall-run chinook salmon in the lower American River.

Impact 3.5-63: Impacts to steelhead in the lower American River.

The cumulative condition would result in periods of reduced flows in the lower American River during the March through June juvenile steelhead rearing period, relative to the existing condition. Further flow reductions during July through September may adversely affect long-term summer rearing success of juvenile steelhead. In addition, temperature increases potentially represent a significant impact to juvenile steelhead rearing. Consequently, the overall effect of the cumulative condition relative to the existing condition represents a potentially significant impact to steelhead in the lower American River.

Flow-Related Impacts to Fall-Run/Steelhead Adult Immigration (September Through March).

Under the cumulative condition, reduction in the 70-year average proportion of Sacramento River flow immediately downstream of the mouth that would be composed of American River water during the September through March period (the combined primary period of upstream adult immigration for chinook salmon and steelhead) would range from about one percent (January) to less than 14 percent (September). Hence, although monthly mean lower American River flows at the mouth under the cumulative condition would decrease during each month of this period, relative to the existing condition, these reductions would not be expected to adversely affect immigrating adult fall-run chinook salmon or steelhead.

Temperature-Related Impacts to Fall-Run/Steelhead Adult Immigration (September Through March)

The long-term average water temperatures modeled for the cumulative condition would not increase by more than 0.2°F, relative to the existing condition, at the mouth or at Freeport on the Sacramento River, during all months of the September through March adult immigration period (as shown in Table H-3.5-63).

The largest long-term average water temperature increase under the cumulative condition for the September through March period is 0.2°F for the month of October. Moreover, under the cumulative condition, water temperatures at the lower American River mouth would remain essentially equivalent to those under existing conditions in 427 out of the 483 months included in the analysis. Water temperatures at Freeport under the cumulative condition would remain essentially equivalent to those under the existing condition in 444 months out of the 483 months included in the analysis. Therefore, September through March water temperatures in the lower portion of the lower American River would not be expected to adversely affect fall-run chinook salmon and steelhead adult immigration. Overall, changes in flow and temperature in the lower American River associated with the cumulative condition relative to the existing condition represent a less-than-significant impact to adult salmonid immigration in the lower American River.

Flow-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

The long-term average flow below Nimbus Dam under the cumulative condition would be up to 13.6 percent (October) less than the flow under the existing condition during all months of the October through February fall-run chinook salmon spawning and incubation period, as shown in Table H-3.5-64. Similarly, changes in long-term average flows at Watt Avenue would be up to 14.3 percent less (i.e., October) during the October through February period, as shown in Table H-3.5-65.

Figures H-3.5-58 through H-3.5-62 show exceedance curves for the American River release from Nimbus Dam for the October through February period. These curves demonstrate that flows under the cumulative condition would be significantly different than those under the existing condition. Differences in flows in the lower flow ranges would be of particular concern. In

October, November and December, when the existing condition flow would be 2,500 cfs or less, the cumulative condition would result in flow reductions of up to 750 cfs nearly 50 percent of the time. Effects on flow in January and February would be small.

These reductions in flows would reduce the amount of available chinook salmon spawning habitat, which could result in increased redd superimposition during years when adult returns are high enough for spawning habitat to be limiting. These reductions in flow are of sufficient magnitude and occur with enough frequency to have a significant adverse effect on long-term initial year-class strength of lower American River fall-run chinook salmon, resulting in a significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

As shown in Table H-3.5-66, the long-term average flow below Nimbus Dam under the cumulative condition (with the project) would be within two percent of the flow under the future base condition (future with the project at existing diversion of 8,500 AF) during all months of the October through February period. In addition, as presented in Table H-3.5-67, changes in long-term average flows at Watt Avenue under the cumulative condition also would be within two percent for each month in the October through February period. The incremental contribution analysis indicates that monthly mean flows would be essentially equivalent or higher at both below Nimbus Dam and at Watt Avenue in 296 of the 350 months simulated.

Figures H-3.5-63 through H-3.5-67 show exceedance curves for the American River release from Nimbus Dam for the months of October through February. These figures demonstrate that although similar most of the time, flows under the cumulative condition would be, at times, lower than the flows associated with the future base condition, particularly when flows are 2,000 cfs or less. Anticipated decreases in flow when the future base flow would be at or below 2,000 cfs are of particular importance to salmon survival. During October and November, there would be seven years in which flows below Nimbus Dam under the cumulative condition would be lower than the corresponding flow under the future base conditions by more than 10 percent. During December, there would be five years in which flows below Nimbus Dam under the cumulative condition would be lower than the corresponding flow under the future base conditions by more than 10 percent. In January and February, decreases in flow of 10 percent or more when the flows would be at or below 2,000 cfs would occur in three and one year, respectively.

If a particular storage level is not met, the PROSIM model, by virtue of its mechanistic logic, has only one option available, which is to reduce fishery management flow releases. In other words, a fixed 250 cfs step difference change in magnitude is automatically calculated in the model regardless of the difference in storage. The result of this fixed step change is that a small reduction in simulated storage during the fall-run chinook salmon spawning period creates a condition that will result in increased storage at the end of the fall-run chinook salmon spawning period, under the cumulative condition. Therefore, the model does not have a choice to calculate a proportional change in the release consistent with the change in storage. However, by contrast to the model, in real-time operations, the operator has the ability to determine the actual flow management objective based on the end-of-September Folsom Reservoir storage, and the risk to

storage associated with the determined fishery management objectives. In the eight years with modeled flows shown as reduced by 250 cfs during the months of October and November, the 250 cfs flow change equates to a flow management risk of approximately a few days to just over a month. During one year (i.e., 1969), there appears to be a 20,000 AF difference in storage at the beginning of the year which would equate over a month long of more than a 250 cfs difference. Nonetheless, because examination of the modeling data indicate that for seven of the eight years, the simulated reduction in flows are a result of a modeling anomaly related to step-functions and to decision logic of PROSIM's response to fishery management flow objectives (which are triggered by Folsom Reservoir storage, and not implementation of the Action Alternatives), the incremental contribution associated with the Action Alternatives to flow-related potentially significant cumulative impacts to fall-run chinook salmon spawning and incubation would not be significant. Therefore, flow reductions associated with the year-round pump station would not occur with sufficient magnitude or frequency to significantly adversely affect fall-run chinook salmon spawning and incubation, and therefore represent a less-than-significant contribution to the cumulative condition.

Temperature-Related Impacts to Fall-Run Chinook Salmon Spawning and Incubation (October Through February)

Under the cumulative condition, the long-term average water temperature would be 0.2°F greater than the existing condition during October at Watt Avenue. Long-term average water temperatures below Nimbus Dam under the cumulative condition would result in decreases of up to 0.4°F relative to the existing condition for the October through February period (Table H-3.5-68).

October monthly mean water temperatures at Watt Avenue would increase by more than 0.3°F under the cumulative condition relative to the existing condition in 23 of the 69 years simulated. Conversely, monthly mean water temperatures, under the cumulative condition relative to the existing condition, would decrease by more than 0.3°F in 17 of the 69 years simulated. November monthly mean water temperatures below Nimbus Dam would increase by more than 0.3°F in only two years of the 69 years modeled. In fact, the mean temperature for the 69-year period of record during the month of November would decrease by 0.3°F under the cumulative condition relative to the existing condition. Under the cumulative condition, there would not be any additional occurrences of October water temperatures at Watt Avenue above 56°F, relative to the existing condition. Below Nimbus Dam, there would be three occurrences less during November in which water temperatures under the cumulative condition would exceed 56°F, relative to the existing condition. December, January and February monthly mean water temperatures below Nimbus Dam would be below 56°F in all 69 years modeled.

The long-term average annual early lifestage survival for fall-run chinook salmon in the American River would be 84.9 percent under the existing condition and 85.3 percent under the cumulative condition, as shown in Table H-3.5-69. Substantial increases or decreases in survival would not occur in any individual year of the 69-year simulation.

Based on these modeling results, small temperature changes in the lower American River resulting from the cumulative condition during the October through February period represents a less-than-significant impact to spawning and incubation success of fall-run chinook salmon.

Flow- and Temperature-Related Impacts to Steelhead Spawning and Incubation (December Through March)

The largest percent decrease in long-term average flows would be 8.5 percent at Watt Avenue during the month of December, for the December through March steelhead spawning and incubation period. However, the resultant long-term December average flow remains relatively high (i.e., 3,300 cfs). The only long-term average water temperature increase for the December through March period would be 0.1°F for the month of March below Nimbus Dam, although the resultant temperature (i.e., 50.7°F) would still be well below the identified index of 56°F. Moreover, under the cumulative condition, water temperatures below Nimbus Dam would remain below 56°F for all months of the 69 years modeled for the spawning and incubation period for steelhead. December, January and February water temperatures at Watt Avenue under the cumulative condition would be below 56°F in all 69 years modeled. Under the cumulative condition, there would not be any additional occurrences in which water temperatures at Watt Avenue would be greater than 56°F, relative to the existing condition, for all the 69 years modeled. Therefore, flow- or temperature-related impacts to steelhead spawning or incubation would not be expected to result from the cumulative condition. For flow data supporting this impact determination, see Table H-3.5-64 and H-3.5-65 and Figures H-3.5-60, H-3.5-61, H-3.5-62, H-3.5-68 through H-3.5-72. For the temperature data supporting this impact determination, see Tables H-3.5-76 and H-3.5-80.

Flow-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Relatively small differences in flow would occur between the cumulative condition and the existing condition during the March through June juvenile fall-run chinook salmon and steelhead rearing period. Under the cumulative condition, the largest reduction in the long-term average flow at Watt Avenue would occur during May (i.e., 6.3 percent) for any given month of the March through June period (Table H-3.5-65). However, most reductions in flow during the month of May occurred during the driest 20 percent of the years, when flows are already at relatively low levels (i.e., less than 2,000 cfs). These differences in flow may adversely affect long-term juvenile fall-run chinook salmon or steelhead rearing habitat availability, and therefore represent a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that under the cumulative condition, the long-term average flow at Watt Avenue would be within two percent of the flow under the future base condition during the March through June period (Table H-3.5-67). Monthly mean flows would be essentially equivalent for 262 months of the 276 months included in the analysis.

Figures H-3.5-73 through H-3.5-76 show the exceedance curves for the lower American River flow at Watt Avenue for the months of March through June. For flows below 2,000 cfs during May, the cumulative condition would result in slight decreases compared to the future base condition. In April (Figure H-3.5-74), the cumulative condition provided an increase in flow when flows ranging between 1,500 cfs and 2,000 cfs, and for flows between 400 cfs and 800 cfs. However, slight flow decreases occur when flows range from 800 to 1,500 cfs. The long-term average flows during May would decrease by less than 1.5 percent under the cumulative condition relative to the future base condition. For the relatively small reductions in flow that do occur during May, most occurred at relatively high (greater than 2,000 cfs) flow levels. These small differences in flow would not be expected to adversely affect long-term juvenile fall-run chinook salmon or steelhead rearing success. Therefore, implementation of the year-round pump station would not significantly contribute to future potentially significant cumulative flow-related impacts to fall-run chinook salmon and steelhead juvenile rearing.

Temperature-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Rearing (March Through June)

Under the cumulative condition, there would be two more occurrences during April, and the same number of occurrences during March, June and July, in which water temperatures at Watt Avenue would be above 65°F, relative to the existing condition. Under the cumulative condition, long-term average water temperature at Watt Avenue would not change by more than 0.3°F during any month of the March through June period, compared to the existing condition, as shown in Table H-3.5-70. Temperature data at Watt Avenue shows a water temperature increase greater than 0.3°F occurring in seven years during the month of March, in nine years during the month of April, in 19 years during the month of May and in 18 years during the month of June. However, temperature decreases greater than 0.3°F occur in five years during the month of March, nine years during the month of April, three years during the month of May, and in 10 years during the month of June. The largest temperature increase associated with the cumulative condition, relative to the existing condition, would be expected to occur during the month of May. Although the long-term average temperature during May increased by only 0.3°F, the cumulative condition would increase the frequency and magnitude of relatively warm temperatures (i.e., greater than or equal to 65°F). Therefore, these increases in water temperatures may represent a potentially significant impact to fall-run chinook salmon and steelhead juvenile rearing.

Action Alternatives' Incremental Contribution to the Cumulative Condition

Under the cumulative condition, the long-term average water temperature at Watt Avenue would not change by more than an estimated 0.1°F during any month of the March through June period, compared to the future base condition (Table H-3.5-71). Data in Appendix I of the Draft EIS/EIR shows that the water temperature at Watt Avenue under the cumulative condition would remain below 65°F in all years during March and April, relative to the existing condition. Monthly mean water temperatures are expected to exceed 65°F approximately 10 percent of the time during May and approximately 30 percent of the time during June under both the future base and the cumulative condition. Further, examination of the exceedance graphs for water

temperatures during May and June comparing the future base and the cumulative condition indicates no substantial differences in water temperatures between the two conditions.

Therefore, implementation of the year-round pump station project would not significantly contribute to potentially significant cumulative temperature-related impacts to fall-run chinook salmon and steelhead juvenile rearing.

Flow-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

As can be concluded from previous discussions, potential changes in flows under the cumulative condition during February and March would not adversely affect juvenile fall-run chinook salmon or steelhead emigration. Hence, this discussion focuses primarily on the April through June period.

Under the cumulative condition, the simulated long-term average flow at the mouth of the lower American River would decrease about two percent in April, seven percent in May, and 3.4 percent in June (Table H-3.5-72). Figures H-3.5-77, H-3.5-78, and H-3.5-79 show the difference in flows simulated under the cumulative condition at the lower flow ranges. Flows at the confluence would frequently be reduced during all months with substantial reductions at the lower flow ranges occurring during May. However, flows under the cumulative condition would not be reduced to levels that could physically block emigration from the river. Although flow reductions at the mouth would occur in a few years during the April through June period and particularly during May, resultant flows represent a less-than-significant impact to juvenile salmonid emigration.

Temperature-Related Impacts to Fall-Run Chinook Salmon and Steelhead Juvenile Emigration (February Through June)

Examination of the exceedance curves indicates that water temperatures at the mouth of the lower American River and at Freeport under the cumulative condition would remain at or below 65°F during all years of the 69-year period of record during the months of February, March and April. Under the cumulative condition, there would not be any additional occurrences during May and June of water temperatures at the mouth of the lower American River exceeding 65°F, relative to the existing condition. At the mouth of the lower American River, water temperatures under the cumulative condition relative to the existing condition would be warmer during May but cooler 10 percent of the time during June. Under the cumulative condition, there only would be two additional occurrences during May, and the same number of occurrences during June, in which water temperatures at Freeport would exceed 65°F, relative to the existing condition. At Freeport, water temperatures are essentially equivalent during May and June for the cumulative and existing conditions. Overall, this would represent a less-than-significant impact to fall-run chinook salmon and steelhead juvenile emigration.

Flow-Related Impacts to Steelhead Rearing (July Through September)

Under the cumulative condition, the long-term average flow below Nimbus Dam would decrease, compared to the existing condition, by about seven percent in July, 10 percent in August and 15 percent in September (Table H-3.5-64). The long-term average flow at Watt Avenue would decrease compared to the existing condition by 7.9 percent in July, 10.9 percent in August, and 16.4 percent in September (Table H-3.5-65).

Figures H-3.5-80 through H-3.5-82 provide flow exceedance curves for American River flows at Watt Avenue during July, August and September. These curves demonstrate that flow reductions at Watt Avenue under the cumulative condition relative to the existing condition would occur about 70 percent of the time during July, about 85 percent of the time during August, and about 90 percent of the time during September. Furthermore, relatively large reductions in flow (i.e., 500 cfs) would occur when flows are already at low levels (i.e., 1,500 cfs or less).

Flow reductions under the cumulative condition may reduce juvenile steelhead summer rearing habitat. Nonetheless, reductions in flow associated with the cumulative condition may adversely affect long-term rearing success of juvenile steelhead, and therefore represent a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that, under the cumulative condition, the long-term average flow on the American River below Nimbus Dam would decrease by approximately two percent during July, 1.5 percent during August, and one percent during September (Table H-3.5-66). Long-term average flows at Watt Avenue would exhibit similar decreases to those below Nimbus Dam (Table H-3.5-67).

Figures H-3.5-83 through H-3.5-85 present the comparison of flow exceedance curves for the cumulative and future base condition flows at Watt Avenue during July, August, and September. Although small reductions in flows potentially would occur during July, these reductions would not be expected to be of such magnitude to adversely affect long-term summer rearing success of juvenile steelhead. Flows under the cumulative and future base condition are essentially equivalent during August and September.

Based on these findings, flow reductions under the cumulative condition, relative to the future base condition, would not be expected to significantly reduce juvenile steelhead rearing habitat. The potential small and infrequent reductions in flow would not be expected to adversely affect long-term rearing success of juvenile steelhead. Therefore, the implementation of the year-round pump would not significantly contribute to future potentially significant cumulative flow-related impacts to steelhead rearing.

Temperature-Related Impacts to Steelhead Rearing (July Through September)

Temperature modeling indicates that the long-term average water temperature at Watt Avenue would increase slightly each month during July, August and September under the cumulative condition, relative to the existing condition (Tables H-3.5-68). The cumulative condition would result in no additional occurrences during July, one less occurrence during August, and two less occurrences during September, in which water temperatures at Watt Avenue would be above 65°F, relative to the existing condition.

Figures H-3.5-86, H-3.5-87, and H-3.5-88 present the exceedance curves for water temperature at Watt Avenue under the existing condition and the cumulative condition during the months of July, August, and September, respectively. During July and August, water temperatures under the cumulative condition are higher than those under the existing condition when temperatures would already be relatively warm (i.e., 68°F). In fact, water temperatures could increase by as much as 3.0°F when temperatures under the existing condition are at 70°F or more. During September, water temperatures at Watt Avenue under the cumulative condition are generally equal to or lower than those under the existing condition. However, water temperature increases that would be expected to occur during July and August represent a potentially significant cumulative impact to juvenile steelhead summer rearing.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The long-term average monthly mean water temperatures at Watt Avenue under the cumulative condition would be essentially equivalent to those under the future base condition during July, August and September (Tables H-3.5-73).

Figures H-3.5-89, H-3.5-90, and H.3-5-91 show water temperature exceedance curves at Watt Avenue during July, August and September under the cumulative condition and future base condition. As shown, water temperatures are essentially identical for both conditions. Small and infrequent differences in water temperatures at Watt Avenue occurred between both conditions. The cumulative condition would result in only one additional occurrence in July, no additional occurrences in August and one less occurrence in September of water temperatures at Watt Avenue exceeding 65° F, relative to the future base condition. Therefore, implementation of a year-round pump station project would not significantly contribute to future potentially significant cumulative temperature-related impacts to steelhead rearing.

Impact 3.5-64: Impacts to splittail in the lower American River.

Under the cumulative condition, the long-term average flow at Watt Avenue during the period February through May would be 1.6 percent to 6.3 percent less than under the existing condition, as shown in Table H-3.5-65.

Using flows at Watt Avenue, the acreage of usable riparian vegetation inundated between RM 8 and RM 9 was calculated and employed as an index of the relative amount of inundated riparian vegetation that would occur in the lower portion of the river for a given flow rate. The amount of long-term riparian habitat inundated in this portion of the river under the cumulative condition

would remain unchanged in 70 years (100 percent of the time) during February, 66 years (94 percent of the time) during March, 59 years (84 percent of the time) during April, and 51 years (73 percent of the time) during May. Therefore, habitat reductions may be expected to occur during most months of this period. In many years, riparian vegetation would not be inundated under either the cumulative or the existing condition.

The amount of riparian habitat between RM 8 and RM 9 under the cumulative relative to the existing condition would be reduced for each month of the February through May splittail spawning period, particularly during April (i.e., 11.1 percent) and May (i.e., 8.3 percent). Under the cumulative condition, reductions in inundated riparian habitat would occur virtually every month during the February through May period, during those years when habitat would be inundated under the existing condition. Relatively little splittail habitat is available under either the cumulative or existing condition. Given the uncertainty as to the magnitude and extent of splittail spawning habitat in the lower American River, and the actual amount of potential spawning habitat at specific flow rates throughout the river, the effects of flow reductions from the February through May period also are uncertain and, therefore, represent a potentially significant impact.

During the February through May period, water temperatures at Watt Avenue would increase above 68°F (the reported preferred range for splittail spawning) under the cumulative condition relative to the existing condition in only three years of the 69-year period of record (i.e., during the month of May). During February, March and April, water temperatures would not increase above 68°F under the cumulative condition for any year of the 69-year period of record. Therefore, significant temperature-related impacts would not be expected to occur to splittail under the cumulative condition.

Action Alternatives' Incremental Contribution to the Cumulative Condition

Under the cumulative condition, relative to the future base condition, average long-term usable inundated riparian habitat would not change for any month of the February through May splittail spawning period. Although small and infrequent decreases in the amount of usable inundated riparian habitat associated with the cumulative condition relative to the future base condition occur during this period, these differences would not be of sufficient magnitude or occur with enough frequency to represent a significant contribution to the identified potentially significant cumulative impact.

Impact 3.5-65: Impacts to American shad in the lower American River.

The average flow at the American River mouth under the cumulative condition relative to the existing condition would be seven and 3.4 percent less in May and June, respectively (Table H-3.5-72). In addition to this analysis, further analysis was performed to determine the probability that lower American River flows at the mouth in May and June would be greater than 3,000 cfs. The simulations showed there would be one less year under the cumulative condition relative to the existing condition when the flow at the mouth would be greater than 3,000 cfs in both May and June. In addition, American shad spawn opportunistically where suitable conditions are found. Therefore, production of American shad within the Sacramento River

system would not be affected. Potential flow-related impacts to American shad are considered to be less than significant.

Under cumulative conditions, monthly mean water temperatures in May and June below Nimbus Dam and at the mouth would be within the reported preferred range for American shad spawning of 60°F to 70°F one less year for both months, relative to the existing condition. Because the frequency with which suitable temperatures for American shad spawning would not differ substantially, temperature-related impacts to American shad also would be considered to be less than significant. Overall, potential impacts to American shad under the cumulative condition would be less than significant.

Impact 3.5-66: Impacts to striped bass in the lower American River.

Differences in lower American River flows that could be expected to occur during May and June under the cumulative condition have been discussed previously under impact discussions for fall-run chinook salmon and steelhead. In addition, further analysis was performed to determine the probability that lower American River flows at the mouth would be below 1,500 cfs. Under the cumulative condition, monthly mean flows at the mouth of the lower American River would be below the 1,500 cfs attraction flow index during one additional year (one percent more often) for the May through June period, relative to the existing condition. Because flows at the mouth that are believed to be sufficient to maintain the striped bass fishery would be met or exceeded in most years during both May and June, and because substantial changes in the strength of the striped bass fishery would not be expected to occur when May and/or June monthly mean flows fall below 1,500 cfs, flow-related impacts to the striped bass fishery that could potentially occur under the cumulative condition would be less than significant.

Monthly mean water temperatures below Nimbus Dam would be within the reported preferred range for striped bass juvenile rearing of 61°F to 73°F by only one less year in May, but one additional year in June. At the mouth, the number of years within this preferred range would increase by two years in May and remain unchanged in June. Because the frequency of suitable temperatures for juvenile striped bass rearing in the lower American River would remain essentially unchanged, temperature-related impacts to juvenile striped bass rearing also are considered to be less than significant. Overall, potential impacts to striped bass would be less than significant.

Shasta and Trinity Reservoir Fisheries Impacts

Impact 3.5-67: Impacts to the warmwater fishery of Shasta and Trinity Reservoirs.

Hydrologic conditions under the cumulative condition would result in a decline in the long-term average end-of-month water surface elevation in Shasta Reservoir during the March through September period when warmwater fish spawning and initial rearing may be expected. In 57 percent of the years, the water surface elevation of Shasta Reservoir was simulated as lower by more than one foot under the cumulative condition compared to the existing condition during the March through September period.

The long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Shasta Reservoir under the cumulative condition would decrease by 6 to 23 percent over the March to September period, as shown in Table H-3.5-74. In addition, significant reductions in reservoir littoral habitat availability would occur frequently in some years during each of these months. Reductions in the availability of littoral habitat, under the cumulative condition, may be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability under the cumulative condition would constitute a potentially significant impact to Shasta Reservoir's warmwater fisheries.

In addition, the cumulative condition could alter the rates by which water surface elevation in Shasta Reservoir change during each month of the primary warmwater fish-spawning period (i.e., March through July). Table H-3.5-75 shows that the relative frequency with which potential nest-dewatering events would occur in Shasta Reservoir under the cumulative condition during the spawning period would not be substantial (i.e., 120 occurrences compared to 111 occurrences under the existing condition). Because the frequency with which potential nest-dewatering events would occur in Shasta Reservoir under the cumulative condition would not change substantially during the warmwater fish-spawning period, impacts to warmwater fish-nesting success are considered to be less than significant. However, overall, reduction in littoral habitat availability and potential impacts to Shasta Reservoir's warmwater fisheries associated with the cumulative condition represent a potentially significant impact.

Hydrologic conditions under the cumulative condition would not result in substantial changes in the long-term average end-of-month water surface elevation in Trinity Reservoir during the March through September period. Reductions in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Trinity Reservoir under the cumulative condition are shown in Table H-3.5-76 and range from 0.1 to 10.2 percent during the March through September period. These reductions would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability would constitute a less-than-significant impact to Trinity Reservoir's warmwater fisheries.

In addition, changes associated with the cumulative condition could alter the rates by which water surface elevation in Trinity Reservoir change during each month of the primary warmwater fish-spawning period (March through July). Table H-3.5-77 provides modeling results indicating the frequency with which potential nest-dewatering events could occur in Trinity Reservoir under the cumulative and the existing condition, during the spawning period. The frequency with which potential nest-dewatering events would occur in Trinity Reservoir during the spawning period would be 84 occurrences under the cumulative condition compared to 87 under the existing condition. Therefore, potential nest-dewatering would be less under the cumulative condition than under the existing condition. Overall, impacts to Trinity Reservoir's warmwater fish populations would be less than significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The cumulative condition would not result in a substantial change relative to the future base condition in the long-term average end-of-month water surface elevation in Shasta Reservoir during the March through September period, when warmwater fish spawning and initial rearing may be expected. End-of-month elevation would be essentially equivalent to the future base condition in 463 months of the 490 months included in the analysis.

The difference in the long-term average amount of littoral habitat potentially available to warmwater fish for spawning and/or rearing in Shasta Reservoir under the cumulative condition relative to the future base would be negligible, as shown in Table H-3.5-78. These small and infrequent reductions in the availability of littoral habitat would not be of sufficient magnitude to substantially reduce long-term average initial year-class strength of warmwater fish populations. Consequently, seasonal reductions in littoral habitat availability associated with implementation of the year-round pump station project would constitute a less-than-significant contribution to the potentially significant cumulative impact to Shasta Reservoir's warmwater fisheries.

Impact 3.5-68: Impacts to the coldwater fishery of Shasta and Trinity Reservoirs.

Hydrologic conditions under the cumulative condition would result in a decrease in long-term average Shasta Reservoir storage, relative to the existing condition, during the April through November period, as shown in Table H-3.5-79. During the April through November period, Shasta Reservoir storage would decrease by 10 percent or more 26 percent of the time. Because physical habitat availability is not believed to be among the primary factors limiting coldwater fish populations within the reservoir, and because anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base used by the reservoir's coldwater fish populations, seasonal reductions in storage expected to occur under the cumulative condition would have less-than-significant impacts to Shasta Reservoir’s coldwater fisheries.

Under the cumulative condition, the long-term average monthly storage in Trinity Reservoir would be slightly less than the existing condition during the April through November period (when Trinity Reservoir thermally stratifies) (Table H-3.5-80). For any given month, the largest long-term average difference would be 5.2 percent during the month of June. Because changes to Trinity Reservoir storage would not be substantial, and anticipated changes in seasonal storage would not be expected to result in substantial adverse effects on the primary prey base utilized by the reservoir's coldwater fish populations, seasonal reductions in storage expected to occur under the cumulative condition would have less-than-significant impacts to Trinity Reservoir's coldwater fisheries.

Sacramento River Fisheries Impacts

Impact 3.5-69: Flow-related impacts in the upper Sacramento River.

The long-term average Sacramento River flows released from Keswick Dam under the cumulative condition would be reduced relative to the existing condition by a range of 0.8 to 9.4

percent, as shown in Table H-3.5-81. This is primarily the result of implementation of the Trinity River Mainstem Fishery EIS/EIR Preferred Alternative (Revised Flow Evaluation Alternative).

The minimum flow objective for Keswick Dam releases stipulated in the NMFS Winter-run Chinook Salmon Biological Opinion (1993, as revised in 1995) for the protection of winter-run chinook salmon rearing and downstream passage is 3,250 cfs between October 1 and March 31. Modeling output shows that monthly mean flows below Keswick Dam would not be below 3,250 cfs in any month of the October through March period in any of the 70 years modeled under either the cumulative condition or the existing condition.

Because the long-term average flows released from Keswick Dam would not be substantially reduced, and because monthly mean flows would not be below 3,250 cfs during any month of the October through March period for any year of the years studied, the cumulative condition would result in less-than-significant flow-related impacts to upper Sacramento River fish resources.

Impact 3.5-70: Flow-related impacts in the lower Sacramento River.

The long-term average flow at Freeport under the cumulative condition would be within five percent of the long-term average under the existing condition during all months of the year, as shown in Table H-3.5-82. In 780 out of the 840 months simulated, the flow at Freeport under the cumulative condition would be greater or essentially equivalent to the future base condition. Neither physical habitat availability for fish residing in the lower Sacramento River nor immigration of adult or emigration of juvenile anadromous fish would be substantially affected relative to the existing condition. Consequently, flow-related impacts to lower Sacramento River fisheries or migrating anadromous fish that could occur under the cumulative condition are considered to be less than significant. Overall, this constitutes a less-than-significant impact.

Impact 3.5-71: Water temperature-related impacts in the upper Sacramento River.

The cumulative condition relative to the existing condition would result in changes to the long-term average temperature at Keswick Dam and Bend Bridge. There would be several additional months in the simulation when temperatures exceed 56°F or 60°F at Keswick Dam or Bend Bridge under the cumulative condition relative to the existing condition (Table H-3.5-83). For example, there would be 22 more occurrences where the 56°F index would be exceeded, and 8 more occurrences where the 60°F index would be exceeded at Keswick Dam relative to the existing condition. At Bend Bridge, there would be 31 more occurrences where the 56°F index would be exceeded and seven more occurrences where the 60°F index would be exceeded relative to the existing condition. Therefore, the cumulative condition would result in significant additional exceedances of the temperature criteria identified in the NMFS Biological Opinion for winter-run chinook salmon. Also, absolute long-term average early lifestage survival of fall-run chinook salmon would decrease more than 10 percent in 11 of the 70 years studied. For winter-run chinook salmon, absolute long-term average early lifestage survival would decrease more than 10 percent in four of the 70 years studied relative to the existing condition. No decreases of more than 10 percent are expected for late-fall-run chinook salmon and actual increases in survival are expected for spring-run chinook salmon relative to the existing condition. However,

based on the increased number of exceedances of the temperature criteria identified in the NMFS Biological Opinion for winter-run chinook salmon, and decreases in absolute long-term early lifestage survival of fall-run chinook salmon and winter-run chinook salmon, temperature-related impacts to upper Sacramento River fisheries under the cumulative condition would represent a significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The cumulative condition would not result in more than a 0.1°F change in the long-term average water temperature at Keswick Dam or Bend Bridge for any month of the year, relative to the future base condition. Also, relative to the future base condition, the cumulative condition would result in only one additional month throughout the entire simulation where the water temperature exceeded 56°F or 60°F below Keswick Dam or at Bend Bridge under the cumulative condition, as shown in Table H-3.5-84. Monthly mean water temperatures at Keswick Dam and at Bend Bridge would be essentially equivalent under the future base and cumulative conditions. Therefore, the cumulative condition would not result in significant additional exceedances of the water temperature criteria identified in the NMFS Biological Opinion for winter-run chinook salmon, relative to the future base condition. In addition, there would not be substantial decreases in annual early lifestage survival of fall-run, late fall-run, winter-run, or spring-run chinook salmon in any individual year under the cumulative condition relative to the future base condition (Table H-3.5-79). Based on these findings, temperature-related impacts to upper Sacramento River fisheries associated with the implementation of the year-round pump station project would represent a less-than-significant contribution to the significant cumulative temperature-related impacts to upper Sacramento River fisheries.

Impact 3.5-72: Water temperature-related impacts in the lower Sacramento River.

The long-term average water temperature at Freeport in the lower Sacramento River would not change more than 0.3°F under the cumulative condition during any month of the year, as shown in Table H-3.5-85. The number of years that temperatures at this location would exceed 56°F, 60°F, and 70°F would be greater (i.e., 2 occurrences more often for the 56°F index, 11 occurrences more often for the 60°F index, and 9occurrences more often for the 70°F index) under the cumulative condition than the existing condition during the period March through November, as shown in Table H-3.5-86. Also, 17 percent of the time in the months of March through November, the monthly mean temperature at Freeport would increase more than 0.3°F under the cumulative condition relative to the existing condition. Overall, potential temperature-related impacts to fish species within the lower Sacramento River represent a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that the long-term average water temperature at Freeport in the lower Sacramento River would not change more than 0.1°F under the cumulative condition relative to the future base condition during any month of the year, as shown in Table H-3.5-87. The number of years that water temperatures at this location would exceed 56°F, 60°F, and 70°F would be slightly greater (i.e., one occurrence more often for the 56°F and 60°F

indices and two more often for the 70°F index) under the cumulative condition, relative to the future base condition during the March through November period. Monthly mean water temperatures at Freeport in the lower Sacramento River would be essentially equivalent to the future base condition for 826 months of the 828 months included in the analysis. Therefore, implementation of the year-round pump station project would not significantly contribute to potentially significant cumulative water temperature-related impacts to fisheries of the lower Sacramento River.

Delta Fishery Impacts

Impact 3.5-73: Impacts to Delta fish populations.

The greatest reduction in the monthly long-term average Delta outflow under the cumulative condition was 8.3 percent (during the month of October) relative to the existing condition, as shown in Table H-3.5-88. Delta outflow during the period of February through June is believed to be of greatest concern for potential effects to spawning and rearing habitat and downstream transport flows for delta smelt, longfin smelt, splittail, striped bass, salmonids, and other aquatic species in the Delta. During 11 percent of the time (i.e., 38 months of the 350 months included in the analysis) for the February through June period, Delta outflow would decrease by 10 percent or more relative to the existing condition.

The long-term average position of X2 would move upstream less than one km relative to the existing condition for any given month. However, during the February through June period considered important for providing appropriate spawning and rearing conditions and downstream transport flows for various fish species, the upstream shift in the position of X2 under the cumulative condition relative to the existing condition would exceed one km 12 percent of the time (i.e., 39 more occurrences out of 350).

The model simulations conducted for the cumulative condition included conformance with X2 requirements set forth in the SWRCB Interim Water Quality Control Plan. Also, the Delta export-to-inflow ratios under the cumulative condition would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Even though the cumulative condition would not cause X2 or Delta outflow standards to be violated, the cumulative condition would result in decreased outflow and upstream shift in the position of X2, which could be considered a potentially significant impact to Delta fisheries. Overall, impacts to Delta fish populations would be potentially significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that reductions in the long-term average Delta outflow of up to 0.3 percent could occur under the cumulative condition relative to the future base condition, as shown in Table H-3.5-89. Throughout the entire 70-year period of record there would be only one individual month (i.e., May) when Delta outflow is reduced by more than three percent for the February through June period, relative to the future base condition.

In addition, under the cumulative condition, there would not be more than a 0.1 km shift in the long-term average position of X2 relative to the future base condition for any given month. Furthermore, during the February through June period, the maximum upstream shift in the position of X2 for the entire 70-year period of record would be 1.0 km. Based on these results, the year-round pump station project would not significantly contribute to potentially significant cumulative impacts to Delta fish populations.

Oroville Reservoir Fisheries Impacts

Impact 3.5-74: Impacts to Oroville Reservoir warmwater fisheries.

Hydrologic conditions under the cumulative condition as compared to the existing condition would result in reduced long-term average end-of-month water surface elevation in Oroville Reservoir during the months of the March through September period (when warmwater fish spawning and initial rearing occurs) (Appendix D of the Draft EIS/EIR). The largest decrease in water surface elevation during the March through September season would be 75 feet for any individual year for the entire 70-year period included in the analysis.

Modeling results indicate that the largest increase in the frequency with which potential nest-dewatering events could occur in Oroville Reservoir under the cumulative condition, compared to the existing condition, would occur during July, from 56 out of 70 years to 61 out of 70 years. Because the frequency with which potential nest-dewatering events could occur in Oroville Reservoir under the cumulative condition would change during the March through July warmwater fish-spawning period, impacts to warmwater fish nesting success may be potentially significant. Overall, water surface elevation changes associated with the cumulative condition, relative to the existing condition, represent a potentially significant impact to the warmwater fisheries of Oroville Reservoir.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

Impact 3.5-75: Impacts to Oroville Reservoir's coldwater fisheries.

The cumulative condition would result in slightly different Oroville Reservoir end-of-month storage during many years of the simulation. For all months of the year, the largest decrease in long-term average end-of-month storage would be 201,000 AF (or approximately 8.3 percent) during the month of September for all months of the year. These anticipated reductions in reservoir storage would not be expected to adversely affect the reservoir's coldwater fisheries because coldwater habitat would remain available within the reservoir during all months of all years and anticipated seasonal reductions in storage would not be expected to adversely affect the primary prey species utilized by coldwater fish. Therefore, storage reductions associated

with the cumulative condition represent a less-than-significant impact to coldwater fish resources of Oroville Reservoir.

Feather River Fisheries Impacts

Impact 3.5-76: Flow-related impacts in the Feather River.

The long-term average Feather River flows released from Oroville Reservoir under the cumulative condition, relative to the existing condition, range from decreases of 14.1 percent during the month of November to increases of 36.4 percent during the month of August. Under the cumulative condition, there would be substantial decreases in flows relative to the existing condition. It is important to note that during months of the critical steelhead over-summer rearing period, the cumulative condition would result in relatively large increases in long-term average Feather River flows (i.e., 25.5 and 36.4 percent in July and August, respective). Nonetheless, because flow decreases greater than 10 percent would occur about 18 percent of the time for the 70-year period of record, and anadromous salmonids and species of management concern may be present during these flow decreases, reductions in flow would represent a potentially significant impact to Feather River fish resources.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in river flow would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

Impact 3.5-77: Water temperature-related impacts in the Feather River.

There would not be any increases in the long-term average monthly mean Feather River water temperatures released from Oroville Reservoir under the cumulative condition relative to the existing conditions. During the month of November, the long-term average monthly mean water temperature would decrease by 2.2ºF. There would only be four months (out of 828 months) that would show increases greater than 0.3 percent. There would not be any months in the 69-year period of record that would show water temperature increases greater than 2.5ºF. An application for renewal for the power facilities at Oroville Reservoir is being prepared for submission to FERC in 2006. During this process, the water temperature and fishery resources of Oroville Reservoir and the lower Feather River will undergo detailed analysis to determine the appropriate flow and water temperature requirements that will be part of the new license to maintain or enhance the fisheries of Oroville Reservoir and the lower Feather River. Therefore, because these flow and water temperature requirements will help attenuate any increases in water temperature, small changes in water temperature under the cumulative condition relative to existing conditions would have a less-than-significant impact to Feather River fisheries.

3.5.4.5 Environmental Protection and Mitigation Measures

The fish resources and aquatic habitat mitigation measures included in the Mitigation Plan (Appendix D to the Final EIS/EIR) are shown below.

Prevent Fish Entrainment and Impingement at the Water Supply Intake/Point of Diversion

Diversion of water at the intake structure could create conditions resulting in entrainment or impingement of fish. Installation and operation of fish screens will minimize the potential for this impact. CDFG fish screen experts will be involved in the design and inspection of the fish screens.

Commitment: Design, construct, operate and maintain fish screens on the water supply intake in a manner consistent with CDFG-approved design.

Responsible Parties: Reclamation/Construction Contractor - design and construct per CDFG-approved plan
PCWA - operation and maintenance per CDFG-approved procedures
CDFG - design input, review and approval; performance inspection

Location: Project area/river channel - water supply intake structure

Timing: Phase II construction/operations

Monitoring:
Reclamation will require the Construction Contractor to install the fish screens according to CDFG-approved plans. PCWA will monitor the operation of the fish screens and provide maintenance, as needed, according to specific fish screen design and operational procedures.

Reporting Requirements:
Reclamation will submit final designs to CDFG and will notify CDFG when construction is completed. CDFG may inspect the construction or performance of fish screens at the site. PCWA will maintain daily records of screen performance on all days pump station is operational. These records will be summarized in quarterly reports to CDFG for the first two years following Project start-up. After that time, PCWA will make records available to CDFG, upon request.

Description of Activities:
Design and Construction
The Project design team will work with CDFG fish screen experts to finalize the design in a manner that meets CDFG requirements for the Project site. Reclamation will ensure that the Construction Contractor installs the approved fish screens as designed.

Operation and Maintenance
PCWA will operate and maintain the fish screens according to the final approved procedures.

Success Criteria:
Reclamation will document that construction/installation meets CDFG-approved design. PCWA will document project operation and maintenance compliance with appropriate procedures.

Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources

The Project, as described in the Draft EIS/EIR, included an increased release of American River water into Auburn Ravine, in exchange for Yuba/Bear River Drum-Spaulding Project water. Change in water source composition potentially would create conditions that might increase straying of American River salmonids into Auburn Ravine. To avoid any potential for such an impact, PCWA will double-pump the increased diversions of American River water, measured against baseline conditions derived from data reflecting monthly pumping levels in the period from 1998 through 2001, from the Auburn Ravine Tunnel directly to its water supply distribution system, rather than to Auburn Ravine. PCWA will not modify this procedure until further environmental evaluations are conducted to evaluate the potential effects of changing water sources or volume in Auburn Ravine.

Commitment:	Minimize alteration of Auburn Ravine aquatic conditions by double-pumping increased diversions of American River water.
Responsible Party:	PCWA
Location:	Auburn Ravine Tunnel and Pump Station; Auburn Ravine
Timing:	Ongoing project operation
Monitoring:	Record American River water deliveries into Auburn Ravine
Reporting Requirements:	Operation records/reports

Description of Activities:
By double-pumping increased American River diversions, PCWA will operate the pump station such that release of American River water into Auburn Ravine, via the Auburn Ravine Tunnel, will be within the limits of recent historical monthly maximum delivery rates.

Success Criteria:
Documentation of double-pump operations and deliveries of American River water into Auburn Ravine within the limits of recent historical monthly maximum delivery rates.

Other Related Mitigation Measures

Water Quality and **Public Health and Worker Safety** include additional measures that would protect fish and aquatic resources in the project area, during both construction and operation of the selected alternative.

PCWA Conservation Measures

Conservation measures are actions to benefit or promote the recovery of listed species that are included by the federal agency as an integral part of the proposed action. These measures will be taken by the federal agency or applicant, and serve to minimize or compensate for, project effects on the species under review. These may include actions taken prior to the initiation of consultation, or actions which the federal agency or applicant have committed to complete in a biological assessment or similar document (USFWS, NMFS and AFS 2001).

PCWA is developing or implementing numerous conservation measures which were discussed by PCWA, Reclamation, and USFWS during internal consultations on the Proposed Project from February through May 1999. These conservation measures include: (1) participation in the western Placer County Natural Communities Conservation Plan (NCCP); (2) resource mapping (baseline habitat inventory); (3) access to PCWA lands (by USFWS); (4) expanded place of use (PCWA and USFWS agreed that if an expanded POU for American River MFP/pump station water was pursued, then a subsequent (and separate) consultation would be conducted); (5) vernal pool preserves (PCWA would provide mapping of vernal pool resources and would encourage associated municipalities in cooperating with the USFWS on preservation of vernal pool resources); (6) programmatic CVP biological opinions (because of Reclamation involvement in the pump station project, PCWA's actions will be consistent with those identified in the USFWS biological opinion for this project); (7) reporting (PCWA agreed to cooperate in reporting of potential impacts to biological resources or potential take of listed species); it is assumed that these reporting responsibilities will also be assigned to participants as part of the Placer County NCCP; (8) planning and communication (PCWA agreed to participate in appropriate planning and communication with USFWS to ensure the receipt of environmental documents and other CEQA-related materials by the USFWS); and (9) general operations and maintenance (PCWA agreed to implement a system of operations and maintenance (O&M) procedures that would incorporate species protection measures).

PCWA also recently agreed to not supply retail treated water service to new developments within environmentally sensitive areas of western Placer County until USFWS has certified that the new development is consistent with the interim conservation strategies of the Placer County Habitat Conservation Plan, that is to be prepared at a later date. Environmentally sensitive areas within western Placer County as used above refers to that area within Placer County west of Highway 65, south of the proposed Highway 65 Lincoln Bypass, and north of Pleasant Creek.

Additionally, PCWA has proposed to undertake a flow and water temperature monitoring program for Auburn Ravine, despite the absence of any expected adverse significant impacts on the aquatic resources of Auburn Ravine from the Proposed Project. Flow and water temperature data will be collected to develop a database for future use in decision-making regarding Auburn Ravine resources. The objective of the flow monitoring is to enhance the ability of resource and water managers to determine water quantities of Auburn Ravine. The water temperature monitoring element objective is to collect data to enable assessment of the effects of watershed activities on Auburn Ravine water temperatures. The program includes installation of seven new flow gages and eight new temperature recorders at strategic locations along Auburn Ravine and near the American River pump station. The program is described in greater detail in the Mitigation Plan (Appendix D to the Final EIS/EIR). The proposed flow and water monitoring locations are shown on **Figure 3.5-4**.

The Water Forum, of which PCWA also is a member, is implementing and proposing to implement numerous additional protection, mitigation, and enhancement measures for threatened and endangered species in the lower American River. Many of these measures require, or will require, a significant commitment of resources, and could result in major enhancement of habitat, or reduction in potential effects on listed species.

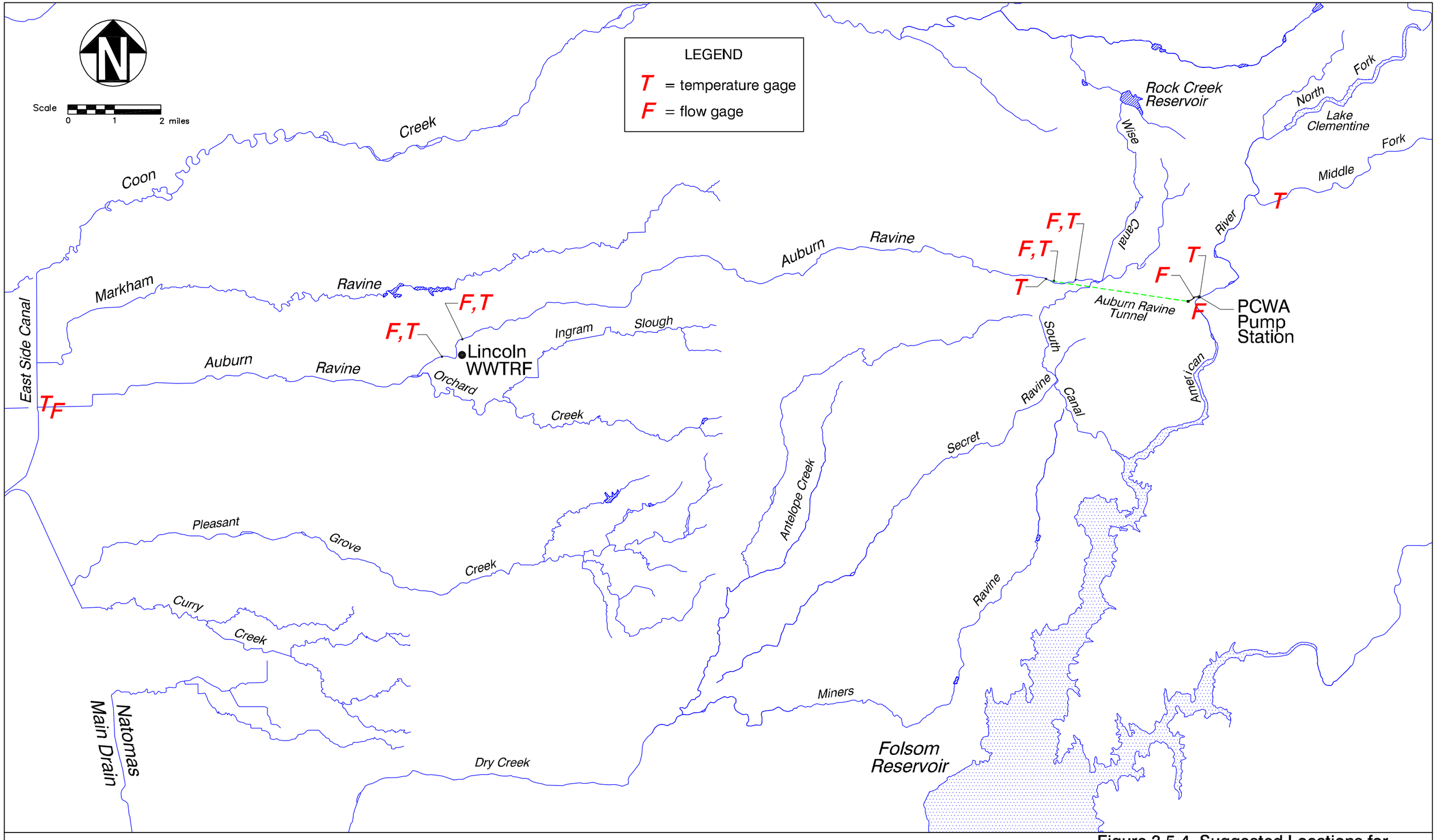


Figure 3.5-4 Suggested Locations for Monitoring Flow and Water Temperature, Auburn Ravine

3.6 TERRESTRIAL RESOURCES

3.6.1 AFFECTED ENVIRONMENT

3.6.1.1 Regional Setting

The regional setting includes the terrestrial resources—riparian and wetland vegetation and associated species that utilize it for habitat—of the American and Sacramento rivers and reservoirs, as well as Oroville Reservoir and the Feather River, that may be influenced by the Proposed Project or alternatives and other reasonably foreseeable future actions. The area is defined in Section 3.2.1 and shown on Figure 2-1. Detailed descriptions of the terrestrial resources associated with these facilities are included in the Cumulative Report (Appendix D of the Draft EIS/EIR). The Cumulative Report also provides a description and evaluation of potential habitat and species impacts that may occur within the water service study area. Section 3.19, ESA Compliance, identifies ESA Section 7 requirements and provides an evaluation of impacts upon federally listed special-status species. The discussion identifies conclusions and determinations for each species and critical habitat.

3.6.1.2 Project Area Setting

The project area represents the direct effect study area for terrestrial resources and encompasses the Middle Fork American River from below Ralston Afterbay to the confluence with the North Fork American River and downstream to Oregon Bar (Figure 2-2).

Middle and North Fork American River

American River Canyon Ecosystem

The foothill canyons of the North and Middle Forks of the American River are within the American River Canyon Ecosystem. The complex topography and geology of the canyon ecosystem create a landscape of high habitat diversity. The Middle and North forks have a relatively high proportion (70 to 75 percent) of their unimpounded mainstems in a north-south orientation, which results in high habitat diversity and ecological value. The northern slopes, and to a lesser degree, northeast facing slopes tend to be cooler and moister because they are not subject to the intense solar radiation characteristic of southern and southwest facing slopes. The dissimilar mesoclimates created by slope aspect have a marked effect on plant distribution, which in turn has habitat implications for wildlife. The net result is higher habitat heterogeneity, smaller patch size, and more habitat edges in canyons with a north-south orientation. The implications of these factors for wildlife are a greater range of habitats available to support a more diverse assemblage of species, and a greater likelihood of all habitat requirements being met on a more local scale (USFWS 1996).

Terrestrial Habitats of the Middle and North Fork American River

Habitats of the Middle and North Forks of the American River include montane riverine, valley-foothill riparian, montane riparian, montane hardwood, montane hardwood-conifer, mixed conifer, blue oak-foothill pine, blue oak woodland, chaparral, and grassland (Mayer and Laudenslayer 1988). The predominant habitats of the Middle and North forks are characterized by montane hardwood and montane hardwood-conifer types.

Riparian Habitat

In general, the dominant riparian species found along both the North and Middle forks of the American River are broad-leaved deciduous trees and shrubs. Species include big leaf maple *(Acer macrophyllum)*, white alder *(Alnus rhombifolia)*, Fremont cottonwood *(Populus fremontii)*, black cottonwood *(Populus trichocarpa)*, button-willow *(Cephalanthus occidentalis)*, sandbar willow *(Salix sessilifolia)*, indian hemp *(Apocynum cannabinum)*, wild grape *(Vitis californica)*, creek dogwood (*Cornus sericea ssp.*), valley oak *(Quercus lobata)*, blackberry *(Rubus ursinus)*, common monkey flower (*Mimulus gluttatus*), scarlet monkey flower (*Mimulus cardinalis*), and indian-rhubarb (*Darmera peltata*). The riparian community also includes the smaller tributaries where California aralia *(Aralia californica)*, columbine *(Aquilegia spp.)*, California bay-laurel *(Umbellulana californica)*, poison oak *(Toxicodendron diversilobum),* and ferns can be found (PARC 1998).

Upland Habitat

The upper canyon walls of both the North and Middle forks of the American River host different upland vegetation species, whose distributions are controlled by the climatic constraints of both the north and south-facing slopes. Typically, ponderosa forests and broadleaf evergreen forests occur on north facing slopes, while foothill woodland and chaparral communities are found on south-facing slopes (PARC 1998).

Ponderosa forests dominate upland habitats on north-facing slopes along both forks between 2,000 to 5,000 feet elevation. Ponderosa pine is the dominant tree of upland vegetation associations, and is accompanied by incense-cedar *(Calocedrus decurrens)*, white fir *(Abies concolor)*, douglas fir *(Pseudotsuga menziesil)*, California black oak *(Quercus kelloggii)*, and sugar pine *(Pinus lambertiana)*. A common understory plant is the pungent mountain misery *(Chamaebatia foliosa)* (PARC 1998).

The foothill woodland vegetation communities along both the North and Middle forks of the American River are composed of oak savannah and grassland habitats. Species include California buckeye *(Aesculus californica)*, interior live oak *(Quercus wislizenii)*, and evergreen shrubs such as manzanita species *(Arctostaphylos spp.)*, deer brush *(Ceanothus integerrimus)*, toyon *(Heteromeles arbutifolia)*, and poison oak. Chaparral communities also occur on serpentine slopes of both the North and Middle fork canyons, although it is much more common along the Middle Fork (PARC 1998).

Project Area

The project area has been heavily disturbed by Auburn Dam construction activities and the annual seasonal pump station installation and removal. Past disturbance is evident in talus slopes, rocky outcrops, extensive areas of boulders and rubble, the Auburn Dam foundation keyway, and the Auburn Dam batch plant/storage area. Annual disturbances of the project area involve rehabilitation of access roadways for installation of the seasonal pump station. Some disturbance of vegetation and wildlife habitat also may occur from use of the site by bicyclists, hikers, and equestrians.

The unstable slopes, existing rock outcrops, and much of the keyway generally are unvegetated or have ruderal vegetation. Excavated bedrock (cofferdam debris) is scattered within the dewatered channel and extends thousands of feet past the bypass tunnel outlet. The dewatered channel appears to be periodically scoured by high winter flows. Pockets of mature oak woodland vegetation have persisted in the project area where the slopes were not graded for access roads or subject to landslides. Mature oak woodland vegetation also occurs upstream and downstream of the project area. The disturbed areas consist of vegetation at various stages of succession, from areas of grasses, shrubs, and small trees to areas of some canopy cover. Limited riparian and wetland vegetation communities also are present in the project area. However, the majority of the project area where construction would occur is either covered by boulders or loose gravel of various sizes, or by grasses and shrubs that have become established in areas that were previously disturbed.

Terrestrial Habitats in the Project Area

Vegetation in the project area has been classified into urban, disturbed, foothill oak woodland, riparian, and wetland habitats as described below. The vegetation in the project area was mapped using a 1997 aerial photograph (scale one inch to 200 feet) and field verification. **Figures 3.6-1** and **3.6-2** show vegetation types in the project area.

Urban Habitat

Urban habitat in the project area includes paved and unpaved roadways, public utilities (e.g., PG&E power station and pipelines), and residential development. Urban areas can provide habitat for plant and animal species that are adapted to human disturbances, such as crows, mourning doves, and squirrels, particularly in ruderal or landscaped areas.

Disturbed Habitat

Grasses and scattered trees and shrubs have become established in the project area in areas with adequate soil. Similar to grasslands, the grasses and wildflowers occurring in the project area germinate with late-fall rains and the plants generally die-off during the summer and early-fall months. Common species in the project area can include soft chess (*Bromus hordaceus*), ryegrass (*Lolium* sp.), and wild barley (*Hordeum murinum* ssp. *leporinum*). Intermixed with these grasses, non-native forbs such as storksbill (*Erodium botrys*) and wild radish (*Raphanus sativus*), and

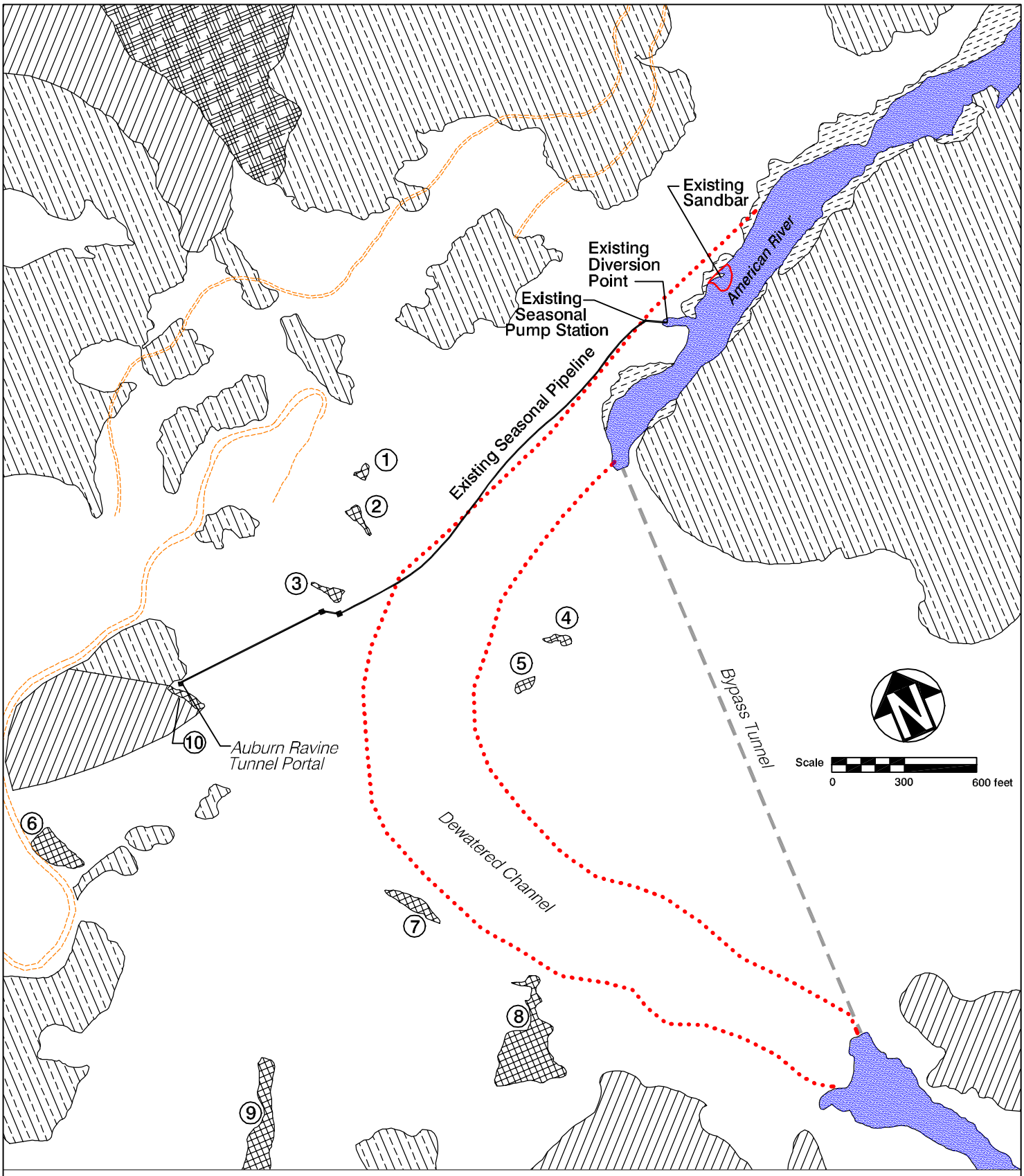


Figure 3.6-1 Habitat Types in the Project Area

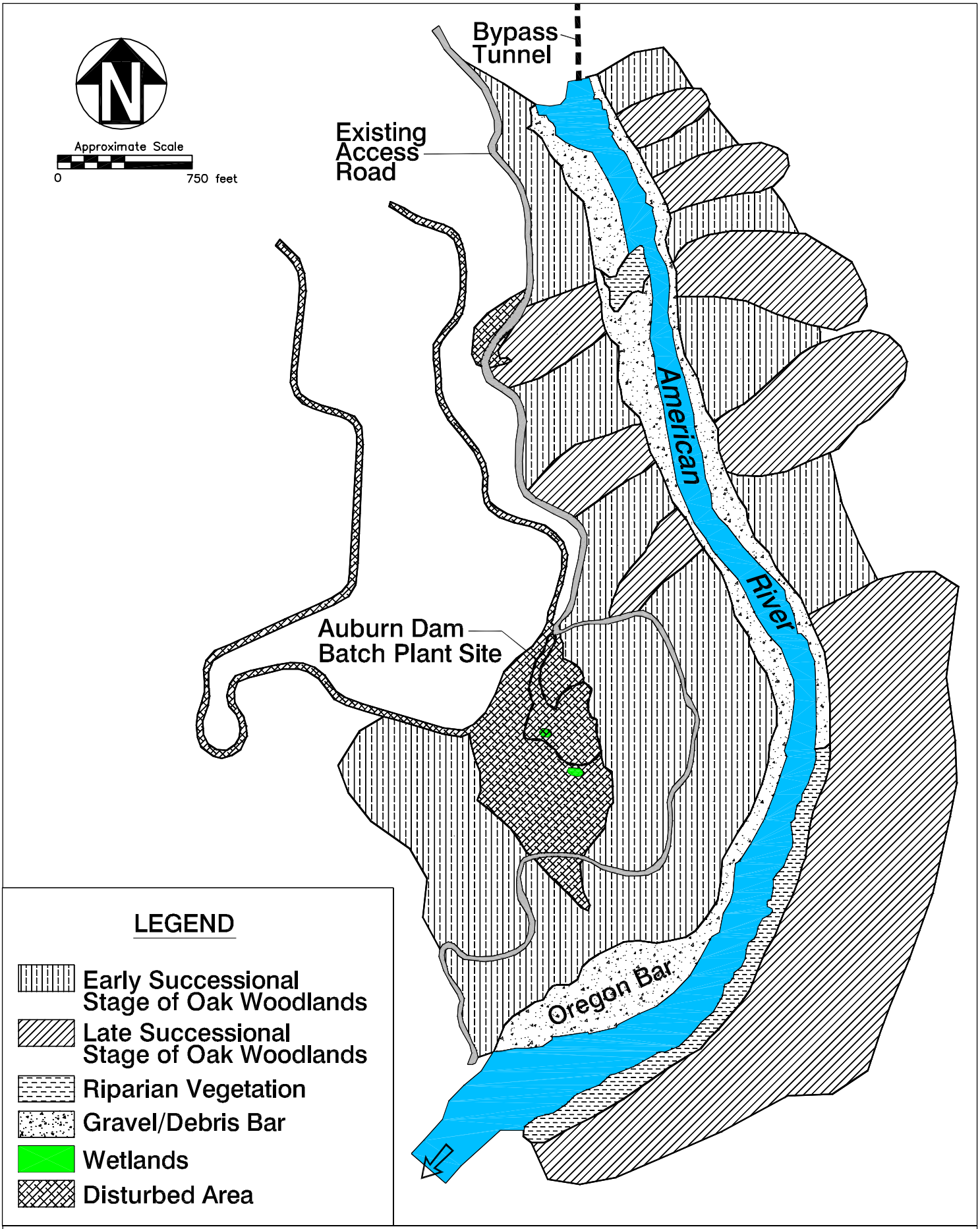


Figure 3.6-2 Habitat Types in the Oregon Bar Area

native forbs such as California poppy (*Eschscholzia californica*) and lupines (*Lupinus* sp.) may occur. Tree of heaven (*Ailanthus altissima*), oaks (*Quercus* sp.), gray pine (*Pinus sabiniana*), California buckeye, coyote brush (*Baccharis pilularis*), and other trees and shrubs were observed scattered in the disturbed areas.

Disturbed habitat can support several wildlife species. Birds, such as wild turkey (*Meleagris gallopavo*), Anna's hummingbirds (*Calypte anna*), killdeer (*Charadrius vociferus*), Canadian geese (*Branta canadensis*), red-tailed hawks (*Buteo jamaicensis*), common garter snake (*Thamnophis sirtalis*), sparrows, and wrens were observed in the areas during site visits.

Figures 3.6-1 and 3.6-2 illustrate the areas that were classified as disturbed. The designation was used for areas with grasses and scattered shrubs and trees providing less than 10 percent canopy cover, areas of bare bedrock, and talus slopes. Disturbed areas include those that have not been disturbed in several years, but where the disturbance has created conditions limiting tree and shrub environment (i.e., areas of cofferdam remnant, bypass tunnel, and batch plant).

Foothill Oak Woodland

Oak woodland occurs in the foothill areas surrounding the North Fork American River. Relatively dense-canopied oak woodlands cover the slopes of the canyon upstream and downstream of the project area. These woodlands occur on poor, shallow, and excessively drained soils and generally provide important nesting and foraging habitat for a variety of bird species, as well as numerous mammal and reptile species (Sawyer and Keeler-Wolf 1995). Characteristic fauna of woodland ecosystems include, but are not limited to, coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), California spotted skunk (*Spilegale putoris*), western toad (*Bufo boreas*), and western skink (*Eumeces skiltonianus*), and various species of bat.

The woodlands in the project area are characterized by several oak species, such as the blue oak (*Quercus douglasii*), valley oak, interior live oak, Douglas fir, California buckeye, gray pine, and other tree and shrub species.

The woodlands in the project area occur in various stages of development. The woodlands that can be described as in an early successional stage are composed of grasses and forbs with shrubs and scattered trees. The oak woodlands in the project area are predominantly in an early successional stage. The early successional stage is characterized by saplings and younger tree and shrub individuals that are scattered or grow in clusters among grasses and forbs. The shrub and tree species are characteristic of oak woodlands but with a higher proportion of shrub species. Tree canopy cover ranges from 10 percent to 50 percent.

The late successional stage occurs in small pockets in the area and is characterized by increased canopy cover (i.e., over 50 percent) and older, larger trees. The woodlands increase in canopy cover and height towards the upstream and downstream ends of the project site where the oak woodland appears to be more mature.

Riparian and Wetlands Habitat

Vegetation associated with riparian and potential wetland habitats are similar for the project area. In general, riparian or wetland habitat in the project area occurs in limited, narrow strips along the American River and along drainages on the sides of the canyon. The drainages are seasonal, with flowing water only in winter and spring. One apparently perennial drainage flows through the Auburn Dam site on the west side of the canyon.

Extensive riparian habitat is not common along the American River due to the relatively steep canyon walls leading up from the river course, the high degree of scouring experienced during high river flows, and the lack of sediment load in the river. In the project area, riparian vegetation occurs along the American River from the bypass tunnel entrance upstream to the Tamaroo Bar Rapids (partially shown on Figure 3.6-1). Deposited sediments have formed bars that support limited stands of willows (*Salix* sp.), Fremont cottonwoods, and other associated species. These bars cover small areas and are generally temporary as high flows tend to scour away the vegetation and some sediments periodically.

Along the walls of the American River canyon, numerous seeps flow down the rock faces to the canyon floor forming shallow pools in depressions and level areas. A preliminary wetland delineation survey was conducted in August 1998 to determine if these areas qualify as wetlands within the jurisdiction of the Corps under Section 404 of the Clean Water Act. The areas surveyed in the wetland delineation included only those areas anticipated to be affected by construction of the pump station and access roads, spoil disposal area on the east side of the canyon, and the backwater area, and did not include an evaluation of sites associated with the parking lot and other improvements near Oregon Bar. Figure 3.6-1 indicates the locations in the project area that could be considered wetlands.

Ten potential areas were identified within the Auburn Dam construction site of the study area. These wetlands include seeps (four areas) with typical wetland vegetation, including willows, cattail, and lemon balm; streams (one area) with dense, mature stands of cottonwoods; ponded water (four areas) supporting cattail and with tadpoles; and a perennial spring.

Figure 3.6-2 shows the general habitat types present in the vicinity of Oregon Bar. Potential wetland habitat at Oregon Bar was observed during a site visit on November 28, 2000. These potential wetlands consist of approximately five small ponds and sinks in an area originally disturbed by construction activities associated with the Auburn Dam and associated facilities. Although the origin of these wetted depressions is uncertain, evidence of culverts and stocks of aggregate rock indicate that many were created during or following Auburn Dam construction activities.

As evidenced by the observation of cattails, rushes, cottonwoods, and willows, water is likely available at or immediately below the surface during the majority of the calendar year. In the larger wetted area located between the proposed parking lot area (Figure 2-7) and the existing unimproved road leading to Oregon Bar, and at a second wetted area with a ramp structure leading into it, open water was evident in the center indicating a depth greater than that which would allow the growth of emergent vegetation.

Listed Species and Species Proposed for Listing

Wildlife

Table 3.6-1 lists the terrestrial species, listed or proposed for listing under the federal ESA or CESA, that could be affected by the Proposed Project or alternatives. Descriptions of the habitat and local distribution of these species follow the table.

Table 3.6-1
Federal and State Listed and Proposed Species That May Occur in the Project Area

Common Name	Species Name	Status Federal [a]/State [b]
Birds		
Bald Eagle	*Haliaeetus leucocephalus*	T/E
Little Willow Flycatcher	*Empidonax traillii brewsteri*	--/E

[a] Federal status: E = Endangered; T = Threatened
[b] State status: E = Endangered
-- = Not listed

Bald Eagle *(Federal Threatened/State Endangered)*. Bald eagles typically are found near open water (e.g., reservoirs, lakes, and rivers). Large, dead trees near open water are used for perching and are an important habitat component (USFWS 1986). Bald eagles have been observed at and around Folsom Reservoir during the winter season, although generally in low numbers (Manolis 1998). Nesting and roosting habitat for the bald eagle was not observed in the project area, nor are bald eagles known to nest in the project area. Bald eagles may occur in the project area during the winter (B. Williams, pers. comm. 1998). In addition to the ESA and CESA, bald eagles are protected under the Bald and Golden Eagle Protection Act.

Little Willow Flycatcher *(State Endangered)***.** The little willow flycatcher requires dense willow thickets for nesting and roosting. Ideal habitats occur on the edge of wet meadows, ponds, or backwater areas. The willow thickets in the project area are located along the rapidly flowing North Fork American River, rather than next to the flycatcher's preferred habitats. The project area may provide foraging habitat to migrating flycatchers during May through September, but are unlikely to provide breeding or wintering habitat (B. Williams, pers. comm. 1998).

California Red-Legged Frog *(Federal Threatened)* ***and Valley Elderberry Longhorn Beetle*** *(Federal Threatened)*. The project area also was examined for the presence of the federally listed threatened California red-legged frog (*Rana aurora drayonii*) and the federally listed threatened valley elderberry longhorn beetle (VELB) (*Democerus californicus demorphus*). Surveys and research indicated that the California red-legged frog is not likely to occur at the site (Carrier 1998; Carrier 2002). Wetlands suitable for the California red-legged frog are not present in the area. Also, suitable sites for the California red-legged frog in the adjacent areas are inhabited by bullfrogs (*Rana catesbiana*), thereby precluding occupancy by the red-legged frog in the project area. Recent surveys included a habitat site assessment (March 2002) and site survey according to the USFWS Red-Legged Frog Survey Protocol (USFWS 1997) completed in June 2002. The survey results confirmed the 1998 site survey results (Carrier 2002); no red-legged frogs were

observed at the project site. The survey concluded: (1) the project area is not within the historical occupied habitat of California red-legged frogs, (2) habitat that may be potentially suitable to the species is temporary and artificial, (3) given the current occupation of the ponds by bullfrogs, it is unlikely that California red-legged frogs could colonize the area, (4) returning the river to its natural channel will result in the eventual elimination of the ponds, and (5) project implementation would not result in take of the California red-legged frog nor affect species recovery (Carrier 2002).

Elderberry shrubs, the sole habitat of VELB, have been reported upstream of the project area on the north side of Tamaroo Bar (MW and JSA 1995). No exit holes, which would indicate the presence of VELB, were found on the trunks of the elderberry cluster. No elderberry shrubs were observed in or around the areas proposed for construction during the project site surveys. Based on the research and survey results, these species were removed from further consideration in the impact analysis.

Plants

Several listed, candidate species of plants initially identified by USFWS as potentially occurring within the project study area were removed from further consideration in the impact analysis because they are not known to occur within Placer County, as determined through searches of the California Natural Diversity Data Base (CNDDB) and reference to Skinner and Pavlik (1994) and Hickman (1993). These species include the endangered Pine Hill ceanothus (*Ceanothus roderickii*), Stebbins' morning glory (*Calystegia stebbinsii*), El Dorado bedstraw (*Galium californicum ssp. spierrae*), and the threatened Layne's butterweed (*Senecio layneae*).

Species of Concern

Wildlife

Table 3.6-2 lists those species which are classified as "species of concern" by USFWS or as "California species of concern" by CDFG, and which may occur in the project area. Descriptions of the habitats of these species follow the table.

Table 3.6-2
Federal and State Species of Concern That May Occur in the Project Area

Common Name	Species Name	Status Federal [a]/State [b]
Amphibians		
Foothill Yellow-legged Frog	*Rana boylei*	SC/CSC
Reptiles		
California Horned Lizard	*Phrynosoma coronatum frontale*	SC/CSC
Mammals		
Spotted Bat	*Euderma maculatum*	SC/CSC
Greater Western Mastiff-bat	*Eumops perotis californicus*	SC/--

[a] Federal status: SC = Species of Concern
[b] State status: CSC = California Species of Concern
-- = No listing

Foothill Yellow-legged Frog *(Federal and State Species of Concern, CDFG Protected Species, and U.S. Forest Service/Bureau of Land Management Sensitive Species).* The foothill yellow-legged frog inhabits rocky streams in a variety of habitats including valley-foothill hardwood, hardwood-conifer, and riparian communities. They are rarely found far from permanent water, even during rainy weather. Sightings have been reported in portions of the canyon upstream of the project site (J. Hiscox, pers. comm. 2000).

California Horned Lizard *(Federal and State Species of Concern)*. The California horned lizard may be found in open areas, usually between shrubs, and especially in sandy areas, washes, floodplains, and wind-blown deposits. Horned lizards have been observed to prefer ants as the main component of their diet. Horned lizards avoid predators and extreme heat by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices (Zeiner et al. 1988).

Spotted Bat *(Federal and State Species of Concern)*. The spotted bat is an obligate rooster in rock crevasses and caves. It emerges at dusk and feeds, primarily on moths, in flight over water and along washes. Although rare, it can occupy habitats ranging from grasslands and arid desert to coniferous forests (Zeiner et al. 1990).

Greater Western Mastiff-Bat *(Federal Species of Concern)***.** The greater western mastiff-bat is an audible bat (emits sound audible to the human ear) and feeds on insects in flight. The nocturnal foraging range for this species can exceed 15 miles and extend over a six- to seven-hour period. Mastiff bats emerge from roosts later in the evening than many bat species, often departing to forage after dark (Zeiner et al. 1990).

Several other wildlife species which were originally determined by USFWS or CDFG to have the potential to occur in the vicinity of the project area have been removed from further consideration in the impact analysis because of the lack of suitable habitat, or because the project area actually is outside of the reported distribution of the species. These species include long-legged myotis (*Myotis volans*), small-footed myotis bat (*Myotis ciliolabrum*), Yuma myotis bat (*Myotis yumanensis*), tricolored blackbird (*Agelaius tricolor*), western burrowing owl (*Athene cunicularia hypugea*), white-faced ibis (*Plegadis chihi*), northwestern pond turtle (*Clemmys marmota marmota*), Sage Creek goracean caddisfly (*Georacea oregona*), and tight coin snail (*Ammonitella yatessi*).

Plants

The project area was examined for several plant species that are classified as species of concern and that were identified by USFWS as having the potential to occur in the project area. El Dorado County mule ears (*Wyethia reticulata*) and Bisbee peak rush-rose (*Heliantheumum suffratescens*) were removed from further consideration in the impact analysis because they were determined to be unlikely to occur in the project area because the site is outside of the known distribution of these species.

3.6.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.6.2.1 Methodology

Facilities-Related Analysis Approach

Facilities-related terrestrial effects refers to the temporary disturbance or permanent loss of vegetation and associated wildlife habitats due to the construction, operation, or maintenance of the Proposed Project or alternatives. The evaluation of potential terrestrial resource impacts was made by identifying: (1) the composition and location of plant communities and wildlife habitats within the project study area through review of aerial maps and on-site surveys; (2) the location (preliminary design) of proposed project alternative features; (3) the type and duration of construction activities; and (4) the areas influenced by operation and maintenance activities. Specific surveys conducted for the project included those for potential wetlands, bat species, red-legged frogs, and VELB. Additional site visits were made to characterize the existing habitat types in the project area.

Special-Status Species

The impact assessment focuses on habitats and special-status species. Special-status species include those that are listed as threatened or endangered by the CDFG or the USFWS, species proposed for state or federal listing, species designated as "species of concern" by USFWS or "special concern species" by CDFG, and species tracked by the CNDDB or California Native Plant Society (CNPS).

The impact assessment involved determining the extent of effects to special-status species and their habitats. To determine which special-status species should be considered in the analysis, lists of species with the potential to occur in the study area were obtained from the USFWS and CNDDB. In addition, research was conducted on each species distribution, life history and habitat to assess which of the species are likely to occur in the study area. Methods used to identify potential environmental effects to the species and their habitat included site surveys, review of information from the USFWS and the CDFG, review of relevant literature, examination of aerial photographs, and initial consultations with CDFG. Informal consultations with the USFWS for the listed species potentially affected by the project and for other wildlife species under the FWCA were initiated on July 10, 1998 by PCWA and Reclamation. Information presented in this section also is intended to support FWCA requirements.

Diversion-Related Analysis Approach

The evaluation of diversion-related terrestrial resource impacts focuses on the potential increase in diversions to result in substantial reductions of river flows or reservoir elevations that could affect the riparian, wetland, and other associated vegetation such that loss of habitat and/or species dependent upon the habitat may occur. The evaluation compares PROSIM hydrologic model results for existing and future conditions with and without a year-round pump station for Folsom Reservoir, the lower American River, and Sacramento River, including the Delta.

Lower American River Riparian Vegetation and Associated Special-Status Species

Cottonwoods (*Populus fremontii*), a dominant tree of riparian forests in the Central Valley, are considered an indicator species for the overall health of riparian forest vegetation. The germination, establishment, growth, and long-term survival of Fremont's cottonwood along the lower American River is dependent upon the dynamic flow regimes and fluvial geomorphic processes of the river. In particular, the capacity of the river to erode, transport, and deposit alluvial materials is central to the structure and maintenance of cottonwood ecosystems. Because cottonwood seed release and establishment has adapted over time to the flow regime and fluvial processes of the lower American River, maintenance of this regime is vital to sustain a viable cottonwood riparian system. Although the ecology of this species does not fully represent the range of conditions under which vegetation occurs in the riparian forest, it provides a model with which to evaluate the effects of flow changes on watercourses such as the lower American River. Data on cottonwood growth under various flow conditions has been adopted into recent regulatory documents such as the final FWCA prepared for the American River Water Resources Investigation (USFWS 1996). Further, investigators such as Sands et al. (1985) and Stromberg (1995) have provided data on the effects of flow changes on cottonwoods that can be used as objective measures of the adequacy of flow to maintain that species and, potentially, large portions of the riparian ecosystem along the lower American River.

While few studies have been conducted on the long-term flow regimes necessary for continued cottonwood regeneration and growth maintenance along the lower American River, several relatively short-term studies have provided insights into the relationship between river flows and cottonwood growth. In one study, the annual radial growth rate of young cottonwoods along a particular segment of the lower American River was found to be significantly related to the groundwater depth and to river flows during the March through October growing season (Stromberg 1995). The study found that cottonwoods had little or no radial growth when average river flows during the growing season dropped below 1,765 cfs. Monthly mean flows of 1,765 cfs are recommended by Stromberg (1995) as necessary for maintenance of radial growth. In order to assure some growth of cottonwoods, the USFWS recommends that an average minimum streamflow of 2,000 cfs occur during the March through October growing season.

A USFWS study concluded that an average flow of 3,000 cfs is required to provide "reasonable" growth and maintenance conditions for riparian vegetation (USFWS 1996). This recommendation is based on work by Caicco (1996 *in* CCOMWP 1999), which identified minimum flows of 3,000 cfs as sufficient for reasonable growth of cottonwoods. The USFWS (1997) correlated monthly mean flows of 3,000 cfs from April though June to peak inundation flows of 5,000 to 13,000 cfs, levels deemed critical to establishment of seedlings on riverine terraces.

Based on the above considerations, the criteria used to determine potentially significant impacts to cottonwoods and associated special-status species and habitats along the lower American River focused on monthly occurrences of flow reductions below Nimbus Dam and H Street Bridge that would be below the indices for maintenance of radial growth (1,765 cfs), some growth (2,000 cfs), and reasonable growth and maintenance of existing cottonwoods (3,000 cfs), during the growing season months of March through October over the 70-year period of record, compared to existing and No Action/No Project Alternative conditions. In addition, these

occurrences were further examined to determine the frequency they would occur in two or more consecutive months, and if these consecutive months would fall during the critical growing season months of April to July (CCOMWP 1999).

An additional analysis was performed to assess the exacerbation of an already degraded situation below Nimbus Dam and H Street Bridge for cottonwood radial growth maintenance during the growing season. For flows already below the 1,765 cfs index, flow reductions of five percent or more relative to the existing condition were assessed. The use of flow reductions of less than five percent was established because, as previously discussed, the models used, although mathematically precise, should be viewed as having "*reasonable detection limits.*" Two simulations having river flows at a given location within five percent of each other are considered to be essentially equivalent. Hence, only occasions when modeled flows differed by more than five percent were assessed for their biological significance. It is important to note, however, that this assessment was for disclosure purposes only because flows that are already below the 1,765 cfs flow index under the existing condition would imply that no maintenance of cottonwoods could occur and even if flows are further reduced, reduction would not further deter the maintenance of cottonwoods.

Finally, to assess potentially significant impacts to cottonwood germination, the monthly occurrences of flow reductions below Nimbus Dam and H Street Bridge below the lower index necessary to inundate terraces that are essential for cottonwood germination (i.e., 5,000 cfs) during the reported period for cottonwood seed release (i.e., April to July) was evaluated.

Lower American River Backwater Pond Recharge and Associated Special-Status Species

Backwater pond areas along the American River Parkway are generally the result of naturally formed gravel deposits and man-induced dredging, although some are likely to be remnant oxbow lakes, such as Bushy Lake. These backwater ponds and lagoons are known to occur throughout the lower American River system, but occur predominantly at Sacramento Bar, Arden Bar, Rossmoor Bar, and between Watt and Howe Avenues (Sands et al. 1985).

Backwater ponds can provide a relatively stable still-water habitat with open water areas and near-shore vegetation cover, and add greatly to the diversity of habitat in the riparian zone. Because of their hydrologic connection to the river, river flow and stage are important to maintaining habitat in backwater areas. Studies have been conducted to determine how these backwater ponds are influenced by flows in the lower American River (Sands et al. 1985). These ponds are located at varied distances from the river channel, have varied depths, and are at different elevations along the river. These studies have indicated that flows between 2,700 cfs and 4,000 cfs adequately recharge ponds closest to the river and off-river ponds, respectively (Sands et al. 1985).

Review of various flow regimes indicated that flows of 1,300 cfs were inadequate to recharge backwater ponds (Sands et al. 1985). Under these conditions, water was maintained only in shallow pools which would become choked with vegetation, therefore reducing habitat diversity and overall value through effective removal of open-water habitat. The same study indicated that at flows of 500 cfs, backwater ponds dried up. Because indices of 1,300 and 500 cfs were not

adequate to maintain even minimal backwater pond habitat functions, they were not evaluated as reasonable impact assessment criteria.

Based on these considerations, the criteria used to determine potentially significant impacts to backwater recharge and associated special-status species and habitats (including elderberry shrubs and VELB) along the lower American River focused on monthly occurrences of flow below Nimbus Dam and H Street Bridge that would be below the index for continued recharge of ponds closest to the river (i.e., 2,700 cfs) during all months of the year, over the 70-year period of record, relative to the basis of comparison. Monthly occurrences of flow below Nimbus Dam and H Street Bridge that would be below the index for continued recharge of off-river ponds (i.e., 4,000 cfs) also were assessed. In addition, these occurrences were further examined to determine the frequency with which they would occur in two or more consecutive months.

Folsom, Shasta, and Trinity Reservoir Vegetation and Associated Wildlife

Increased diversions from the American River could result in alterations to storage and surface elevations at major CVP reservoirs within the regional study area, including Shasta, Trinity, and Folsom reservoirs. Fluctuations at these reservoirs, in response to day-to-day operations and changes in runoff patterns, can affect vegetation that has been established at or near the water surface and within the drawdown zone. Vegetation, such as willows, that periodically establishes within the drawdown zone or near the waters' edge, is commonly inundated and lost during prolonged periods of high storage. Alternatively, plants that establish during periods of high storage may be lost during periods of reduced reservoir storage or drought.

The criteria used to determine potentially significant impacts to reservoir vegetation focused on change in elevation that would occur during the March through September period (CCOMWP 1999) over the 70-year period of record, relative to the basis of comparison. In addition, the drawdown zone vegetation of these reservoirs was evaluated to determine if it forms a contiguous riparian community, and the degree of its habitat value (CCOMWP 1999). An evaluation of whether or not an impact on terrestrial resources would be substantial must consider both the resource itself and how that resource fits in a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations (CCOMWP 1999).

Sacramento River Terrestrial Vegetation and Associated Wildlife

To assess potential significant impacts to riparian vegetation and associated wildlife species in the Sacramento River, substantial long-term average monthly flow reductions below Keswick Dam and at Freeport during the March through October growing season were evaluated. The magnitude of the flow after the reductions also was evaluated. As previously discussed, an evaluation of whether or not an impact on terrestrial resources would be substantial must consider both the resource itself and how that resource fits in a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations (CCOMWP 1999).

Sacramento-San Joaquin River Delta Vegetation and Associated Special-Status Species

To assess impacts to the Delta vegetation and associated special-status species, substantial long-term average monthly reductions at Freeport during the March through October growing season were evaluated. The magnitude of the flow after the reductions also was evaluated. In addition, fluctuations in water salinity were assessed by evaluating shifts in X2 position. If Delta habitats were found to be adversely affected by flow reductions and shifts in X2 position, then a finding of potentially significant impact to special-status species dependent on these habitats also was determined.

3.6.2.2 Applicable Laws, Ordinances, Regulations and Standards

The laws, ordinances, regulations, and standards discussed in this section were used to develop resource impact indicators and significance criteria used to evaluate impacts to terrestrial resources. Terrestrial resources in the study area could be protected under one or more of the following:

- Endangered Species Act of 1973, as amended
- California Endangered Species Act
- CEQA Guidelines Section 15380
- Section 404 of the Clean Water Act
- Section 2 of the Fish and Wildlife Coordination Act

Endangered Species Act

The general purpose of the federal ESA is to conserve ecosystems and species that depend on those ecosystems (Section 2). Federally protected special-status terrestrial species in the project area are the responsibility of the USFWS. All actions involving, or potentially involving, listed or proposed terrestrial species are regulated under Section 7(a)(2) of the ESA, which prohibits any federal agency from carrying out any action that is likely to jeopardize the continued existence and recovery of any listed species.

California Endangered Species Act

State endangered and threatened species are regulated under the CESA by the CDFG. Sections 2053, 2055, and 2090 of the CESA require review of proposed projects to ensure that those projects do not jeopardize the continued existence of endangered or threatened species or their habitat (Section 2053); that conservation of these species occur (Section 2055); and that consultation, when appropriate, occur with CDFG to provide mechanisms for accomplishing the above (Section 2090). CDFG also designates "species of special concern" for those species that are considered indicators of regional habitat changes or are considered to be potential future protected species.

California Environmental Quality Act

CEQA Guidelines (Section 15380) provide for including species not listed under the ESA and CESA to be treated as "rare or endangered" under the following circumstances:

- If the species' survival and reproduction in the wild are in immediate jeopardy;
- If the species is existing in such small numbers throughout all or a significant portion of its range that it could become endangered if its environment worsens;
- If the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and could be considered under the federal definition of "threatened;"
- If the project would cause a change in species composition, abundance, or diversity beyond normal variability; or
- If the project would result in the measurable degradation of sensitive habitats through filling, inundation, or other land use alteration.

Clean Water Act Section 404

Wetland impacts fall within the jurisdiction of the Corps under Section 404 of the Clean Water Act. Impacts to greater than three acres of jurisdictional wetlands, or "waters of the United States," would require an individual permit from the Corps while impacts of less than three acres are typically eligible for a Nationwide Permit. Impacts to less than one-third of an acre do not require Corps notification prior to construction of a project. This does not, however, preclude notification of appropriate agencies should listed species be involved.

Fish and Wildlife Coordination Act

Section 2 of the FWCA states that wildlife conservation shall receive equal consideration with other project purposes and will be coordinated with other features of water resources development projects.

3.6.2.3 Impact Indicators and Significance Criteria

The impact assessment provides a comparison of the potential effects upon terrestrial habitat and resources that may result from the Proposed Project or alternatives. **Tables 3.6-3, 3.6-4**, and **3.6-5** provide a summary of impact indicators and significance criteria. The significance criteria described in the tables have been developed for use in assessing potential impacts of the facilities construction, operations, and maintenance. Table 3.6-5 specifically provides CEQA guidelines that provide general guidance on the identification of circumstances that may result in a significant effect on the environment related to terrestrial resources, including special-status species.

Table 3.6-3
Terrestrial Resources Facilities-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Composition and location of plant community or wildlife within the project area, the location of project features, and the type and duration of construction activities.	❑ Decrease in habitat quantity and quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect long-term populations of listed and special-status species.
❑ Acres of wetlands.	❑ Decrease in wetland quantity or quality, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect wetland habitat and special-status species.

Table 3.6-4
Terrestrial Resources Diversion-Related Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Upper American River	
❑ Monthly mean flows (cfs) in the upper American River.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the growth, maintenance, and reproductive capability of upper American River riparian vegetation.
Folsom Reservoir	
❑ End-of-month water surface elevation (feet/msl) during March through September.	❑ Decrease and degradation of continuous stands of native vegetation of relatively high to moderate wildlife value over seasonal, annual and long-term time periods, relative to the basis of comparison.
Lower American River	
Fremont Cottonwoods[a] and Terrace Inundation	
❑ Monthly mean flows (cfs) below Nimbus Dam and at H Street Bridge occurring each month from March through October.	❑ Decrease in flow below 1,765 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the long-term radial growth maintenance of cottonwoods for any month of this period over the 70-year period of record. ❑ Decrease in flow below 2,000 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect some growth in cottonwoods for any month of this period over the 70-year period of record. ❑ Decrease in flow below 3,000 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect reasonable growth and maintenance of existing cottonwoods for any month of this period over the 70-year period of record. ❑ Decrease in flow below 5,000 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect terrace inundation, and therefore, cottonwood germination, for any month of this period over the 70-year period of record.

Table 3.6-4 (Continued)
Terrestrial Resources Diversion-Related Impact Indicators and Significance Criteria

Backwater Recharge	
❑ Monthly mean flows (cfs) below Nimbus Dam and H Street Bridge occurring each month of the year.	❑ Decrease in flow below 2,700 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect adequate recharge of backwater ponds closest to the lower American River for any month of this period over the 70-year period of record. ❑ Decrease in flow below 4,000 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect continued recharge of off-river ponds for any month of this period over the 70-year period of record. ❑ Decrease in flow below 2,700 cfs, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect adequate recharge of backwater ponds closest to the lower American River, and therefore affect elderberry shrubs and VELB, which are dependent on this habitat, for any month of this period over the 70-year period of record.
Shasta and Trinity Reservoirs	
❑ End-of-month reservoir water surface elevation (feet/msl) during March through September.	❑ Decrease and degradation of continuous stands of native vegetation of relatively high to moderate wildlife value over seasonal, annual and long-term time periods, relative to the basis of comparison.
Upper Sacramento River	
❑ Monthly mean flows (cfs) from March through October.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the growth, maintenance, and reproductive capacity of the riparian vegetation in the upper Sacramento River for any month of this period over the 70-year period of record.
Lower Sacramento River and the Delta	
❑ Monthly mean flows (cfs) from March through October. ❑ Position of X2.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the growth, maintenance, and reproductive capacity of vegetation in the lower Sacramento River and the Delta for any month of this period over the 70-year period of record. ❑ Upstream shift in X2 position, relative to the basis of comparison, of sufficient magnitude (i.e., greater than 1 km) and frequency to adversely affect the growth, maintenance and reproductive capacity of vegetation of the Delta for any month of this period over the 70-year period of record.
Oroville Reservoir	
❑ End-of-month reservoir water surface elevation (feet/msl) during March through September.	❑ Decrease in reservoir water surface elevation, and degradation of continuous strands of native vegetation of relatively high to moderate wildlife value over seasonal, annual, and long-term time periods, relative to the basis of comparison.

Table 3.6-4 (Continued)
Terrestrial Resources Diversion-Related Impact Indicators and Significance Criteria

Feather River	
❑ Monthly mean flows (cfs) from March through October below Oroville Dam.	❑ Decrease in flow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect the growth, maintenance, and reproductive capacity of the riparian vegetation of the Feather River for any month of this period over the 70-year period of record.

[a] Freemont cottonwoods are used as in indicator species for assessment of riparian habitats as much of the lower American River habitat is dominated by these species, and the correlation between cottonwoods and flow in the lower American River is well-documented.

Table 3.6-5
CEQA Thresholds of Significance

Impact Indicators	Significance Criteria
❑ Riparian habitat or other natural communities.	❑ Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS.
❑ Special-status plant or wildlife species or their habitat.	❑ Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or the USFWS.
❑ Jurisdictional wetlands.	❑ Substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means.
❑ The movement or reproductive activities of native resident wildlife species.	❑ Substantial interference with the movement of any native resident wildlife species or with established native resident wildlife corridors, or impede the use of native wildlife nursery sites.
❑ Locally important terrestrial resources.	❑ Conflict with any local policies or ordinances protecting terrestrial resources, such as a tree preservation policy or ordinance.
❑ Inconsistencies between project activities and existing biological conservation plans.	❑ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state biological conservation plan.

3.6.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related terrestrial resources impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.6-1: Disturbance of terrestrial resources of the project area due to installation and removal, operation, and maintenance of the seasonal pump station.

Impacts to terrestrial resources under the No Action/No Project Alternative would not differ substantially from the existing condition. Although the pump station and related facilities would be installed earlier and dismantled later in the year, the timing effects on habitats and species would not be significant. The same land and in-river areas (sump pond) would continue to be subject to seasonal pump station construction, operation, and maintenance activities. These areas provide only marginal foraging habitat to wildlife species occurring in the project area. Construction, operation, and maintenance activities under the No Action/No Project Alternative would not result in an overall decrease in habitat quantity or quality, relative to the existing condition, and would represent a less-than-significant impact to terrestrial resources, including special-status species, of the North Fork American River.

Impact 3.6-2: Disturbance of riparian and wetland habitat of the North Fork American River due to installation, removal, operation, and maintenance of the seasonal pump station.

Impacts to riparian and wetland areas under the No Action/No Project Alternative would not differ substantially from the existing condition. Although the seasonal facilities would be installed earlier and dismantled later in the year, the timing effects on habitats and species would not be significant. The same land and in-river areas would continue to be subject to seasonal pump station construction, operation, and maintenance activities. Construction, operation, and maintenance activities under the No Action/No Project Alternative would not result in an overall decrease in riparian or wetland habitat quantity or quality, relative to the existing condition, and would represent a less-than-significant impact to wetland habitats and associated species of the North Fork American River at the project site.

Proposed Project

Impact 3.6-3: Disturbance of terrestrial resources due to construction, operation and maintenance of the year-round pump station.

Noise related to construction (such as that caused by excavation activities) and human presence could disturb endangered and threatened species if they are present in the area (i.e., bald eagle, little willow flycatcher, and American peregrine falcon). Bald eagles could be present during winter, and the little willow flycatcher could be present during spring and fall. Peregrine falcons

could be present at the site during any time of the year. However, these species are rare and do not nest in the area, are highly mobile, and could use other similar or higher quality habitats in adjacent areas of the river canyon. Conversion of existing habitats and the temporary and permanent disturbances expected with excavation and fill activities are not anticipated to affect roosting areas for these listed species. Most of the construction activities would occur in a previously dewatered part of the river channel that contains no roosting habitat for the bald eagle or peregrine falcon, and a negligible roosting habitat for the little willow flycatcher. These construction-related impacts also would eliminate a negligible amount of foraging habitat for any of these listed species. Operation activities would likely disturb federally listed species at a level below the existing condition, because the annual installation and dismantling of seasonal facilities would not be necessary.

Special-status species (i.e., California horned lizards, spotted bat, greater mastiff-bat, and yellow-legged foothill frogs) may be temporarily affected by facilities-related construction effects associated with the Proposed Project.

California Horned Lizard

California horned lizards could occur in successional oak woodland and disturbed habitats in the project area. Under the Proposed Project, construction activities in the project area could involve disturbance or alteration of potential horned lizard habitat. The California horned lizard could be affected in two ways: (1) construction of the permanent pump station and other facilities could result in disturbance, harm, or mortality of individuals of this species; or (2) potential habitat for this species could be temporarily disturbed or eliminated. Temporary disturbances could include trampling or compaction of burrow sites or ant colonies, the primary food source of the horned lizard. Environmental protection measures would be implemented prior to and during construction and reduce impacts to California horned lizards to less than significant.

Spotted Bat and Greater Western Mastiff Bat

The spotted bat and greater western mastiff-bat could occupy caves, crevices, and other features of the project study area. Noise from blasting could disturb and cause roosting bats to abandon the area. If other roosting sites are not found soon afterwards, mortality could result. If project features physically altered any roosting sites, the habitat of this species would be reduced, thereby affecting the population of the bats in the project area. Environmental protection measures would be implemented and reduce impacts to these bat species.

Impact 3.6-4: Disturbance of riparian and wetland habitats of the North Fork American River due to construction, operation, and maintenance of project facilities.

Disturbance and loss of riparian and wetland habitat as a result of earthwork, excavation material disposal, and placement of pump station-related facilities has the potential to result in impacts upon foothill yellow-legged frog, western toad, and chorus frog species that have been observed within the project area. The potential area of wetland loss has been estimated at less than one-quarter acre in areas within the east keyway area proposed for excavation material placement and along the west riverbank due to construction activity and possible pump station placement. Disturbance of

other wetland or riparian areas also would result from dust accumulation, hydrology alteration, and construction-related equipment use. These activities would result in potentially significant impacts upon the species that utilize these habitats. Reclamation would ensure that a qualified biologist be retained to implement environmental protection measures described below.

Foothill Yellow-legged Frog

Sightings of foothill yellow-legged frogs have been reported upstream of the bypass tunnel inlet. Physical alteration of riparian and upland habitat through construction of the diversion structure, closure of the bypass tunnel and restoration of the river channel could result in short-term temporary loss of habitat and disturbances to individuals of the species. Construction-related noise, however, is not likely to affect this species as reports indicate findings of adult frogs within 10 feet of operation suction dredges (J. Hiscox, pers. comm. 1997). Over the long-term, river channel restoration would result in increased potential habitat area for this species, resulting in a potential benefit (J. Hiscox, pers. comm. 1997). Operation and maintenance activities would not result in substantial disturbance of the newly developed habitat. Environmental protection measures have been identified through discussions with CDFG personnel to minimize potential construction-related impacts to these species. The measures include pre-construction surveys by a qualified biologist to verify the presence of the foothill yellow-legged frogs and photo documentation of habitat conditions. Additionally, any adult tadpoles of the species found in the construction impact area would be captured and relocated to suitable habitat upstream of the site away from the influence of construction-related activities. These measures would reduce impacts to this species to less than significant.

Western Toad and Chorus Frog

Tadpoles of these species were observed at the site during the preliminary wetland delineation for the project (Stallings 1998). Construction-related loss or disturbance of wetland areas would result in impacts upon these species. Operations and maintenance activities would not result in disturbance of wetland areas and would not affect these species. Environmental protection measures to protect and restore wetland habitat have been developed for the project. These measures include avoiding and protecting wetlands to minimize the total area disturbed or lost, and capture and relocation of adult and tadpoles of the species from wetland areas that cannot be avoided or protected during construction to appropriate alternative locations approved by CDFG. River channel restoration would result in re-creation of aquatic habitat through the project area, potentially benefiting these species and impacts would be considered less than significant.

Impact 3.6-5: Disturbance of terrestrial resources of the North Fork American River associated with construction and use of the public river access sites at Oregon Bar.

Improvements at Oregon Bar would result in temporary disturbance and permanent removal of vegetation along the access road, trail, turnaround, and proposed parking area. Vegetation along the road, trail and turnaround areas primarily consist of coyote bush (*Baccharis pilularis*) and grass species such as soft chess (*Bromus hordaceus*), ryegrass (*Lolium sp.*), and wild barley (*Hordeum murinum ssp. leporinum*). These species are ruderal invasive species of relatively low habitat value. Additional species that may be affected along the trail and turnaround nearer to the river,

include manzanita shrubs (*Arctostaphylos sp.*), California blackberry (*Rubus ursinus*), toyon (*Heteromeles arbutifolia*), and California coffeeberry (*Rhamnus californica*). These species have somewhat higher habitat value than the ruderal species; however, impacts would be minimized by plantings of native shrubs and grasses along the improved trail and roadway following construction. Minimal grading of the proposed parking area at the Auburn Dam batch plant site would result in removal of sparse herbaceous cover and possibly some shrub species. Due to the highly disturbed nature of this site, these changes would not be considered significant. No mature trees would be removed by these activities. The final parking lot design and construction methods would be sized and implemented such that wetland habitat values at the site would be retained. Open water areas would not be filled; these areas would be fenced for avoidance during construction. Placement of rock, wood fences, or other barrier prior to opening the site for use would minimize potential public disturbances of these habitats.

Increased use of the project area would not result in loss of vegetation beyond the anticipated trampling of ruderal plant species that likely would become established at the parking area and along the road and trails. These impacts would not be considered significant.

Upstream Diversion Alternative

Impact 3.6-6: Disturbance of terrestrial resources due to construction, operation, and maintenance of project facilities.

The Upstream Diversion Alternative construction activities would involve substantially less earthwork than the Proposed Project because this alternative would not include river channel restoration or development of public river access facilities. Construction-related effects upon special-status species at the site generally would be of the same nature as described for the Proposed Project (see Impact 3.6-3) and would be less than significant for threatened or endangered bird species. For the terrestrial species of concern, the impact would be potentially significant due to the potential to harm individuals by trampling or other disturbances or loss of habitat at the site. The same environmental protection measures described for the Proposed Project would be incorporated into the construction management plan for the Upstream Diversion Alternative should it be the one selected. The resultant impact would be less than significant.

Impact 3.6-7: Disturbance of riparian and wetland habitats of the North Fork American River due to installation, operation, and maintenance of project facilities.

The potential impacts to riparian and wetland areas under the Upstream Diversion Alternative would be similar to those described for the Proposed Project (see Impact 3.6-4). Important differences in the Upstream Diversion Alternative would be that the loss of wetland area (up to 0.11 acre) along the eastern Auburn Dam keyway would be permanent and would not be re-created at the site because this alternative would not include river channel restoration. The loss of the wetland habitat would be mitigated through creation of replacement wetland areas through coordination with regulatory agencies, including the Corps. As with the Proposed Project, environmental protection measures would be implemented prior to and during construction of the project. Riparian vegetation would likely become re-established both upstream and downstream of the bypass tunnel, as appears to occur at the site seasonally under existing conditions. The

Upstream Diversion Alternative would not include development of public river access locations, and, would therefore have no impact upon wetland areas observed at the Auburn Dam batch plant site. Overall, impacts upon riparian and wetland habitat and associated special-status or other species would be considered less than significant.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.6-1, H-3.6-2, etc.).

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP or SWP operations associated with the Action Alternatives also would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the Action Alternatives.

Impact 3.6-8: Flow-related impacts to riparian vegetation of the upper American River.

Implementation of the Action Alternatives would not significantly affect streamflows in the upper American River, relative to the existing condition (Section 3.5, Fish Resources and Aquatic Habitat). Therefore, no adverse environmental effects on the upper American River riparian vegetation would be anticipated to occur under the Action Alternatives relative to the existing condition. Impacts to upper American River riparian vegetation would be considered less than significant.

Impact 3.6-9: Flow-related impacts to riparian vegetation of the lower American River.

The analysis for flow impacts to riparian vegetation of the lower American River evaluates changes in flow below Nimbus Dam and H Street Bridge during the growing season months, March through October. Tables H-3.6-1 and H-3.6-2 present the simulated frequency of occurrence of flows below specified flow indices in the lower American River below Nimbus Dam and H Street Bridge, respectively, under the Action Alternatives and the existing condition. Simulated long-term average American River flows below Nimbus Dam and H Street Bridge are displayed in Figures H-3.6-1 and H-3.6-2, respectively, for the existing condition and Action Alternatives.

Changes in lower American River flows associated with the Action Alternatives would result in slightly more frequent reduction of flows below the indices indicated for maintenance of cottonwood radial growth, some growth, and reasonable growth and maintenance and the index for terrace inundation. Additionally, these flow reductions would result in a very slight increase in the number of consecutive occurrences where flows would be reduced below the indices, compared to

the existing condition. However, overall, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on the long-term population growth and maintenance of lower American River cottonwoods. Because cottonwoods are considered a good indicator of the health of the lower American River riparian community, flow-related impacts to lower American River riparian vegetation would be less than significant.

Flows to Support Mature Cottonwood Radial Growth Maintenance - 1,765 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 1,765 flow index, the reported long-term minimum flow required for radial growth maintenance of mature cottonwoods, during March through October. Under the existing condition, monthly mean flows below Nimbus Dam fall below 1,765 cfs in 128 out of the 560 months included in the analysis. Implementation of the Proposed Project or Upstream Diversion Alternative would result in monthly mean flows below 1,765 cfs in 134 out of 560 months. The Action Alternatives would result in monthly mean flows below Nimbus Dam that would be below the maintenance index approximately 1.1 percent more often than under the existing condition. Lower American River flows simulated below H Street Bridge under the existing condition would fall below 1,765 cfs in 138 of the 560 months included in the analysis. The Action Alternatives would result in flows that are below 1,765 cfs in 147 of the 560 months included in the analysis. Therefore, under the Action Alternatives, flows in the lower American River below H Street Bridge would be below the index approximately 1.6 percent more often than under the existing condition.

For flows below Nimbus Dam or H Street Bridge already at or above 1,765 cfs under the existing condition, the Action Alternatives would not reduce flows below the index in consecutive months during any year (out of 70 years modeled) relative to the existing condition. Under Action Alternatives conditions, there would be instances of exacerbation of an already detrimental situation for cottonwood radial growth maintenance during the growing season. For flows below Nimbus Dam that are already below 1,765 cfs under the existing condition, there would be 17 occurrences in which these flows would be reduced by five percent or more under the Action Alternatives. However, in only three occurrences would these flow reductions occur in two or more consecutive months, and in one of these occurrences the consecutive months would fall outside of the critical growing period of April through July. For flows below H Street Bridge, there would be 20 occurrences during the March through October period in which flows that are already below 1,765 cfs under the existing condition would be reduced by five percent or more under the Action Alternatives. However, in only four occurrences would these flow reductions occur in two or more consecutive months, and in two of these occurrences the consecutive months would fall outside of the critical growing period of April through July. Moreover, when flows are already below 1,765 cfs under the existing condition, radial growth maintenance of cottonwoods would not occur and, therefore, further flow reductions under the Action Alternatives would not further deter the maintenance of cottonwoods. Overall, because flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect the radial growth maintenance of mature cottonwoods, this would represent a less-than-significant impact.

Flows to Support Some Cottonwood Growth - 2,000 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 2,000 cfs flow index, the reported long-term minimum flow required to support some growth of cottonwoods during the growing season of March through October. Under the existing condition, flows below Nimbus Dam would be below 2,000 cfs in 140 of the 560 months included in the analysis. Under the Action Alternatives, flows below Nimbus Dam would be below 2,000 cfs in 149 of the 560 months included in the analysis. This change represents approximately a 1.6 percent increase in the frequency of monthly mean flows below Nimbus Dam under the 2,000 cfs index. Monthly mean flows for the existing condition below H Street Bridge would fall below the 2,000 cfs index in 176 of the 560 months of the analysis. Under the Action Alternatives, monthly mean flows below H Street Bridge would fall below the 2,000 cfs flow index in 187 out of the 560 months included in the analysis. Overall, the change represents an approximate two percent increase in the frequency that monthly mean flows below H Street Bridge would fall below 2,000 cfs, relative to the existing condition.

For flows below Nimbus Dam that are at or above 2,000 cfs under the existing condition, the Action Alternatives would not reduce flows below the index in consecutive months during any year of the 70-year period of record. For flows below H Street Bridge that are at or above 2,000 cfs under the existing condition, there would be only one occurrence of two or more consecutive months in which the Action Alternatives would reduce these flows below the index, over the 70-year period of record. These consecutive months would fall outside the critical growing season of April through July. Because these flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect some growth in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Reasonable to Maximum Cottonwood Growth Rates - 3,000 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below 3,000 cfs, the reported flow required to support reasonable to maximum cottonwood growth rate during the growing season of March through October. Under the existing condition, monthly mean flows below Nimbus Dam below 3,000 cfs would occur in 302 out of 560 months included in the analysis. Under the Action Alternatives, monthly mean flows below Nimbus Dam would be below 3,000 cfs in 310 out of 560 months included in the analysis. Overall, the Action Alternatives represents about a one percent decrease in the frequency that monthly mean flows would be at or above 3,000 cfs, relative to the existing condition. Under the Action Alternatives, monthly mean flows below H Street Bridge below 3,000 cfs would occur in 325 out of 560 months of the analysis, relative to 320 out of 560 months under the existing condition. Overall, the Action Alternatives represents about a one percent decrease in the frequency that monthly mean flows below H Street Bridge would be at or above 3,000 cfs, relative to the existing condition.

For flows below Nimbus Dam or H Street Bridge that are at or above 3,000 cfs under the existing condition, the Action Alternatives would not reduce flows below the index in consecutive months during March through October, over the 70-year period of record. Because these flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect

reasonable to maximum growth in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Terrace Inundation for Cottonwood Germination - 5,000 cfs Index

Previous field studies conducted on the lower American River concluded that peak flows between 5,000 cfs and 13,000 cfs during April to July (the reported period for cottonwood seed release) are necessary to inundate terraces that are essential for cottonwood germination, with the highest terraces inundated at 50,000 cfs (CCOMWP 1999). Implementation of the Action Alternatives relative to the existing condition would not result in a reduction in the number of occurrences below Nimbus Dam or H Street Bridge in which mean peak flows would be above 5,000 cfs. As a result, this would represent a less-than-significant impact.

Impact 3.6-10: Flow-related impacts to backwater pond recharge in the lower American River (Nimbus Dam and H Street Bridge).

Tables H-3.6-3 and H-3.6-4 and Figures H-3.6-3 and H-3.6-4 present the frequency of occurrence of flows within the ranges required for backwater recharge below Nimbus Dam and at H Street Bridge, respectively, for existing and Action Alternatives conditions. Overall, changes in lower American River flows associated with the Action Alternatives relative to the existing condition would result in a slightly more frequent reduction of flows below the indices for adequate recharge of backwater ponds closer to the lower American River, and the continued recharge of off-river backwater ponds. However, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on backwater pond habitat of the lower American River, and therefore would be considered less than significant.

Flows to Support Adequate Recharge of the Ponds Closest to the Lower American River - 2,700 cfs Index

Vegetation around backwater ponds closest to the river is typical of the riparian associations in the area and is composed of mixed-age willow, alder, and cottonwood. Because the water is slower moving and the ponds are isolated from human disturbances, these areas tend to be of higher value to wildlife (Sands et al. 1985). Wildlife species that have been recorded in these areas include pied-billed grebe (*Podilymbus podiceps*), American bittern (*Botaurus lengtiginosus*), green heron (*Butorides striatus*), common merganser (*Mergus merganser*), white-tailed kite (*Elanus leucurus*), wood duck (*Aix sponsa*), yellow warbler (*Dendroica petechia*), warbling vireo (*Vireo gilvus*), dusky-footed woodrat (*Neotoma fuscipes*), western gray squirrel (*Sciurus griseus*), Pacific tree frog (*Hyla regilla*), and western toad (*Bufo spp.*).

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 2,700 cfs flow index, the reported long-term minimum flow required to provide adequate recharge of the ponds closer to the lower American River, relative to the existing condition. Under the existing condition, monthly mean flows below Nimbus Dam below 2,700 cfs would occur in 470 of the 840 months included in the analysis. Implementation of the Action Alternatives would result in monthly mean flows below 2,700 cfs in 474 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below 2,700 cfs below Nimbus Dam

approximately 0.5 percent more often than under the existing condition. For flows below H Street Bridge, long-term monthly mean flows below 2,700 cfs under the existing condition would occur in 492 of the 840 months included in the analysis. Implementation of the Action Alternatives would result in monthly mean flows below 2,700 cfs in 499 of the 840 months included in the analysis. Overall, the Action Alternatives would result in monthly mean flows below H Street Bridge that would be below the 2,700 cfs index approximately 0.8 percent more often than under the existing condition.

For flows below Nimbus Dam or H Street Bridge that are at or above 2,700 cfs under the existing condition, the Action Alternatives would not reduce flows below the index in consecutive months during any year of the 70-year period of record. Because flow reductions under the Action Alternatives relative to the existing condition would not occur with sufficient magnitude and/or frequency to significantly adversely affect adequate recharge of ponds closer to the lower American River, this would represent a less-than-significant impact.

Flows to Support Continued Recharge of Off-River Ponds - 4,000 cfs Index

Vegetation associated with off-river ponds would be similar to vegetation for ponds closest to the river (discussed above). Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 4,000 cfs flow index, the reported long-term flow required to provide continued recharge of off-river ponds, relative to the existing condition. Under the existing condition, monthly mean flows below 4,000 cfs below Nimbus Dam would occur in 609 of the 840 months included in the analysis. Implementation of the Action Alternatives would result in monthly mean flows below 4,000 cfs in 611 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below Nimbus Dam that would be below 4,000 cfs approximately 0.2 percent more often than under the existing condition. For flows below H Street Bridge, the existing condition results in monthly mean flows below Nimbus Dam below 4,000 cfs in 623 of the 840 months included in the analysis. Implementation of the Action Alternatives would result in monthly mean flows below 4,000 cfs in 634 of the 840 months included in the analysis. Overall, the Action Alternatives would result in monthly mean flows below H Street Bridge that would be below 4,000 cfs approximately 1.3 percent more often than under the existing condition.

For flows below Nimbus Dam or H Street Bridge that are at or above 4,000 cfs under the existing condition, the Action Alternatives would not reduce flows below the index in consecutive months over the 70-year period of record. Because flow reductions under the Action Alternatives relative to the existing condition would not occur with sufficient magnitude and/or frequency to significantly adversely affect continued recharge of off-river ponds, this would represent a less-than-significant impact.

Impact 3.6-11: Impacts to special-status species dependent on lower American River riparian and open water habitats (Nimbus Dam and H Street Bridge).

Bald eagle, bank swallow, yellow warbler, yellow-breasted chat, river otter, and several other species are special-status species known to occur, nest, or periodically forage in open water and cottonwood forest habitats along the lower American River. Therefore, potential impacts to

cottonwood forests also are assessed to determine if special-status species dependent on this habitat would be affected by the Action Alternatives.

As previously discussed, when compared to the existing condition, the Action Alternatives would result in monthly mean flows below Nimbus Dam and H Street Bridge that would be below the 1,765 cfs cottonwood radial growth maintenance flow index approximately 1.1 and 1.6 percent more often, respectively. Moreover, the Action Alternatives would not result in consecutive months over the 70-year period of record in which flows below Nimbus Dam or H Street Bridge that are at or above 1,765 cfs would be reduced below this flow index.

The Action Alternatives also would not result in substantial monthly mean flow reductions below Nimbus Dam and H Street Bridge below the 2,000 cfs flow index for some growth in cottonwoods, relative to the existing condition. The Action Alternatives would result in monthly mean flows below Nimbus Dam and H Street Bridge that are below 2,000 cfs approximately 1.6 and 2.0 percent more often, respectively. Also, flows below Nimbus Dam that are at or above 2,000 cfs under the existing condition would not be reduced under the Action Alternatives below the index in consecutive months, over the 70-year period of record. For flows below H Street Bridge that are at or above 2,000 cfs under the existing condition, there would be only one occurrence of two or more consecutive months in which the Action Alternatives would reduce these flows below this flow index, over the 70-year period of record. Because impacts to cottonwood radial growth maintenance and some growth resulting from the Action Alternatives would be less-than-significant, impacts to special-status species associated with riparian and open water habitats also would be less-than-significant.

Impact 3.6-12: Impacts to special-status species dependent on lower American River backwater pond/marsh habitats.

Sanfords arrowhead, western pond turtle, valley elderberry shrubs, the VELB, and tricolored blackbirds are special-status species known to occur in backwater pond areas along the lower American River. Because impacts to recharge of ponds resulting from the Action Alternatives relative to the existing condition would be less-than-significant, impacts to special-status species associated with backwater pond/marsh habitats also would be less-than-significant.

Impact 3.6-13: Impacts to elderberry shrubs and VELB along the lower American River.

USFWS has designated the American River Parkway as critical habitat for VELB, and this species has been recorded in elderberry shrubs near backwater ponds along the lower American River. Because impacts to backwater habitats under the Action Alternatives relative to the existing condition were determined to be less than significant, elderberry shrubs that are dependent on these habitats also are not expected to be adversely affected. Impacts to elderberry shrubs and VELB would be less than significant.

Impact 3.6-14: Impacts associated with Folsom, Shasta, and Trinity reservoir vegetation.

Compared to the existing condition, the Action Alternatives would result in essentially equivalent long-term average end-of-month water elevations for Folsom, Trinity, and Shasta

reservoirs. Folsom, Shasta, and Trinity reservoir water levels fluctuate seasonally and annually, and therefore non-native (weedy) vegetation becomes established in areas below the high water line during periods of low water. Because the drawdown zone is vegetated primarily with non-native herbaceous plants and scattered willow shrubs that do not form a contiguous riparian community, they are not considered of high wildlife value, and will likely reestablish as water levels fluctuate. Vegetation in these regions is ephemeral, desiccating when reservoir levels drop over consistent periods of time, and succumbing to inundation when water levels rise. Therefore, the value of nearshore habitat is related to the stability of reservoir surface water levels. Because maintenance of a consistent water elevation runs counter to inflow patterns and common flood control and water supply practices, quality nearshore vegetation and the associated wildlife habitat that it would provide can rarely establish. Although project conditions would result in variations in end-of-month water elevation relative to the existing condition, areas of high and consistent habitat values are not adversely affected under the Action Alternatives. Based on these findings, elevation fluctuations associated with the Action Alternatives would represent a less-than-significant impact to reservoir vegetation.

Impact 3.6-15: Flow-related impacts to riparian vegetation of the upper Sacramento River.

Much of the Sacramento River is confined by levees that reduce the natural diversity of riparian vegetation. Agricultural land (e.g., rice, dry grains, pastures, orchards, vineyards, and row and truck crops) is common along the lower reaches of the Sacramento River, but is less common in the upper portions (CDFG 1988). The bands of riparian vegetation that occur along the Sacramento River are similar to those found along the lower American River, but are somewhat narrower and not as botanically diverse. The riparian communities consist of Valley oak, cottonwood, wild grape, box elder (*Acer negundo*), elderberry (*Sambucus mexicanus*), and willow. Freshwater, emergent wetlands occur in the slow moving backwaters and are primarily dominated by tules (*Scirpus acutus* var. *occidentalis*), cattails, rushes, and sedges (SAFCA and Reclamation 1994). Although riparian vegetation occurs along the Sacramento River, these areas are confined to narrow bands between the river and the river side of the levee.

The wildlife species inhabiting the riparian habitats along the lower Sacramento River are essentially the same as those found along the lower American River. These include, but are not limited to, black phoebe (*Sayornis nigricans*), sora rail (*Porzana carolina*), great horned owl, Swainson's hawk (*Buteu swainsoni*), ash-throated flycatcher, wood duck, great blue heron, great egret, green heron, California ground squirrel, and coyote. The freshwater/emergent wetlands represent habitat for many wildlife species, including reptiles and amphibians such as the western pond turtle, bullfrog, and Pacific tree frog. Agricultural areas adjacent to the river also represent foraging habitat for many raptor species.

Under the Action Alternatives, long-term average flows on the upper Sacramento River during the March through October growing season would be essentially equivalent to slightly increased relative to the existing condition. The Action Alternatives would result in long-term average flow decreases below Keswick Dam ranging from three to seven cfs during the months of August, September and October, and increases ranging from one to 18 cfs during the remaining months of the growing season. During the critical months of the growing season, the Action Alternatives would result in flow increases that would have the potential to benefit riparian vegetation in the

Sacramento River. In the context of riparian vegetation effects, the frequency and magnitude of flow decreases under the Action Alternatives would be small considering that monthly mean flows would range from 5,345 to 13,270 cfs during the months of the growing season. Because the largest and only long-term average flow reduction in the upper Sacramento River during the growing period of March through October that would occur under the Action Alternatives (i.e., October) would vary from the existing condition by only one percent, flows under the Action Alternatives are not expected to adversely affect riparian vegetation along the river, and impacts are considered less than significant.

Impact 3.6-16: Impacts to vegetation associated with the lower Sacramento River and the Delta.

Lower Sacramento River riparian vegetation would be similar to upper Sacramento River vegetation (discussed above).

The analysis of effects on riparian vegetation within the lower Sacramento River is based on the modeling of primary growing season (March through October) river flows at Freeport under the existing condition and the Action Alternatives. The largest long-term average flow reduction under the Action Alternatives relative to the existing condition would be two percent during the month of August. The Action Alternatives would result in long-term average flow decreases at Freeport ranging from 17 to 24 cfs during most months of the growing season. In the context of riparian vegetation effects, the frequency and magnitude of these flow decreases under the Action Alternatives would be small considering that long-term average flows would range from 12,043 (i.e., October) to 33,441 cfs (i.e., March) during the months of the growing season. Also, tidal action influences the river stage in this area. Because flow reduction would not be of sufficient magnitude and frequency to significantly alter existing riparian habitat dependent on the lower Sacramento River flows, flows under the Action Alternatives are not expected to adversely affect riparian vegetation or species along the river and impacts are considered less than significant.

Most of the vegetation in the Delta consists of irrigated agricultural fields and associated ruderal (disturbed), non-native vegetative "fringes" that border cultivated fields. Throughout much of the Delta, these areas border the levees of various sloughs, channels, and other waterways within the historic floodplain. Native habitats include remnant riparian vegetation that persists in some areas, with brackish and freshwater marshes also being present. Saline wetlands consist of pickleweed (*Salicornia virginica*), cord grass (*Spartina* sp.), glasswort (*Salicornia* sp.), saltgrass (*Distichlis spicata*), sea lavender (*Limonium californicum*), arrow grass (*Triglochin* spp.), and shoregrass (*Monanthochloe littoralis*). These wetlands are very sensitive to fluctuations in water salinity, which are determined by water flows into the Delta (San Francisco Estuary Project 1993).

Under the Action Alternatives, there would not be a shift in the long-term average position of X2 relative to the existing condition. In fact, the maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 0.7 km. Because Sacramento River flow reductions would not be of sufficient magnitude and frequency, and because there would not be a shift in the long-term average X2 position, flows under the Action Alternatives are not expected to adversely affect vegetation associated with the Delta, and impacts are considered less than significant.

Impact 3.6-17: Impacts to Delta habitats of special-status species.

The wetlands of the Delta represent habitat for a number of shorebirds and waterfowl species including California black rail (*Laterallus jamaicensis coturniculus*), western sandpiper (*Calidris mauri*), long-billed curlew (*Numenius americanus*), greater yellow-legs (*Tringa melanoleuca*), American coot (*Fulica americana*), gadwall (*Anas strepera*), canvas back (*Aythya valisineria*), American wigeon, common moorhen, killdeer and mallard. These areas also support a number of mammals such as river otter (*Lutra canadensis*), beaver (*Castor canadensis*), coyote, gray fox, and muskrat. Several species of reptiles and amphibians also occur in this region.

When compared to the existing condition, the Action Alternatives would result in infrequent long-term average flow reductions in the Sacramento River during certain times of the year. However, flows would not be reduced by sufficient magnitude and/or frequency to significantly alter existing habitats dependent on the Delta. In addition, under the Action Alternatives, there would not be a shift in the long-term average position of X2 relative to the existing condition. The maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 0.7 km. Because Delta habitats would not be adversely affected, the special-status species dependent on these habitats also would not be expected to be adversely affected; therefore, this impact would be considered less than significant.

Impact 3.6-18: Impacts to Oroville Reservoir or Feather River vegetation and special-status species.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the existing condition. Any small changes that might occur would be considered to represent less-than-significant impacts upon these resources.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.6-19: Flow-related impacts to riparian vegetation of the upper American River.

The Action Alternatives would not significantly affect streamflows in the upper American River, relative to the No Action/No Project Alternative (see Section 3.5, Fish Resources and Aquatic Habitat). Therefore, adverse environmental effects to the upper American River riparian vegetation are not anticipated to occur under the Action Alternatives relative to the No Action/No Project Alternative. Impacts to upper American River riparian vegetation are considered less than significant.

Impact 3.6-20: Flow-related impacts to riparian vegetation of the lower American River.

Tables H-3.6-5 and H-3.6-6 present the simulated frequency of occurrences of flows below specific flow indices on the lower American River below Nimbus Dam and H Street Bridge, respectively, under the No Action/No Project Alternative and Action Alternatives. Simulated

long-term American River flows below Nimbus Dam and H Street Bridge are displayed in Figures H-3.6-3 and H-3.6-4, respectively, for the No Action/No Project and Action Alternatives.

Overall, changes in lower American River flows associated with the Action Alternatives relative to the No Action/No Project Alternative would result in slightly more frequent reduction of flows below the indicated indices for maintenance of cottonwood radial growth, some growth and reasonable to maximum growth, and the index for terrace inundation. However, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on the long-term population growth and maintenance of lower American River cottonwoods. Because cottonwoods are considered a good indicator of the health of the lower American River riparian community, flow-related impacts to lower American River riparian vegetation would represent a less-than-significant impact.

Flows to Support Mature Cottonwood Radial Growth Maintenance - 1,765 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 1,765 cfs flow index. Under the No Action/No Project Alternative, monthly mean flows below Nimbus Dam fall below 1,765 cfs in 151 out of the 560 months included in the analysis for March through October. The Action Alternatives would result in monthly mean flows below Nimbus Dam that would fall below 1,765 cfs in 154 out of the 560 months included in the analysis. Overall, the Action Alternatives represents a 0.6 percent increase in the frequency that monthly mean flows would fall below 1,765 cfs, relative to the No Action/No Project Alternative. Under the Action Alternatives below H Street Bridge, monthly mean flows would fall below 1,765 cfs in 175 out of the 560 months included in the analysis for the growing season over the 70-year period of record, relative to 173 out of the 560 months under the No Action/No Project Alternative condition. Overall, the Action Alternatives below H Street Bridge represent a 0.4 percent increase in the frequency that monthly mean flows would fall below 1,765 cfs, relative to the No Action/No Project Alternative.

For flows below Nimbus Dam or H Street Bridge already at or above 1,765 cfs under the No Action/No Project Alternative, the Action Alternatives would not reduce flows below the index in consecutive months over the 70-year period of record. For flows below Nimbus Dam that are already below 1,765 cfs under the No Action/No Project Alternative, there would be 21 occurrences in which those flows are further reduced by five percent or more under the Action Alternatives. However, in only one occurrence would these flow reductions occur in two or more consecutive months, and these consecutive months would fall outside of the critical growing period of April through July. For flows below H Street Bridge, there would be 26 occurrences during the March through October period in which flows under the No Action/No Project Alternative that are already below the 1,765 cfs flow index are further reduced by five percent or more under the Action Alternatives. However, in only one occurrence would these flow reductions occur in two or more consecutive months, and these consecutive months would fall outside of the critical growing period of April through July. Moreover, when flows are already below the 1,765 cfs flow index under the No Action/No Project Alternative, maintenance of radial growth cottonwoods would not occur and, therefore, further flow reductions under the Action Alternatives would not further deter the maintenance of cottonwoods. Overall, because

these flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect maintenance of cottonwoods, this would represent a less-than-significant impact.

Flows to Support Some Cottonwood Growth - 2,000 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 2,000 cfs index, relative to the No Action/No Project Alternative. Under the Action Alternatives below Nimbus Dam, monthly mean flows would fall below 2,000 cfs in 166 out of the 560 months included in the analysis (March through October, 70-year period of record), relative to 164 out of the 560 months under the No Action/No Project Alternative. The Action Alternatives below Nimbus Dam represent a 0.4 percent increase in the frequency that monthly mean flows would fall below 2,000 cfs, relative to the No Action/No Project Alternative. Under the Action Alternatives below H Street Bridge, monthly mean flows would fall below 2,000 cfs in 212 out of 560 months included in the analysis, relative to 209 out of 560 months under the No Action/No Project Alternative. The Action Alternatives below H Street Bridge represent a 0.5 percent increase in the frequency that monthly mean flows would fall below 2,000 cfs during the growing season, relative to the No Action/No Project Alternative (Tables H-3.6-5 and H-3.6-6).

Relative to the No Action/No Project Alternative, the Action Alternatives would not reduce flows below Nimbus Dam below 2,000 cfs in consecutive months during the growing season of March through October. For flows below H Street Bridge relative to the No Action/No Project Alternative, there would be only one occurrence of two or more consecutive months during the growing season of March through October, over the 70-year period of record, in which the Action Alternatives would reduce flows below the 2,000 cfs index. Because these flow reductions would not occur with sufficient magnitude and frequency to significantly affect some growth in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Reasonable to Maximum Cottonwood Growth Rates - 3,000 cfs Index (March Through October)

Under the Action Alternatives, monthly mean flows would not be substantially reduced below the 3,000 cfs flow index, relative to the No Action/No Project Alternative. Under the No Action/No Project Alternative, monthly mean flows below Nimbus Dam would fall below 3,000 cfs in 323 out of 560 months included in the analysis. Under the Action Alternatives, monthly mean flows below Nimbus Dam would fall below 3,000 cfs in 327 out of 560 months included in the analysis. Overall, the Action Alternatives below Nimbus Dam represent a one percent decrease in the frequency that monthly mean flows would be at or above 3,000 cfs, relative to the No Action/No Project Alternative. Under the Action Alternatives, monthly mean flows below H Street Bridge would fall below 3,000 cfs in 353 out of 560 included in the analysis, relative to 348 out of 560 months under the No Action/No Project Alternative. Overall, the Action Alternatives below H Street Bridge represent a one percent decrease in the frequency that monthly mean flows would be at or above 3,000 cfs during the March through October period, relative to the No Action/No Project Alternative.

For flows below Nimbus Dam or H Street Bridge that are at or above 3,000 cfs under the No Action/No Project Alternative, the Action Alternatives would reduce flows below 3,000 cfs in

consecutive months during the growing season of March through October, over the 70-year period of record. Because flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect reasonable to maximum growth and maintenance in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Terrace Inundation for Cottonwood Germination - 5,000 cfs Index

Previous field studies conducted on the lower American River concluded that peak flows between 5,000 cfs and 13,000 cfs during April to July (the reported period for cottonwood seed release) are necessary to inundate terraces that are essential for cottonwood germination, with the highest terraces inundated at 50,000 cfs (CCOMWP 1999). The Action Alternatives would result in only one reduction in the number of occurrences below Nimbus Dam in which mean peak flows would be above 5,000 cfs, and no reduction below H Street Bridge, relative to No Action/No Project Alternative. As a result, this impact would be less than significant.

Impact 3.6-21: Flow-related impacts to backwater pond recharge in the lower American River (Nimbus Dam and H Street Bridge).

Tables H-3.6-7 and H-3.6-8 present the frequency of occurrence of flows below the index required for backwater recharge, below Nimbus Dam and at H Street Bridge, respectively, for the No Action/No Project and the Action Alternatives.

Overall, changes in lower American River flows associated with the Action Alternatives relative to No Action/No Project Alternatives would result in slightly more frequent reduction of flows below the indices for adequate recharge of backwater ponds closer to the lower American River, and the continued recharge of off-river backwater ponds. However, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on backwater pond habitat of the lower American River, and therefore would be considered less than significant.

Flows to Support Adequate Recharge of the Ponds Closest to the River - 2,700 cfs Index

Under the Action Alternatives, monthly mean flows would not be substantially reduced below 2,700 cfs, relative to the No Action/No Project Alternative. Under the No Action/No Project Alternative, monthly mean flows below Nimbus Dam fall below 2,700 cfs in 487 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below 2,700 cfs in 489 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below Nimbus Dam that would fall below 2,700 cfs approximately 0.2 percent more often than under the No Action/No Project Alternative. For flows below H Street Bridge, the No Action/No Project Alternative results in monthly mean flows below Nimbus Dam that fall below 2,700 cfs in 523 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below 2,700 cfs in 527 of the 840 months included in the analysis. Overall, the Action Alternatives would result in monthly mean flows below H Street Bridge that would be below 2,700 cfs approximately 0.5 percent more often than under the No Action/No Project Alternative.

For flows below Nimbus Dam or H Street Bridge that are at or above 2,700 cfs under No Action/No Project Alternative, the Action Alternatives would not reduce flows below the flow index in consecutive months during any year of the 70-year period of record. Because flow reductions under the Action Alternatives would not occur with sufficient magnitude and/or frequency to significantly adversely affect adequate recharge of ponds closest to the lower American River relative to the No Action/No Project Alternative, this would represent a less-than-significant impact.

Flows to Support Continued Recharge of Off-River Ponds - 4,000 cfs Index

Under the Action Alternatives, monthly mean flows would not be substantially reduced below 4,000 cfs, relative to the No Action/No Project Alternative. Under the No Action/No Project Alternative, monthly mean flows below Nimbus Dam fall below 4,000 cfs in 639 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below 4,000 cfs in 644 of the 840 months included in the analysis. Therefore, the Action Alternatives would result in monthly mean flows below Nimbus Dam that would be below the index approximately 0.6 percent more often than under the No Action/No Project Alternative. For flows below H Street Bridge, the No Action/No Project Alternative would result in monthly mean flows that would fall below 4,000 cfs in 667 of the 840 months included in the analysis. The Action Alternatives would result in monthly mean flows below 4,000 cfs in 670 of the 840 months included in the analysis. Overall, the Action Alternatives would result in long-term average flows below H Street Bridge that would be below 4,000 cfs approximately 0.4 percent more often than under the No Action/No Project Alternative.

For flows below Nimbus Dam or H Street Bridge that are at or above 4,000 cfs under the No Action/No Project Alternative, the Action Alternatives would not reduce flows below the index in consecutive months, over the 70-year period of record. Because flow reductions under the Action Alternatives relative to the No Action/No Project Alternative would not occur with sufficient magnitude and/or frequency to significantly adversely affect continued recharge of off-river ponds, this would represent a less-than-significant impact.

Impact 3.6-22: Impacts to special-status species dependent on lower American River riparian and open water habitats.

As previously discussed, when compared to the No Action/No Project Alternative, the Action Alternatives would result in monthly mean flows below Nimbus Dam and H Street Bridge that are below the 1,765 cfs radial growth maintenance flow index approximately 0.6 and 0.4 percent more often, respectively. Moreover, the Action Alternatives would not result in any consecutive months over the 70-year period of record in which flows below Nimbus Dam or H Street Bridge that are at or above the 1,765 cfs index would be reduced below this index.

The Action Alternatives also would not result in substantial reductions in monthly mean flows below Nimbus Dam and H Street Bridge below the 2,000 cfs flow index for some growth, relative to the No Action/No Project Alternative. The Action Alternatives would result in monthly mean flows below Nimbus Dam and H Street Bridge that are below 2,000 cfs approximately 0.4 and 0.5 percent more often than No Action/No Project Alternative, respectively. Flows below Nimbus

Dam that are at or above the 2,000 cfs index under No Action/No Project Alternatives, would not be reduced under the Action Alternatives below the index in consecutive months during the growing period, over the 70-year period of record. For flows below H Street Bridge that are at or above 2,000 cfs under No Action/No Project Alternatives, there would be only one occurrence in which the Action Alternatives would reduce these flows below the index in two or more consecutive months during the growing period, over the 70-year period of record. Because impacts to radial growth maintenance and some growth for cottonwoods resulting from the Action Alternatives would be less-than-significant, impacts to special-status species associated with riparian and open water habitats also would be less-than-significant.

Impact 3.6-23: Impacts to special-status species dependent on lower American River backwater pond/marsh habitats.

Because impacts to recharge of ponds resulting from the Action Alternatives relative to the No Action/No Project Alternative would be less-than-significant, impacts to special-status species associated with backwater pond/marsh habitats also would be less-than-significant.

Impact 3.6-24: Impacts to elderberry shrubs and VELB.

USFWS has designated the American River Parkway as critical habitat for VELB, and this species has been recorded in elderberry shrubs near backwater ponds along the lower American River. Because impacts to backwater habitats under the Action Alternatives relative to the No Action/No Project Alternative were determined to be less than significant, elderberry shrubs that are dependent on these habitats also are not expected to be adversely affected. Impacts to elderberry shrubs and VELB are considered less than significant.

Impact 3.6-25: Impacts associated with Folsom, Shasta, and Trinity reservoir vegetation.

Compared to the No Action/No Project Alternative, the Action Alternatives would result in essentially equivalent long-term average end-of-month water elevations for Folsom, Trinity and Shasta reservoirs for the March through September growing period. Folsom, Shasta, and Trinity reservoirs have water levels that routinely fluctuate seasonally and annually. Although the Action Alternatives would result in minor variations in end-of-month water elevation relative to No Action/No Project Alternatives, areas of high and consistent habitat values are not adversely affected. Therefore, water surface elevation fluctuations associated with the Action Alternatives would represent a less-than-significant impact to reservoir vegetation in the project area.

Impact 3.6-26: Impacts to vegetation associated with the upper Sacramento River.

Under the Action Alternatives, long-term average flows on the upper Sacramento River during the March through October growing season would be essentially equivalent to the No Action/No Project Alternative. The Action Alternatives would result in long-term average flow decreases below Keswick Dam ranging from one to 13 cfs during the months of May, August, September and October, and increases ranging from one to 27 cfs during the remaining months of the growing season. During the critical months of the growing season (i.e., April through July), the Action Alternatives would generally result in flow increases that would have the potential to

benefit riparian vegetation in the Sacramento River. In the context of riparian vegetation effects, the frequency and magnitude of flow decreases under the Action Alternatives would be small considering that long-term average flows would range from 5,016 to 13,149 cfs during the months of the growing season. Because the largest long-term average flow reduction in the upper Sacramento River during the growing period of March through October that would occur under the Action Alternatives (i.e., May) would vary from the No Action/No Project Alternative by only two percent, flows under the Action Alternatives are not expected to adversely affect riparian vegetation along the river, and would represent a less-than-significant impact.

Impact 3.6-27: Impacts to vegetation associated with the lower Sacramento River.

The largest long-term average flow reduction during March through October under the Action Alternatives relative to the No Action/No Project Alternative would be three percent. The Action Alternatives would result in long-term average flow decreases at Freeport ranging from 10 to 47 cfs during March, May, August and October. In the context of riparian vegetation effects, the frequency and magnitude of these flow decreases under the Action Alternatives would be small considering that long-term average flows would range from 11,443 (i.e., October) to 33,065 cfs (i.e., March) during the months of the growing season. Also, tidal action influences the river stage in this area. Because flow reductions would not be of sufficient magnitude and frequency to significantly alter existing riparian habitat dependent on the lower Sacramento River flows and Delta inflows, the Action Alternatives would not expected to adversely affect riparian vegetation along the river, and impacts are considered less than significant.

In addition to lower Sacramento River flows, the Delta wetlands are very sensitive to fluctuations in water salinity, which are determined by water flows into the Delta (San Francisco Estuary Project 1993). Under the Action Alternatives, there would not be a shift in the long-term average position of X2 relative to No Action/No Project Alternative. In fact, the maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 0.7 km. Because Sacramento River flow reductions would not be of a sufficient magnitude and frequency, and there would be no shift in the long-term average X2 position, the Action Alternatives are not expected to adversely affect riparian vegetation along the river associated with the Delta, and impacts are considered less than significant.

Impact 3.6-28: Impacts to Delta habitats of special-status species.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in infrequent long-term average flow reductions in the Sacramento River during certain times of the year. However, these flows would not be reduced by sufficient magnitude and/or frequency to significantly alter existing habitats dependent on the Delta. In addition, under the Action Alternatives, there would be no shift in the long-term average position of X2 relative to the No Action/No Project Alternative. The maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 0.8 km. Because Delta habitats would not be adversely affected, the special-status species dependent on these habitats also would not be expected to be adversely affected; therefore, this impact would be considered less than significant.

Impact 3.6-29: Impacts to Oroville Reservoir and Feather River vegetation and special-status species.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered to represent less-than-significant impacts upon these resources.

Cumulative Impacts

Impact 3.6-30: Flow impacts to riparian vegetation of the upper American River.

The cumulative condition would not significantly affect streamflows in the upper American River, relative to the existing condition (see Section 3.5). Therefore, no adverse environmental effects on the upper American River riparian vegetation are anticipated to occur under the cumulative condition, relative to the existing condition. Impacts to upper American River riparian vegetation are considered less than significant.

Impact 3.6-31: Flow impacts to riparian vegetation of the lower American River

Tables H-3.6-9 and H-3.6-10 present the frequency of flows within the ranges required for minimal maintenance and growth, and optimal growth of cottonwoods below Nimbus Dam and H Street Bridge, respectively, for existing and the cumulative condition. Simulated long-term average American River flows below Nimbus Dam and H Street Bridge are displayed in Figures H-3.6-5 and H-3.6-6, respectively, for the existing and the cumulative condition.

Overall, changes in lower American River flows associated with the cumulative condition relative to the existing condition would result in more frequent reduction of flows below the indicated indices for maintenance of cottonwood radial growth, some growth, and reasonable to maximum growth and maintenance, and the index for terrace inundation. However, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on the long-term population growth and maintenance of lower American River cottonwoods. Because cottonwoods are considered a good indicator of the health of the lower American River riparian community, flow-related impacts to lower American River riparian vegetation associated with the cumulative condition would be considered less than significant.

Flows to Support Mature Cottonwood Radial Growth Maintenance - 1,765 cfs Index (March Through October)

Under the cumulative condition, monthly mean flows would not be substantially reduced below the 1,765 cfs flow index, relative to the existing condition. Under the existing condition, monthly mean flows below Nimbus Dam below 1,765 cfs would occur in 128 out of 560 months included in the analysis (March through October growing period). The cumulative condition would result in monthly mean flows below Nimbus Dam below 1,765 cfs in 154 out of 560 months included in the analysis for the March through October growing period. Overall, the cumulative condition below Nimbus Dam represent approximately a 4.6 percent increase in the

frequency that monthly mean flows fall below 1,765 cfs, relative to the existing condition. Under the cumulative condition, monthly mean flows below H Street Bridge would fall below 1,765 cfs in 174 out of the 560 months included in the analysis, relative to 138 out of 560 months under the existing condition. Overall, the cumulative condition represents a 6.4 percent increase in the frequency that monthly mean flows below H Street Bridge fall below the 1,765 cfs index, relative to the existing condition.

For flows below Nimbus Dam or H Street Bridge at or above 1,765 cfs under the existing condition, the cumulative condition would reduce flows in only six occurrences during two or more consecutive months below the index, over the 70-year period of record, and these consecutive months would not occur during the critical growing months of April through July. Under the cumulative condition, there will be instances of the exacerbation of an already detrimental situation for cottonwood radial growth maintenance during the growing season. For flows below Nimbus Dam that are already below 1,765 cfs under the existing condition, there would be 67 occurrences during the March through October period in which flows under the existing condition that are already below 1,765 cfs would be reduced by five percent or more under the cumulative condition. However, in only eight occurrences would these flow reductions occur in two or more consecutive months, and in three of these eight instances the consecutive months would fall outside of the critical growing period of April through July. For flows below H Street Bridge, there would be 76 occurrences during the March through October period in which flows that are already below 1,765 cfs under the existing condition would be reduced by five percent or more under the cumulative condition. In 15 occurrences would these flow reductions occur in two or more consecutive months, and in seven of these 15 instances the consecutive months would fall outside of the critical growing period of April through July. Moreover, when flows are already below 1,765 cfs under the existing condition, radial growth maintenance of cottonwoods would not occur and, therefore, further flow reductions under the cumulative condition would not further deter the maintenance of cottonwoods.

Compared to the existing condition, the cumulative condition would result in monthly mean flows below the index for maintenance of radial growth of cottonwoods more often than under the existing condition; however, these flows would not be reduced with enough frequency to significantly alter existing riparian vegetation dependant on flows in the lower American River. This impact would be considered less than significant.

Flows to Support Some Cottonwood Growth - 2,000 cfs Index (March Through October)

Under the cumulative condition, monthly mean flows would not be substantially reduced below 2,000 cfs, relative to the existing condition. Under the cumulative condition, monthly mean flows below Nimbus Dam would fall below 2,000 cfs in 166 out of the 560 months included in the analysis for March through October, relative to 140 out of 560 months under the existing condition. Overall, the cumulative condition represents approximately a 4.6 percent increase in the frequency that monthly mean flows below Nimbus Dam fall below 2,000 cfs, relative to the existing condition. Under the cumulative condition, monthly mean flows below H Street Bridge would fall below 2,000 cfs in 212 out of the 560 months included in the analysis over the 70-year period of record, relative to 176 out of 560 months under the existing condition. Overall, the cumulative condition represents a 6.4 percent increase in the frequency that monthly mean flows

below H Street Bridge would fall below 2,000 cfs, relative to the existing condition (Tables H-3.6-9 and H-3.6-10).

For flows below Nimbus Dam that are at or above 2,000 cfs under the existing condition, the cumulative condition would reduce flows below the flow index in only five occurrences of two or more consecutive months over the 70-year period of record, and these consecutive months would fall outside the critical growing months of April through July. For flows below H Street Bridge that are at or above 2,000 cfs under the existing condition, there would be only four occurrences of two or more consecutive months, over the 70-year period of record, in which the cumulative condition would reduce these flows below the index. None of these occurrences would occur during the critical growing period of April through July. Because these flow reductions would not occur with sufficient magnitude and frequency under the cumulative condition relative to the existing condition to significantly affect some growth in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Reasonable to Maximum Cottonwood Growth Rates - 3,000 cfs Index (March Through October)

Under the cumulative condition, monthly mean flows would not be substantially reduced below 3,000 cfs, relative to the existing condition. Under the existing condition, monthly mean flows below Nimbus Dam below 3,000 cfs would occur in 302 out of 560 months included in the analysis for the March through October growing season. Under the cumulative condition, monthly mean flows below Nimbus Dam would fall below 3,000 cfs in 327 out of 560 months included in the analysis. Overall, the cumulative condition represents approximately a four percent decrease in the frequency that monthly mean flows below Nimbus Dam would be at or above 3,000 cfs, relative to the existing condition. Under the cumulative condition, monthly mean flows below H Street Bridge would fall below 3,000 cfs in 353 out of the 560 months included in the analysis for the growing season, over the 70-year period of record, relative to 320 out of 560 months that would fall below 3,000 cfs under the existing condition. Overall, the cumulative condition represents approximately a six percent decrease in the frequency that monthly mean flows below H Street Bridge would be at or above 3,000 cfs flow relative to the existing condition (Tables H-3.6-5 and H-3.6-6).

For flows below Nimbus Dam or H Street Bridge that are at or above 3,000 cfs under the existing condition, the cumulative condition would reduce flows below the index in three occurrences of two or more consecutive months over the 70-year period of record, and these consecutive months would fall outside of the critical growing period of April through July. Because these flow reductions would not occur with sufficient magnitude and frequency to significantly adversely affect reasonable to maximum growth in cottonwoods, this would represent a less-than-significant impact.

Flows to Support Terrace Inundation for Cottonwood Germination - 5,000 cfs Index

Previous field studies conducted on the lower American River concluded that peak flows between 5,000 and 13,000 cfs during April to July (the reported period for cottonwood seed release) are necessary to inundate terraces that are essential for cottonwood germination, with the highest

terraces inundated at 50,000 cfs (CCOMWP 1999). The cumulative condition would result in only two instances of reduction in the number of occurrences for either Nimbus Dam or H Street Bridge in which mean peak flows would be above 5,000 cfs, relative to the existing condition. As a result, this impact would be less than significant.

Impact 3.6-32: Flow impacts to backwater pond recharge in the lower American River (Nimbus Dam and H Street Bridge).

Tables H-3.6-11 and H-3.6-12 present the frequency of occurrence of flows below the indices required for backwater recharge, below Nimbus Dam and at H Street Bridge, respectively, for existing and cumulative conditions.

Overall, changes in lower American River flows associated with the cumulative condition relative to the existing condition would result in more frequent reduction of flows below the indices for adequate recharge of backwater ponds closer to the lower American River, and the continued recharge of off-river backwater ponds. However, these flow reductions are not considered to be of substantial magnitude and/or to occur with enough frequency to have significant adverse effects on backwater pond habitat of the lower American River, and therefore would be considered less than significant.

Flows to Support Adequate Recharge of the Ponds Closest to the River - 2,700 cfs Index

Under the cumulative condition, monthly mean flows would not be substantially reduced below 2,700 cfs, relative to the existing condition. Under the existing condition, monthly mean flows below Nimbus Dam below 2,700 cfs would occur in 469 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below 2,700 cfs in 489 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below Nimbus Dam that would be below the index approximately 2.4 percent more often than under the existing condition. For flows below H Street Bridge, the existing condition would result in monthly mean flows below 2,700 cfs in 492 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below 2,700 cfs in 527 of the 840 months included in the analysis. Overall, the cumulative condition would result in monthly mean flows below H Street Bridge that would be below the index approximately 4.2 percent more often than under the existing condition.

For flows below Nimbus Dam that are at or above 2,700 cfs under the existing condition, the cumulative condition would reduce flows below the flow index in only one occurrence of two or more consecutive months over the 70-year period of record. For flows below H Street Bridge that are at or above 2,700 cfs under the existing condition, the cumulative condition would reduce flows below the index in four occurrences of two or more consecutive months over the 70-year period of record. Because flow reductions under the cumulative condition would not occur with sufficient magnitude and/or frequency to significantly adversely affect adequate recharge of ponds closer to the lower American River relative to the existing condition, this would represent a less-than-significant impact.

Flows to Support Continued Recharge of Off-River Ponds – 4,000 cfs Index

Under the cumulative condition, monthly mean flows would not be substantially reduced below the 4,000 cfs flow index, relative to the existing condition. Under the existing condition, monthly mean flows below Nimbus Dam below 4,000 cfs would occur in 609 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below 4,000 cfs in 644 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below Nimbus Dam that would be below the index approximately 4.2 percent more often than under the existing condition. For flows below H Street Bridge, the existing condition result in monthly mean flows below 4,000 cfs in 623 of the 840 months included in the analysis. The cumulative condition would result in monthly mean flows below 4,000 cfs in 670 of the 840 months included in the analysis. Overall, the cumulative condition would result in monthly mean flows below H Street Bridge that would be below 4,000 cfs approximately 5.6 percent more often than under the existing condition.

For flows below Nimbus Dam that are at or above 4,000 cfs under the existing condition, the cumulative condition would reduce flows below the index in nine occurrences of two or more consecutive months for all months of the year, over the 70-year period of record. For flows below H Street Bridge that are at or above 4,000 cfs under the existing condition, the cumulative condition would reduce flows below the index in 12 occurrences of two or more consecutive months for all months of the year, over the 70-year period of record. These flow reductions under the cumulative condition would not occur with sufficient magnitude and/or frequency to significantly adversely affect continued recharge of off-river ponds relative to the existing condition; this would represent a less-than-significant impact.

Impact 3.6-33: Impacts to special-status species dependent on lower American River riparian and open water habitats.

As previously discussed, when compared to the existing condition, the cumulative condition would result in monthly mean flows below Nimbus Dam and H Street Bridge that are below the 1,765 cfs maintenance of radial growth in cottonwoods flow index approximately 4.6 and 6.6 percent more often, respectively. Moreover, for flows below Nimbus Dam or H Street Bridge already at or below the 1,765 cfs maintenance flow index under the existing condition, the cumulative condition would reduce flows in six occurrences during two or more consecutive months below the index, over the 70-year period of record, and these consecutive months would not occur during the critical growing months of April through July.

The cumulative condition also would not result in substantial reductions in monthly mean flows below Nimbus Dam and H Street Bridge below the 2,000 cfs index for some growth in cottonwoods relative to the existing condition. The cumulative condition would result in monthly mean flows below Nimbus Dam and H Street Bridge that are below the 2,000 cfs flow index approximately 4.6 and 6.4 percent more often, respectively. Also, for flows below Nimbus Dam that are at or above 2,000 cfs under the existing condition, the cumulative condition would reduce flows below the index in only five occurrences of two or more consecutive months over the 70-year period of record, and these consecutive months would fall outside the critical growing months of April through July. For flows below H Street Bridge that are at or above

2,000 cfs under the existing condition, there would be only four occurrences of two or more consecutive months, over the 70-year period of record, in which the cumulative condition would reduce these flows below the index. None of these occurrences would occur during the critical growing period of April through July. Because impacts to radial growth maintenance and some growth for cottonwoods resulting from the cumulative condition would be less-than-significant, impacts to special-status species associated with riparian and open water habitats also would be less-than-significant.

Impact 3.6-34: Impacts to special-status species dependent on lower American River backwater pond/marsh habitats.

Because impacts to recharge of ponds resulting from the cumulative condition relative to the existing condition would be less-than-significant, impacts to special-status species associated with backwater pond/marsh habitats also would be less-than-significant.

Impact 3.6-35: Impacts to elderberry shrubs and VELB.

USFWS has designated the American River Parkway as critical habitat for the VELB, and this species has been recorded in elderberry shrubs near backwater ponds along the lower American River. Because impacts to backwater habitats under the cumulative condition relative to the existing condition were determined to be less than significant, elderberry shrubs that are dependent on these habitats also are not expected to be adversely affected. Impacts to elderberry shrubs and VELB are considered less than significant.

Impact 3.6-36: Impacts associated with Folsom, Shasta, and Trinity reservoir vegetation.

Compared to the existing condition, the cumulative condition would result in lower long-term average end-of-month water elevations for Folsom, Trinity and Shasta reservoirs for the March through September growing period that would range from two to 11 feet. Folsom, Shasta, and Trinity reservoirs have water levels that routinely fluctuate seasonally and annually. Although the cumulative condition would result in variations in end-of-month water elevation relative to the existing condition, areas of high and consistent habitat values are not adversely affected. Therefore, water surface elevation fluctuations associated with the cumulative condition would represent a less-than-significant impact to reservoir vegetation in the project area.

Impact 3.6-37: Impacts to vegetation associated with the upper Sacramento River.

Under the cumulative condition, long-term average flows on the upper Sacramento River during the March through October growing season would be reduced relative to the existing condition. The cumulative condition would result in long-term average flow decreases below Keswick Dam ranging from 80 to 825 cfs during the growing season. In the context of riparian vegetation effects, the frequency and magnitude of flow decreases under the cumulative condition would be small considering that monthly mean flows would range from 5,016 to 13,149 cfs during the months of the growing season. For example, the individual 825 cfs flow reduction represents only a 6.1 percent reduction relative to the existing condition during that month. Because flow reductions in the upper Sacramento River during the growing period of March through October

that would occur under the cumulative condition would not be of sufficient magnitude and/or frequency to significantly alter existing riparian vegetation dependent on the upper Sacramento River flows, impacts to riparian vegetation are considered less than significant.

Impact 3.6-38: Impacts to vegetation associated with the lower Sacramento River.

The largest long-term average flow reduction during the growing season of March through October under the cumulative condition relative to the existing condition would be 4.7 percent during the month of October. The cumulative condition would result in long-term average flow decreases at Freeport ranging from 399 to 828 cfs during most months of the growing season, and increases ranging from 36 to 466 cfs during the months of April, July, and August. In the context of riparian vegetation effects, the frequency and magnitude of these flow decreases under the cumulative condition would be small considering that monthly mean flows would range from 11,443 (i.e., October) to 33,065 cfs (i.e., March) during the months of the growing season. Also, tidal action influences the river stage in this area. Because flow reductions would not be of sufficient magnitude and frequency to significantly alter existing riparian habitats along the river, this would represent a less-than-significant impact.

In addition to lower Sacramento River flows, the Delta wetlands are very sensitive to fluctuations in water salinity, which are determined by flows into the Delta (San Francisco Estuary Project 1993). Under the cumulative condition, long-term average position of X2 would remain essentially equivalent to the existing condition. The maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 4.4 km. Because Sacramento River flow reductions and shifts in X2 position would not be of a sufficient magnitude and frequency to significantly alter existing riparian habitats associated with the Delta, this would represent a less than significant impact.

Impact 3.6-39: Flow impacts to special-status species habitat of the Delta.

When compared to the existing condition, the cumulative condition would result in long-term average flow reductions in the Sacramento River during certain times of the year. However, these flows would not be reduced by sufficient magnitude and/or frequency to significantly alter existing habitats dependent on the Delta. In addition, under the cumulative condition, long-term average position of X2 would remain essentially equivalent to the existing condition. The maximum upstream shift for any individual month of the year in the position of X2, over the 70-year period of record, would be 4.4 km. Because Delta habitats would not be adversely affected, the special-status species dependent on these habitats also would not be expected to be adversely affected; therefore, this impact would be considered less than significant.

Impact 3.6-40: Impacts to vegetation and special-status species associated with Oroville Reservoir.

Compared to the existing condition, the cumulative condition would result in substantially lower long-term average end-of-month elevation for the March through September vegetation growing period over the 70-year period of record. Long-term end-of-month elevation reductions for Oroville Reservoir would range from 6 to 18 feet. During individual years, reductions of up to 76

feet in end-of-month elevation would occur. Given the relatively large reduction in end-of-month water surface elevation indicated by the modeling results, potentially significant impacts to vegetation associated with Oroville Reservoir would occur under the cumulative condition.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' contribution to the cumulative condition would not be considerable.

Impact 3.6-41: Impacts to vegetation and special-status species associated with the Feather River.

As previously mentioned, the primary growing season for riparian vegetation within this region occurs during the months of March through October. The largest long-term average flow reduction under the cumulative condition relative to the existing conditions for the March through October growing period would be 5.7 percent during the month of March. Conversely, long-term average flow increases under the cumulative condition relative to the existing conditions for the March through October growing period would be up to 36.4 percent (i.e., August). Changes in flow for the Feather River represent a less-than-significant impact to riparian vegetation and associated special-status species.

3.6.2.5 Environmental Protection and Mitigation Measures

The mitigation measures shown below have been incorporated into the Mitigation Plan (Appendix D of the Final EIS/EIR) to reduce the impacts upon terrestrial resources to levels considered less than significant.

Establish Buffer Zone to Avoid Disturbance of and Prevent the Permanent Loss of Riparian, Wetland and Pond Vegetation and Associated Habitat

Riparian, wetland, and pond vegetation exist at and adjacent to (upstream and downstream) the Project site. Avoidance buffer zones will minimize the extent of habitat disturbance or modification due to Project construction. Ultimately, restoration of the river channel will result in improvements to aquatic habitat conditions at the site, relative to the existing condition.

Commitment:	Establish a 10-foot buffer zone around all riparian and wetland or pond areas to be avoided during construction. Clearly mark the buffer area with temporary fencing, flagging or other suitable material.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Monitoring to ensure temporary buffer markers remain in place
Reporting Requirements:	Daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to identify and create buffer zones around riparian, wetland and pond habitats within and immediately adjacent to the Project area. The Construction Contractor will indicate the buffer zones and avoidance areas with temporary markers and/or fencing.

Success Criteria:
Riparian, wetland and pond habitat buffer zones will remain clearly marked throughout construction and encroachment will be avoided by construction personnel.

Minimize Impacts Upon State and Federal Special-Status Species in the Project Area

Commitment:	Protect individuals and habitat for state and federal special-status species from Project construction impacts by performing pre-construction site surveys. Inform Construction Contractor personnel of potential presence of special status species in the Project area and provide procedures for avoidance or relocation, if necessary, to USFWS- or CDFG-designated habitat.
Responsible Parties:	Reclamation/Construction Contractor - On-site Monitor
Location:	Project area/river channel
Timing:	Prior to and during all phases of construction (2002 through 2004)
Monitoring:	No specific monitoring requirements
Reporting Requirements:	Conduct survey and document results. Construction personnel will indicate participation in education/ informational session by signing participation statements.

Description of Activities:
Reclamation biologists will conduct a site survey to evaluate potential presence of special status species (**Table 3.6-6**) within project construction area. Information regarding the state and federal special-status species that potentially occur within the Project construction area will be included in the Construction Contractor personnel education/information presentations and materials. Table 3.6-6 lists those species which are classified as "species of concern" (SC) by USFWS or as "California species of concern" (CSC) by CDFG, and which may occur in the project area.

Success Criteria:
Document completion of survey and successful avoidance and/or relocation of these species, as needed, in construction compliance reports.

Table 3.6-6 Federal and State Species of Concern That May Occur in the Project Area		
Common Name	**Species Name**	**Status Federal [a]/State [b]**
Amphibians		
Foothill Yellow-legged Frog	*Rana boylei*	SC/CSC
Reptiles		
California Horned Lizard	*Phrynosoma coronatum frontale*	SC/CSC
Mammals		
Spotted Bat	*Euderma maculatum*	SC/CSC
Greater Western Mastiff-bat	*Eumops perotis californicus*	SC/--

[a] Federal status: SC = Species of Concern
[b] State status: CSC = California Species of Concern
-- = No listing

Measures for Entrapped, Injured or Dead Special-Status Animal Species

Commitment: All reasonable efforts will be made to allow any entrapped animals to escape. Any dead or injured animals will be turned over to CDFG or USFWS.
Responsible Parties: Reclamation/Construction Contractor - On-site Monitor
Location: Entire Project area, including staging sites and access routes
Timing: During all phases of construction (2002 through 2004), as needed
Monitoring: No specific monitoring requirement
Reporting Requirements:
A written report detailing the date, time, location, and general description of the circumstances under which an animal was found must be submitted to CDFG and/or USFWS no later than three business days following the incident.

Description of Activities:
Reclamation will require the Construction Contractor to ensure that all injured or killed special-status species are reported to CDFG or USFWS and handled appropriately.

Success Criteria:
All incidents are reported to CDFG or USFWS and handled appropriately. Include documentation in construction compliance reports.

Restoration of Permanent Riparian, Wetland and Pond Vegetation/Habitat Loss

Commitment: Restoration of river channel through Project area will provide enhancement of wetland and riparian habitat such that all construction-related permanent vegetation loss is fully mitigated.
Responsible Party: Reclamation
Location: Project area/river channel

Timing: Post-construction
Monitoring: Monitor re-establishment of wetland, pond, and riparian vegetation associated with the restored river channel
Reporting Requirements: Provide Summary Reports, including photographs of the Project site, with benchmarks prior to construction, and at years 1, 3, 5, and 10 following river restoration

Description of Activities:
Restoration of the North Fork American River channel, including creation of a "naturally functioning" river system will provide overall vegetation and associated habitat enhancement at the Project site. Reclamation will monitor the long-term natural re-establishment of vegetation and habitat areas and report to resources and permitting agencies. In consultation with these agencies, Reclamation may implement an adaptive vegetation restoration strategy, if needed, to supplement natural re-growth at the site.

Success Criteria: Document natural re-establishment of vegetation in Project area.

Other Related Mitigation Measures

Fish Resources and Aquatic Habitat, Mitigation Measure 3.1-2, avoids changes to the flow and water source composition of Auburn Ravine, thereby avoiding any Project-related change to terrestrial (riparian) resources along the Auburn Ravine corridor.

Noise, Mitigation Measure 3.9-2, results in lower operational noise levels in the Project area than under existing conditions, reducing operational noise impacts to wildlife.

Public Health and Worker Safety Mitigation Measure 3.10-5, design of the public river access features includes installation of posts and other barriers to prevent off-road travel, thereby minimizing the impacts of increased vehicular access at the Project site upon individual wildlife species and habitat.

3.7 WATER QUALITY

3.7.1 AFFECTED ENVIRONMENT

3.7.1.1 Regional Setting

The regional setting includes water bodies whose water quality may be indirectly affected by the Proposed Project or alternatives. Because the Proposed Project and other reasonably foreseeable actions within the American River Basin would result in changes to CVP system operations, and potentially influence SWP operations, certain CVP and SWP system components and associated waterways are included in the regional study area. These facilities include: Trinity and Shasta reservoirs, the upper and lower Sacramento River, Folsom Reservoir, Lake Natoma, the lower American River, Delta, Oroville Reservoir, and the Feather River. Detailed descriptions of the beneficial uses and water quality of these resources are included in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.7.1.2 Project Area Setting

The project area represents the direct effect study area for water quality and includes the Middle Fork American River from below Ralston Afterbay to the confluence with the North Fork American River and downstream to Oregon Bar (Figure 2-2).

The beneficial uses of the Middle and North Forks of the American River include:

- Municipal and domestic supply
- Agricultural supply
- Water contact and non-contact recreation
- Potential warm freshwater habitat
- Cold freshwater habitat
- Cold freshwater spawning, reproduction, and/or early development of fish
- Wildlife habitat

Water quality in the American River is considered to be good, although historical water quality data for the North Fork and Middle Fork are sparse (Corps 1991). During construction activities for Auburn Dam, Reclamation collected water samples at two sites upstream of the Auburn Dam construction site and two sites downstream. These samples were analyzed for pH and turbidity. Although construction of Auburn Dam was halted in 1977, monitoring was conducted weekly until 1995. Data for 1991 and 1992 were evaluated. Because data for other years shows little variation, the 1991-1992 water year is considered to be representative of the entire period (P. Vonich, pers. comm. 1998). Turbidity was low at the nearest downstream and upstream monitoring sites, with annual averages just below or above one Nephelometric Turbidity Unit (NTU). The pH ranged from 7.0 to 8.2 at the four monitoring sites. Information on sediment in the river was not readily available; however, turbidity results indicate the river carries little sediment during low flows.

Several wastewater sources discharge into the North and Middle Forks of the American River, or to their tributaries. Sources of wastewater discharge include two sawmills located at Foresthill; one is on a tributary to Devil's Canyon and the North Fork American River, the other discharges directly into the Middle Fork American River.

3.7.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.7.2.1 Methodology

Facilities-Related Analysis Approach

The anticipated construction, operation, and maintenance impacts on water quality were assessed in part by consulting with project engineers on the project design team and Reclamation staff. Specifically examined were the diversion and intake structure configurations, changes in sedimentation at the diversion structure, and channel stability as it relates to water quality.

The impact assessment focuses primarily upon recreation and drinking water uses because these water quality standards are more stringent than water quality standards for other beneficial uses and purposes. The effects of the project on water quality for fisheries resources, primarily water temperature-related, are discussed in Section 3.5, Fish Resources and Aquatic Habitat. Wildlife uses generally receive lower water quality standards than fish; groundwater recharge, and industrial and agricultural supply require lesser standards than drinking water supply; and navigation and power generation are not dependent on water quality.

Diversion-Related Analysis Approach

The assessment of water quality impacts within the regional study area water bodies focuses on the potential for the alternatives to result in increased water quality constituent concentrations through the reduced contribution of flows with low constituent concentrations. The focus of the analysis is on the quality of water available to downstream users for drinking water supply and for recreational uses of the river downstream of the project site. Reclamation's PROSIM model was used to simulate hydrologic conditions over a 70-year period of record (1922 through 1992) for Folsom Reservoir, the lower American River, and the Sacramento River, including the Delta.

The evaluation of water quality impacts is based on a comparison of CVP reservoir surface water storage volumes and American and Sacramento river flows under existing and future conditions with and without the project. Because the timing and amount of the proposed diversion increases under the Proposed Project and Upstream Diversion Alternative are identical, the analysis of impacts is combined into one discussion and referred to as "Action Alternatives."

The model simulations and comparisons were described in Section 3.3.2. Additional details of the hydrologic modeling process are included in Appendix E of the Draft EIS/EIR.

3.7.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Applicable laws, ordinances, regulations, and standards were reviewed to identify permitting and other regulatory compliance requirements for the alternatives. The Corps, RWQCB, CDFG, CDPR, and the counties of Placer and El Dorado have water quality policies and/or standards applicable to the study area. Water quality-related objectives, policies, and permit requirements are discussed below.

Regional Water Quality Control Board - Water Quality Control Plan

In the WQCP for the Central Valley Region (the Basin Plan), the RWQCB (1994) establishes beneficial uses for water bodies in the Sacramento River basin. Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The RWQCB establishes water quality objectives to protect these beneficial uses from waste discharges. Water quality objectives are defined as the limits or levels to which constituents (e.g., copper) or characteristics (e.g., temperature) can be changed without unreasonably affecting beneficial uses.

Based on the beneficial uses identified for regional and project area water bodies listed in Section 3.7.1 and Appendix D, Chapter 3.0, of the Draft EIS/EIR, and a review of the waste discharges that could result from the alternatives, a summary of the water quality constituents potentially altered were identified and are listed in **Table 3.7-1**. The RWQCB objectives for these constituents for the affected water bodies also are described.

Table 3.7-1
Water Quality Objectives for the Affected Water Bodies

Constituent	Beneficial Use	Objective
Sediment	All uses	The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Turbidity	All uses	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits: ❑ Where natural turbidity is between 0 and 5 NTU, increases shall not exceed 1 NTU. ❑ Where natural turbidity is between 5 and 50 NTU, increases shall not exceed 20 percent. ❑ Where natural turbidity is between 50 and 100 NTU, increases shall not exceed 10 percent. ❑ Where natural turbidity is greater than 100 NTU, increases shall not exceed 10 percent.

Source: RWQCB 1994

The RWQCB Basin Plan allows conditional waivers of waste discharge requirements for construction activities under the limitation that BMPs are implemented. The assumption is that if these BMPs are implemented properly, the Basin Plan water quality objectives will be met. For longer-term construction projects (e.g., requiring more than a few days), daily monitoring is

required to confirm that water quality objectives are being met. A mixing zone of approximately 100 to 300 feet may be allowed, depending on site conditions (K. Landau, pers. comm. 1998).

BMPs for construction activities are designed to minimize erosion and control sedimentation. The objectives of these BMPs generally are to:

- Minimize soil disturbance/vegetation removal;
- Stabilize and revegetate soils after disturbance and before the rainy season;
- Trap loosened sediments; and
- Design an adequate stormwater runoff control system (Basin Plan).

Maintenance activities, as with construction activities, also are required to meet the Basin Plan's water quality objectives. Generally, short-term maintenance activities are assumed to not result in violations of water quality objectives. For longer-term maintenance activities (e.g., a week-long activity occurring more than once a month), daily monitoring is required to confirm that water quality objectives are being met. A mixing zone of approximately 100 to 300 feet would be allowed, depending on site conditions (K. Landau, pers. comm. 1998).

El Dorado County General Plan

The El Dorado County General Plan (1995) has several goals, objectives, and policies applicable to water quality, including:

Goal 7.3 Conserve, enhance, and manage water resources and protect their quality from degradation.

Objective 7.3.2 Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1 Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Placer County General Plan

The Placer County General Plan (1994) has two policies that address water quality:

Policy 6.A.4(e) Where creek protection is required or proposed, the County should require public and private development to:

> Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: (1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport

of sediment off-site; and (2) temporary vegetation sufficient to stabilize disturbed areas.

Policy 6.A.7 The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

3.7.2.3 Impact Indicators and Significance Criteria

Table 3.7-2 lists the impact indicators and significance criteria used in the water quality analysis.

Table 3.7-2
Water Quality Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Turbidity of the North Fork American River.	❑ An increase in the natural turbidity of the North Fork American River of 1 NTU or greater (applying an appropriate mixing zone). [a]
❑ Potential for increased concentration of contaminants in affected water bodies indicated by decreases in: ▪ end-of-month reservoir storage for Folsom, Shasta, Trinity; or Oroville; and ▪ monthly mean flow for lower American River, upper and lower Sacramento River and Feather River below Oroville Reservoir.	❑ A substantial increase in the concentration of contaminants in affected water bodies, based on: ▪ A substantial change in end-of-month reservoir storage, relative to the basis of comparison, for any month of the year over the 70-year simulation for Folsom, Shasta, Trinity, and Oroville reservoirs, or ▪ Change in monthly mean flow (cfs) of substantial magnitude or frequency, for any month of the year over the 70-year simulation, for the lower American River (Nimbus Dam and Watt Avenue), upper Sacramento River (Keswick), and lower Sacramento River (Freeport) and Feather River.
Monthly mean location of X2 and Delta export/inflow ratios for all months of the year.	▪ Change in position of X2 and Delta exportl/inflow ratio, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect water quality and downstream transport flows over the 70-year period of record.

[a] The natural turbidity in the North Fork American River is between 1 and 5 NTU. An increase of 1 NTU was chosen in accordance with RWQCB objectives for turbidity levels in this range (see Table 3.7-1). Note: further consideration of this requirement is anticipated as part of the regulatory permitting process to be undertaken prior to construction of the selected alternative.

3.7.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related water quality impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.7-1: Construction activities could increase sediment and turbidity in the river, which would affect the quality of water available for downstream beneficial uses.

Under the No Action/No Project Alternative, installation of the seasonal pumps would occur earlier in the diversion season, and removal would occur later in the fall/early winter, making it more vulnerable to damage from high river flows. Installation and removal activities would involve the same practices as currently implemented during seasonal pump station construction, including compliance with regulatory permit terms and conditions to protect water quality. Additional protection measures, including monitoring, may be required in the event of high flows and/or flooding could require occasional rebuilding of the sump pond and reinstallation of project facilities. These measures would be developed through consultation with the Corps, RWQCB, and CDFG, as appropriate. Therefore, compared to the existing condition, turbidity would not be expected to increase by more than 1 NTU. Therefore, the impact would be less than significant.

Proposed Project

Impact 3.7-2: Construction of the pump station and river access facilities could increase sediment and turbidity in the river, which could affect the quality of water available for downstream beneficial uses.

Construction activities for the Proposed Project would involve considerable excavation and spoil movement (up to one million cubic yards), however, much of this excavation would occur in the dewatered channel or other disturbed areas at the site. Closure of the bypass tunnel would require some in-river activity. The movement of such a large amount of material related to channel excavation has the potential to result in increased sediment loading and elevated turbidity levels in the American River and downstream of the project site due to the potential for loose materials to be deposited in the river channel. This potential impact would be minimized to levels considered less-than-significant through standard BMPs discussed later in this section.

Road widening would result in vegetation removal and associated soil disturbance that could result along the embankment adjacent to the road, which potentially would increase turbidity in the receiving waters. Collectively, the construction-related ground-disturbing impacts are not anticipated to result in a substantial amount of soil disturbance. Development of the turnaround and three parking spaces across from the bypass tunnel outlet would occur as part of the channel restoration activities, and would occur prior to re-watering the riverbed. Due to the distance

from the river there would be no direct contribution of soil or rock materials to the river. All materials to be removed from the channel would be deposited in designated excavation material disposal locations and stabilized prior to re-watering of the river channel. The parking area proposed for the former Auburn Dam concrete batch plant also is a sufficient distance from the river that no direct contribution of construction materials to the water would be anticipated. Implementation of construction BMPs for erosion control and grading activities would minimize the potential for direct release of materials to the river during road widening and trail improvements that would take place between the upper flat parking area and Oregon Bar at the river. Few improvements would be made from the point of the proposed vehicle turnaround area near Oregon Bar and the river itself. These improvements generally would include development of improved drainage courses for surface water runoff and would be performed manually to minimize the extent of vegetation and ground disturbance.

Incorporation of environmental protection measures, including compliance with regulatory permit terms and conditions, would serve to minimize the release of sediments and other materials into the river channel. It is expected that such measures would prevent the elevation of turbidity levels above unacceptable levels. Additionally, because of the scope and duration of the construction activities, the construction contractor would be responsible for water quality monitoring at designated sampling sites up and downstream of the construction activity to confirm that water quality objectives are being met. The details of this monitoring program would be determined through the permitting and consultation with RWQCB. Should the monitoring results indicate an unacceptable increase of turbidity levels due to construction, the lead agencies, in consultation with the RWQCB, would develop and implement additional protective measures to prevent significant water quality impacts.

Construction activities also would comply with the Corps' Nationwide Permit, and the RWQCB's Water Quality Certification and NPDES Permit, which necessitate measures that would minimize increases in sedimentation and turbidity. These measures would be documented in a construction erosion and sedimentation control plan to be developed and approved prior to commencement of construction. The plan would identify the specific BMPs for control of sediment transport, including specific regulatory permit terms. The BMPs would be identified in the construction specifications. Specific BMPs that that may be incorporated into the plan for the selected alternative are listed under Section 3.7.2.5, Environmental Protection and Mitigation Measures.

Additionally, the NPDES Permit compliance would include development and implementation of a stormwater pollution prevention plan (SWPPP) for the construction site, including staging areas. Required elements of the SWPPP include:

- Specific erosion and sediment control practices;
- Post-construction controls; and
- Monitoring and inspection.

The relationship of the project site to the nearest water supply intakes and the planned closure of the river in the vicinity of construction activities further minimize the potential for water quality to affect these uses. The distance to the nearest water supply intakes at Folsom Dam (13 to 14

miles) combined with the sedimentation that occurs in the reservoir would reduce the potential for impacts upon drinking water quality.

Implementation of the BMPs and compliance with regulatory permit terms and conditions would result in a less-than-significant impact upon the downstream water quality and designated beneficial uses.

Increases in sedimentation and turbidity sedimentation and turbidity due to the Proposed Project would be expected to be greater than during No Action/No Project Alternative seasonal pump station construction activities, but would be mitigated through implementation of specific BMPs, such as the ones listed above, or others as determined appropriate for the project through consultation and permitting with regulatory agencies.

Impact 3.7-3: Operation and maintenance activities could increase sediment and turbidity in the river and affect the quality of water available for downstream beneficial uses.

Short-term maintenance activities generally are assumed to not violate water quality objectives. Short- and long-term maintenance activities would be performed in compliance with regulatory permit terms and conditions. These conditions typically specify minimization of water quality impacts by limiting all in-river activities to the extent practicable and requiring proper disposal of excavated materials away from the river channel. For longer-term maintenance activities (e.g., a week-long activity occurring more than once a month), turbidity monitoring upstream and downstream of the diversion structure would be required to determine if activities are in compliance with water quality objectives. If turbidity is increased by more than 1 NTU, maintenance practices would be modified to decrease sedimentation disturbance. Compliance with these measures would ensure that maintenance-related activities of the Proposed Project result in less-than-significant water quality impacts at and downstream of the project site, thereby protecting downstream beneficial uses.

The Proposed Project maintenance activities generally would result in the same types of potential impacts at the project site, primarily the potential to disturb ground surfaces adjacent to the river channel from on-site travel, or the river bed due to in-river dredging. Under the Proposed Project, the need for in-river work likely would be reduced to once every three or four years, depending upon the effects of seasonal flooding upon the diversion structure, compared to annual dredging performed as part of the seasonal pump station activity. As described above, the Proposed Project maintenance activities would be in compliance with regulatory permits and prevent the increase of sedimentation and turbidity levels in compliance with state standards. It is anticipated that the Proposed Project would result in a less than significant water quality impact compared to existing and No Action/No Project Alternative conditions.

Impact 3.7-4: Use of the public river access sites and associated road and trail improvements could increase runoff contaminants and increase turbidity in the North Fork American River.

Use of the river access parking areas potentially would involve up to 53 cars at one time on a peak summer day. These vehicles could result in increased contribution of oil or other contaminants to local surface water runoff. Using stormwater control BMPs, the parking areas

would be designed to reduce the potential for direct contribution of vehicle-related materials to the river.

Additionally, the public river access areas would include installation of sanitary facilities including restrooms and trash containers to minimize potential water quality impacts from increased human activity in the project area. Based on the limited use of the area and inclusion of proper drainage and sanitary improvements, increased use of the area is anticipated to have a less-than-significant impact on water quality.

It is also noted that the Proposed Project would not result in use of motorized watercraft in the project area, therefore, pollutants associated with motorized watercraft would not be introduced to the project area.

Upstream Diversion Alternative

Impact 3.7-5: Construction activities could increase sediment and turbidity in the river, which could affect the quality of water available for downstream beneficial uses.

Construction activities for the Upstream Diversion Alternative would be similar to the Proposed Project, however, the dewatered river channel would not be restored and the pubic river access sites would not be developed. A much smaller quantity of excavation would take place (72,000 cubic yards). As with the Proposed Project, construction activities result in the potential to increase sedimentation and turbidity in the American River at and downstream of the project site, possibly affecting the quality of water available for downstream beneficial uses.

The environmental protection measures and permit compliance requirements described for the Proposed Project (Impact 3.7-2) generally would be the same for the Upstream Diversion Alternative. Implementation of these measures would result in less-than-significant impacts upon the quality of water available for downstream drinking water and recreation uses.

Sedimentation and turbidity increases would potentially be greater under the Upstream Diversion Alternative than under the No Action/No Project Alternative; however, due to the implementation of environmental projection measures, turbidity levels in the river are not anticipated to increase above acceptable levels. These activities therefore represent a less-than-significant impact.

Impact 3.7-6: Operation and maintenance activities could increase sediment and turbidity in the river and affect the quality of drinking water available to downstream users.

Maintenance activities under the Upstream Diversion Alternative would be similar to those required for the Proposed Project. As for the Proposed Project (see Impact 3.7-3), the Upstream Diversion Alternative maintenance practices would include water quality protection measures and monitoring for turbidity to ensure levels do not increase by more than 1 NTU. These practices would therefore result in less-than-significant effects upon local and downstream water quality. As for the Proposed Project, the impact upon downstream water quality for drinking water and recreation uses would be less than significant.

Cumulative Facilities-Related Impacts

Impact 3.7-7: Construction, operation and/or maintenance of the alternatives could contribute to cumulative water quality impacts which could affect the quality of water available for downstream beneficial uses.

Because the Proposed Project or alternatives would incorporate extensive measures to minimize and prevent potential water quality impacts, the project is not anticipated to result in a contribution to cumulative water quality impacts for the North Fork American River. Additionally, ongoing and future activities within the canyon (such as annual installation of the seasonal pumps and future planned projects involving Foresthill Bridge) already include or would be required to incorporate similar protection measures to minimize degradation of river water quality.

Assuming implementation of project-specific environmental protection measures and compliance with permit terms and conditions (see Impacts 3.7-2, 3.7-3, and 3.7-4), the alternatives would result in a less-than-significant contribution to cumulative facilities-related impacts upon water quality.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.6-1, H-3.6-2, etc.). Additionally, the reader is referred to the Hydrologic Modeling Technical Memorandum (Appendix E of the Draft EIS/EIR) and to the model data output (Appendix I of the Draft EIS/EIR).

The only potential diversion-related effect to water quality in the upper American River would be to water temperature in the river below the diversion site. These effects are addressed in Section 3.5, Fish Resources and Aquatic Habitat.

No Action/No Project Alternative

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant increases in contaminant concentrations downstream of the project site or in other CVP system water bodies.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP or SWP

operations associated with the Action Alternatives also would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the Action Alternatives.

Impact 3.7-8: Increased diversions could result in increased concentration of contaminants in the North Fork American River, which could affect the quality of drinking water available downstream and at other locations in the CVP system.

Increased diversions from the North Fork American River associated with an Action Alternative could be expected to reduce storage levels in Folsom Reservoir and to reduce flows in the lower American River. Because the CVP reservoirs are operated in an integrated fashion, reduced storage levels in Folsom Reservoir have the potential to affect storage levels in Shasta and Trinity reservoirs and to affect flows in the Sacramento River and into the Delta.

Reduced contribution of high quality flows from the North Fork American River can potentially affect water quality in downstream water bodies by reducing dilution flows. The potential for this indirect effect on water quality would be greatest during the summer time when flows were already low. Loss of dilution is most important where a high quality flow is diluting a poor quality water flow. However, since the North Fork American River and Folsom Reservoir are of relatively high quality water, the importance of dilution is minor.

Reduction in water flows in the lower American River and reduction in storage levels in Folsom Reservoir due to the Action Alternatives would not be substantial when compared to existing conditions. Long-term average storage levels in Folsom Reservoir would be reduced by less than 1 percent. Long-term average flows in the lower American River would be reduced by less than 2 percent. Lower Sacramento River flows would be reduced by less than 0.1 percent on average. Shasta Reservoir and Trinity Reservoir storage levels would be reduced by less than 0.1 percent as a long-term average. Upper Sacramento River flows would be changed even less. These small reductions in dilution flows, acting indirectly on concentrations or levels of water quality parameters have only a small potential to impact water quality.

Levels or concentrations of water quality parameters of interest such as nutrients, pathogens, total dissolved solids, total organic carbons, turbidity, and priority pollutants (e.g., metals, organics) would not be expected to be altered substantially, if at all, by the Action Alternatives. Any direct or indirect impacts to water quality in downstream or other CVP project area water bodies resulting from reductions in North Fork American River flows would be less than significant.

Overall, measurable increases in constituent concentrations/levels that could occur under the project alternatives would not be expected to be sufficiently large to cause state or federal drinking water quality criteria or standards to be exceeded in the downstream or project area water bodies when they would not otherwise be exceeded. Therefore, impacts to water quality due to the Proposed Project or Upstream Diversion Alternative would be less than significant.

Impact 3.7-9: Impacts to Delta water quality.

Throughout the entire 70-year period of record included in the analysis, Delta outflow reductions of more than three percent occurred during only seven individual months (out of 350 months) under the Action Alternatives relative to the existing condition. Under the Action Alternatives, there would be no shift in the long-term average position of X2 relative to the existing condition.

The model simulations conducted for the Action Alternatives included conformance with X2 requirements set forth in the SWRCB Interim Water Quality Control Plan, as well as Interior's Final Administrative Proposal for the Management of 3406(b)(2) Water. Therefore, the Delta export-to-inflow ratios under the Action Alternatives would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Overall, impacts to Delta water quality would be considered less than significant.

Impact 3.7-10: Impacts to Oroville Reservoir or Feather River water quality.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the existing condition. Any small changes that might occur would be considered less-than-significant impacts upon water quality and related beneficial uses. See discussion under Impact 3.7-8.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.7-11: Increased diversions could result in increased concentration of contaminants in the North Fork American River, which could affect the quality of drinking water available downstream and at other locations in the CVP system.

Increased diversions from the North Fork American River associated with the Action Alternatives as compared to the future No Action/No Project Alternative could be expected to reduce storage levels in Folsom Reservoir and to reduce flows in the lower American River. Because the CVP reservoirs are operated in an integrated fashion, reduced storage levels in Folsom Reservoir have the potential to affect storage levels in Shasta and Trinity reservoirs and to affect flows in the Sacramento River and into the Delta.

Reduction in water flows in the lower American River and reduction in storage levels in Folsom Reservoir due to the Action Alternatives would not be substantial compared to the No Action/No Project Alternative. Long-term average storage levels in Folsom Reservoir would be reduced by less than one percent. Long-term average flows in the lower American River would be reduced by less than two percent. Lower Sacramento River flows would be reduced by less than 0.1 percent on average. Shasta Reservoir and Trinity Reservoir storage levels would be reduced by less than 0.1 percent as a long-term average. Upper Sacramento River flows would be changed even less. These small reductions in dilution flows, acting indirectly on concentrations or levels of water quality parameters have only a small potential to impact water quality.

Levels or concentrations of water quality parameters of interest would not be expected to be altered substantially, if at all, by the Action Alternatives. Any direct or indirect impacts to water quality in these water bodies resulting from reductions in North Fork American River flows or Folsom Reservoir storage would be less than significant.

Overall, measurable increases in constituent concentrations/levels that could occur under one of the Action Alternatives would not be expected to be sufficiently large to cause state or federal water quality criteria or standards to be exceeded in the downstream or project area water bodies when they would not otherwise be exceeded. Therefore, impacts to water quality due to the Action Alternatives relative to the No Action/No Project Alternative would be less than significant.

Impact 3.7-12: Impacts to Delta water quality.

Reductions in the long-term average Delta outflow of up to 0.3 percent for any given month would occur under the Action Alternatives relative to the No Action/No Project Alternative, as shown in Table H-3.5-51. In 40 of the 840 months simulated, the Delta outflow was reduced by more than one percent relative to the future No Action/No Project Alternative. There were only eight months out of the 840 months included in the analysis, or about one percent of the time, when the Delta outflow would decrease by more than three percent under the Action Alternatives relative to the No Action/No Project Alternative.

Under the Action Alternatives, there would be only a 0.1 km upstream shift in one month's long-term average position of X2 relative to the long-term average position under the No Action/No Project Alternative.

The Delta export-to-inflow ratios under the Action Alternatives relative to the No Action/No Project Alternative would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Overall, impacts to Delta water quality would be less than significant.

Impact 3.7-13: Impacts to Oroville Reservoir or Feather River water quality.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered less-than-significant impacts upon water quality and related beneficial uses. See discussion under Impact 3.7-11.

Cumulative Impacts

The cumulative effects were determined based on a comparison of the future condition with implementation of an Action Alternative plus other reasonably foreseeable actions or projects (cumulative condition) to existing conditions. In instances where potentially significant or significant effects are identified, there is a further analysis to determine the Action Alternatives' incremental contribution to the cumulative condition. The reader is referred to Appendix E for

further explanation of the modeling methodology and assumptions and Appendix I for results from the simulations.

Impact 3.7-14: Increased diversions could result in increased concentration of contaminants in the North Fork American River, which could affect the quality of drinking water available downstream and at other locations in the CVP study area.

Changes in operation of the CVP system associated with the cumulative condition could be expected to substantially reduce storage levels in Folsom, Shasta, Trinity, and Oroville reservoirs and to substantially reduce flows in the lower American River, Sacramento River, and Feather River compared to existing conditions. Long-term average storage levels would be reduced by up to 11 percent in Folsom Reservoir, up to 7 percent in Shasta Reservoir, up to 5 percent in Trinity Reservoir, and up to about 8 percent in Oroville Reservoir. Long-term average flows would be reduced by up to 15 percent in the lower American River, up to 10 percent in the upper Sacramento River, up to 5 percent in the lower Sacramento River, and up to about 14 percent in the lower Feather River. The greatest reduction in flow would be in September, October and November - months when the existing flow is already low. These reductions in dilution flows, acting indirectly on concentrations or levels of water quality parameters have potential to impact water quality.

Increases in constituent concentrations or levels that may occur under the cumulative condition could be sufficiently large to cause state or federal water quality criteria or standards to be exceeded in the downstream or project area water bodies when they would not be exceeded in the existing condition. Therefore, impacts to water quality due to the cumulative condition relative to the existing condition are potentially significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

Impacts on water flows and storage levels associated with the Action Alternatives would be small. Long-term average storage levels would be reduced by less than 1.2 percent in Folsom Reservoir, by less than 0.1 percent in Shasta Reservoir, by less than 0.2 percent in Trinity Reservoir, and by less than 1 percent in Oroville Reservoir. Long-term average flows would be reduced by less than 2 percent in the lower American River, by less than 0.2 percent in the upper Sacramento River, by less than 0.3 percent in the lower Sacramento River, and by less than 1 percent in the lower Feather River. These reductions in dilution flows, acting indirectly on concentrations or levels of water quality parameters would have negligible contribution to the cumulative impacts on water quality.

The Action Alternatives' incremental contribution to the cumulative condition water quality would be less than significant.

Impact 3.7-15: Impacts to Delta water quality.

The greatest reductions in the long-term average Delta outflow under the cumulative condition was 8.3 percent (during the month of October) relative to the existing condition, as shown in

Table H-3.5-88. The long-term average position of X2 would move upstream less than one kilometer relative to the existing condition.

The Delta export-to-inflow ratios under the cumulative condition would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Even though the cumulative condition would not cause X2 or Delta outflow standards to be violated, the cumulative condition could result in decreased outflow and upstream shift in the position of X2, which could be considered a potentially significant impact to Delta water quality. Overall, impacts to Delta water quality would be potentially significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that reductions in the long-term average Delta outflow of up to 0.3 percent could occur under the cumulative condition relative to the future base condition, as shown in Table H-3.5-89. In addition, under the cumulative condition, there would not be more than a 0.1 km shift in the long-term average position of X2 relative to the future base condition. The Delta export-to-inflow ratios under CVP operations associated with the Action Alternatives would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. Based on these and the above-discussed results, implementation of the year-round pump station project would not significantly contribute to future potentially significant impacts to Delta water quality.

3.7.2.5 Environmental Protection and Mitigation Measures

The Proposed Project or Upstream Diversion Alternative would include incorporation of environmental protection measures, as described in the impact analysis. These measures, plus regulatory permit terms and conditions would ensure protection of water quality at and downstream of the project site.

The mitigation measures included in the Mitigation Plan (Appendix D to the Final EIS/EIR) are provided below.

Removal of Construction Litter and Debris

Commitment:	Remove litter and construction debris from the Project area and dispose of at an appropriate site.
Responsible Parties:	Reclamation/Construction Contractor - On-site Monitor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004), as needed
Monitoring:	Inspect construction areas for compliance with litter and debris control measures
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require Construction Contractor to keep site clear of construction-related litter and debris; specifically, in areas near the river channel.

Success Criteria:
No litter or construction debris is noted in the Project area, on inspection.

Construction-Related Water Quality Protection Measures

Commitment:	Stormwater runoff control measures that prevent contaminants, soil or sediment from entering the river shall be implemented, monitored for effectiveness, and maintained throughout construction operations. The specific measures to be implemented for this project will be determined as part of the permitting process prior to construction. Construction specifications will include all required measures indicated in permits for erosion control, stormwater runoff control, and dewatering specifics.
Responsible Parties:	Reclamation/Construction Contractor - On-site Monitor
Location:	Construction areas
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect construction areas for compliance with water quality control measures
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to implement terms and conditions of regulatory permits including all applicable construction BMPs for stormwater runoff and erosion control to minimize the potential for direct release of materials to the river during Project construction.

The Construction Contractor will be responsible to meet the terms of the permit(s). Should monitoring or site inspection indicate unacceptable conditions due to construction, the lead agencies, in consultation with the RWQCB or other permitting agencies, will develop and implement additional protective measures to prevent water quality impacts.

The Project water quality protection measures to be required by permitting agencies may include one or more of the following:

- Terms limiting the period or type of construction activities that occur within the ordinary high water line of the American River up- and downstream of the bypass tunnel.
- Restrictions upon storage and stockpiling of construction materials, including vehicles and supplies, and chemicals or other hazardous materials to designated construction staging areas.
- Designation of vehicle/equipment fueling and wash-down areas, away from the floodway and designed to contain potential spills.

- Regular maintenance of construction vehicles and equipment such that leaks of fuels, lubricants and other materials are prevented.
- Removal of construction litter/debris and proper disposal practices at the end of each construction day and particularly prior to the start of the rain season.
- Requirement to minimize near and in-river activities to the extent possible.
- Implementation of post-construction management activities including restoration or improvement of drainage patterns and stabilization of stream banks and hillsides (upland areas) within the construction area; stabilization may include revegetation with a seed mix of plants native to the area, mulch or some other form of protection.

Success Criteria:
Document permit compliance in construction compliance report or as required by individual permitting agencies.

Project Operation and Maintenance Water Quality Protection

Commitment:	Protect downstream beneficial water uses by incorporating standard BMPs into the operation and maintenance of the Project to avoid water quality impacts.
Responsible Party:	PCWA
Location:	Project area/river channel
Timing:	Project operation and maintenance
Monitoring:	As required by permitting agencies
Reporting Requirements:	Comply with regulatory permit reporting requirements

Description of Activities:
PCWA will comply with regulatory permit terms and conditions in all short- and long-term maintenance activities for the pump station, intake facilities, and diversion structure.

Success Criteria:
Document compliance with regulatory permit terms and conditions.

Minimize Water Quality Impacts From Increased Public Access

Commitment:	Reduce the potential for pollutants to enter the river.
Responsible Party:	Reclamation
Location:	Project area (public river access features)
Timing:	Ongoing during operation of public river access
Monitoring:	Monitor use of parking areas such that capacity is not exceeded; monitor proper functioning of drainage control structures; and track public sanitation facility maintenance.

Reporting Requirements: No specific reporting requirement.

Description of Activities:
Reclamation will ensure that design of the public river access features limits the number of cars permitted into the Project area and further restricts the proximity of vehicles to the river. Reclamation will ensure that the design incorporates drainage control structures into all access roads, trails and parking areas to reduce direct contribution of pollutants into the river.

Through its Auburn SRA management agreement, Reclamation will require CDPR to maintain the public river access facilities such that trash containers will be emptied and restrooms will be cleaned regularly to avoid accumulation of litter in the Project area.

Success Criteria:
Public river access area is maintained appropriately and water quality/pollution impacts avoided.

3.8 RECREATION

3.8.1 AFFECTED ENVIRONMENT

3.8.1.1 Regional Setting

The regional setting includes recreation areas or facilities that may be influenced by the Proposed Project or alternatives through reductions in flows or reservoir elevations due to changed CVP or SWP operations that affect water-based or water-enhanced recreation of the water body. Regional water resources included in this evaluation include: Trinity and Shasta reservoirs, the upper and lower Sacramento River, Folsom Reservoir, Lake Natoma, the lower American River, the Delta, Oroville Reservoir, and the Feather River. Descriptions of the water-based recreation activities associated with these waterways and water bodies are included in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.8.1.2 Project Area Setting

The project area represents the direct effect study area and encompasses the water-based recreation resources of the Middle Fork American River below Ralston Afterbay and the North Fork American River from the confluence with the Middle Fork to just downstream of Oregon Bar (Figure 2-2).

Middle Fork American River

The Auburn State Recreation Area (SRA) is managed by the CDPR and receives approximately 850,000 visitors annually (CDPR 2002). The Middle Fork American River from below Ralston Afterbay lies within the Auburn SRA and extends 24 miles downstream to the confluence with the North Fork. The Auburn SRA includes approximately 40,000 acres of lands withdrawn for the proposed Auburn Dam and Reservoir Project. Twenty-five thousand acres are managed by CDPR under the 1977 agreement with Reclamation. The remaining 15,000 acres are scattered throughout the canyon and are either privately owned or federal lands. Broad management guidelines for the public use area of Auburn Dam Project lands were established under Public Law 89-161, the enabling legislation for the construction of Auburn Dam.

The Middle Fork American River is the most popular river in the Auburn SRA for whitewater boating. Water released from the PCWA MFP through Ralston Afterbay supports rafting, kayaking, and canoeing throughout the year. PCWA currently has an informal arrangement with Middle Fork American River commercial whitewater companies to release water from Ralston Afterbay on weekend mornings to augment flows down the river for whitewater use. Releases of 1,000 to 1,100 cfs typically are released beginning at 7:00 a.m. and continue to be released for several hours, depending on water operations (Anderson 1998).

Water released at 7:00 a.m. usually reaches the confluence of the Middle and North Forks at approximately 3:00 p.m. The released water provides river boating opportunities along the Middle Fork. These releases are particularly important during the summer and early fall months

when river flows may be below 300 cfs. Adequate flows for whitewater boating are above 1,000 cfs and the minimum flow needed is approximately 800 cfs (Cassady and Calhoun 1995; T. Reed, pers. comm. 1998; Anderson 1998).

Most whitewater boating occurs in the summer (97 percent of the year's whitewater use), with the boating season beginning in late May and extending into September (CDPR and Reclamation 1992). The majority of the river stretches along the Middle Fork American River tend to be difficult whitewater and require intermediate to advanced level skills, or the services of a commercial rafting company (Anderson 1998). There are three distinct whitewater runs on the river: (1) the Tunnel Chute run; (2) the Mammoth Bar run; and (3) Murderer's Bar run. The Tunnel Chute run extends from just below Ralston Afterbay to the old Greenwood Bridge site. It is a Class IV run with one Class V rapid and a portage. The Mammoth Bar Run is a Class II run which extends from the old Greenwood Bridge site to Mammoth Bar. The Murderer's Bar run extends from Mammoth Bar to the confluence, ending just above the Highway 49 bridge. This run is a Class IV with one Class V rapid. The confluence area offers the last takeout point above the project site. **Figure 3.8-1** provides a map of recreational opportunities along the Middle Fork American River.

North Fork American River

Boating and other water-related activities are discouraged downstream of the confluence to the project site (CDPR and Reclamation 1992) and prohibited within the area 1/2-mile upstream and 1/2-mile downstream of the Auburn Dam construction bypass tunnel (posted CDPR order #318-02-91) due to hazards associated with the bypass tunnel (Anderson 1998, CDPR 2000). At normal river stages, the entire flow of the river is diverted into the bypass tunnel, which presents hazards that may not be evident until after a boater has entered the tunnel. Specifically, river-borne debris such as logs can become lodged in the tunnel and pose a significant pinning or drowning hazard to boaters or swimmers. At 4,000 cfs, the tunnel is passable with a four-foot high gap at the downstream tunnel portal, according to the most recent engineering survey of the area (MW et al. 1998). However, at flows greater than 10,000 cfs, the upstream tunnel portal can be entered while the downstream tunnel portal is completely submerged. Although undocumented, noncommercial whitewater boating, fishing, and swimming are known to occur in the area (J. Dampier, pers. comm. 1998).

Project Area River Characteristics

Currently, the Auburn reach of the North Fork American River is divided into two segments by the dam construction site. If boating were allowed in the project area, the stretch above the bypass tunnel would be an easy Class I to Class II river trip through a narrow canyon appropriate for novice boaters, families, and unguided trips with one Class II+ rapid (Tamaroo Bar Rapid). These river characteristics would be suitable for use by individuals with a wide range of boating skills. This trip would begin with a short warm-up leading directly into fairly long cobble bar type rapids with swift water and a tricky left turn against a rock face near the bottom.

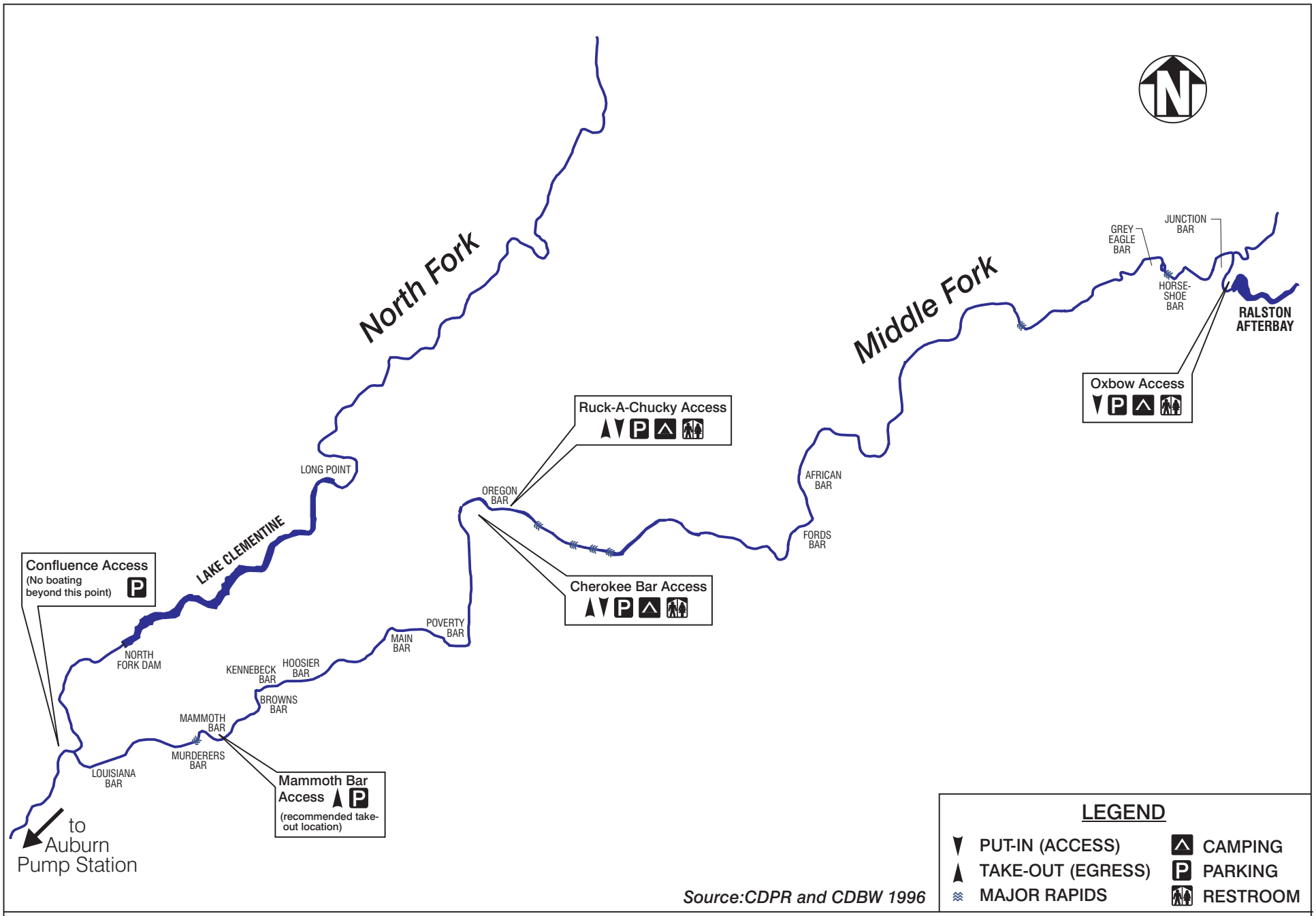


Figure 3.8-1 Recreational Opportunities Along the Middle Fork American River

Downstream of the project area, steeper, longer, and more closely spaced rapids increase the difficulty of the stretch to a Class II to Class III run. This downstream segment of the river supports a large volume of cofferdam remnants, which makes the riverbed unstable. As a result, the rapids tend to change with each flood event (Anderson 1998; Anderson 2002).

Increased boating opportunities below the Middle Fork/North Fork confluence would be open to non-motorized river uses, including canoes, kayaks, and rafts. Motorized boating currently is prohibited by posted order on the rivers of the Auburn SRA (with the exception of Lake Clementine). The posted order would apply to the river reach within the project area. Commercial whitewater boating is prohibited on the North Fork American River between the Middle Fork/North Fork confluence and the project area. No commercial river use is proposed as part of this project; nor is any being considered by CDPR at this time. Any future consideration of commercial river activities would require separate feasibility study, planning, environmental review and analysis.

Other river-related uses that have been known to occur within the project area include fishermen who use the river below the diversion tunnel, swimmers and others who use the beach area along the river below Robie Point and use the stretch of river between the Middle Fork/North Fork confluence and the Auburn Dam site by hikers, sunbathers and anglers.

Project Area Trail Use

Although boating is either discouraged or prohibited in areas downstream of the Middle Fork/North Fork confluence to approximately 1/2-mile below the project site (CDPR and Reclamation 1992), the North Fork American River canyon provides opportunities for hiking, biking, sight-seeing, and horseback riding. As with other areas in the region, May through September are peak use months for these activities.

The Auburn SRA has a system of trails, which provide access for a variety of uses including hiking and trail running, equestrian, and mountain biking (**Figure 3.8-2**). The Auburn-to-Cool Trail is a multi-use trail used by hikers, mountain bikers, and equestrians. The trail extends from Auburn, down the western side of the river canyon in the project area, crosses the southwestern end of the dewatered river channel, passes up onto the cofferdam remnants and then follows the eastern canyon wall of the river before heading east towards Cool (Figure 3.8-2). From the east side of the river, the Auburn-to-Cool Trail intersects with other Auburn SRA trails which provide access to the towns of Foresthill and Georgetown, and to other recreational use areas such as Knickerbocker Flat, Lake Clementine, and the river canyons of the North and Middle forks. The trail became widely used during closure of Mountain Quarries Bridge (otherwise known as No Hands Bridge) in 1996, located just downstream of the Highway 49 river crossing (Mountain Quarries Bridge/No Hands Bridge has since been re-opened).

A trail counter installed in November and December of 2001 on the Auburn-to-Cool Trail counted 589 trail uses. Based on seasonal use patterns, CDPR estimated the two-month count to equate to 2,500-3,500 annual trail users. The Auburn-to-Cool Trail intersects the Western States Trail, a nationally registered trail that extends from Sacramento to Utah. The Western States Trail begins in the Auburn Staging Area, located near the Gold Country Fairgrounds in Auburn,

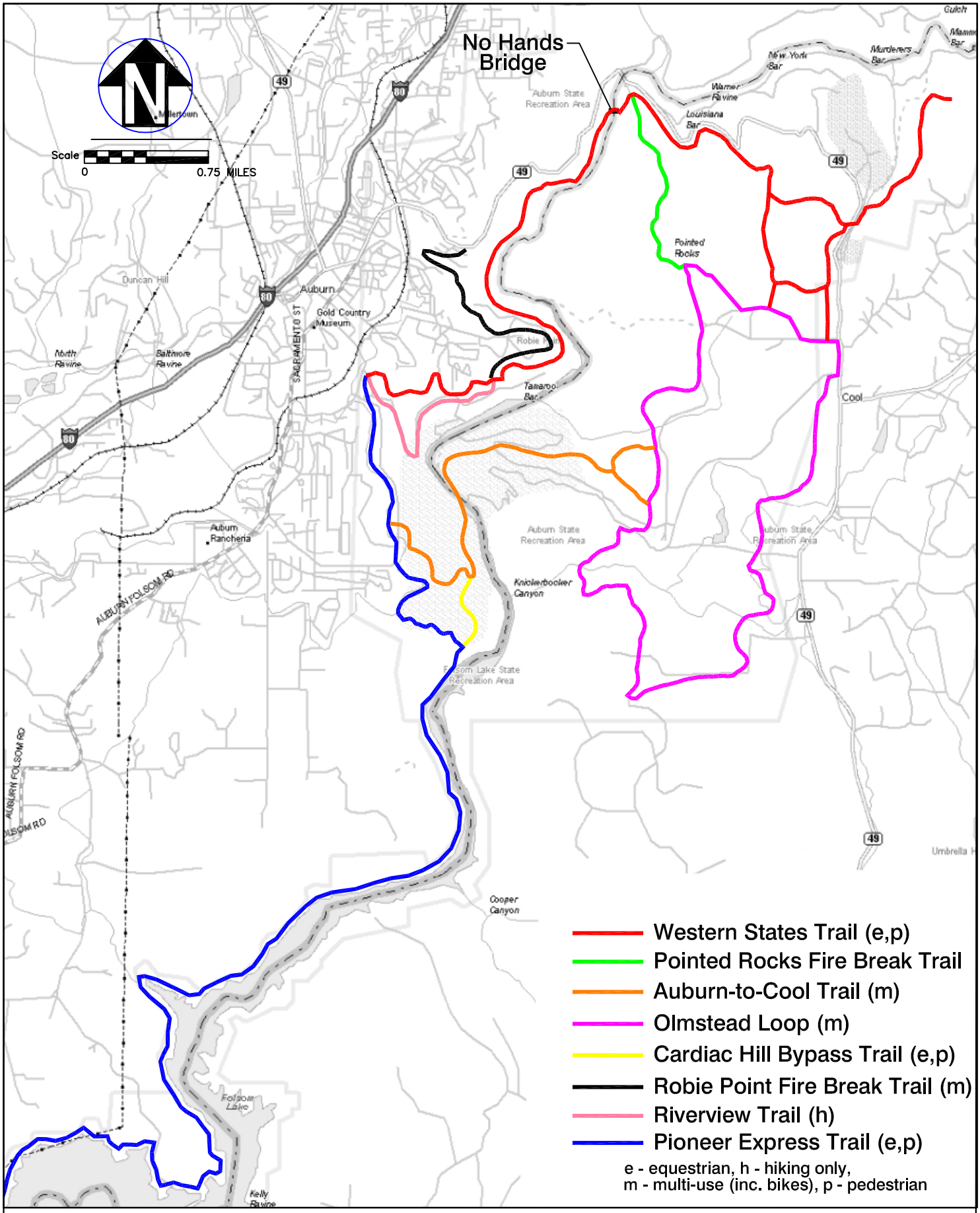


Figure 3.8-2 American River Pump Station Project Area, Recreation Trails Map

passes down to the confluence of the Middle and North forks of the river, along the Middle Fork, and then into the Sierra Nevada Mountains. The Western States trail is the main trail along the Middle Fork and intersects with other Auburn SRA trails (CDPR and Reclamation 1992). Two recreational events of national significance held on the Western States route and which pass through the SRA are the Tevis cup endurance ride (100 miles) and the Western States Endurance Run (100 miles).

Other recognized trail systems within the vicinity of the project area include the Cardiac Hill Trail, the Pioneer Express Trail, and the Robie Point Firebreak Trail. Despite the officially designated closure of the area to public use, the area has many unofficial trails and construction roads that are used by the public.

3.8.2. ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.8.2.1 Methodology

Facilities-Related Analysis Approach

The anticipated construction, operation, and maintenance impacts on recreation were assessed in part by consulting with Reclamation and CDPR staff. Specifically examined were the location and nature of project components, changes in access roads and access to the river, changes in boating and swimming opportunities or trail access, and potential hazards to recreationists.

Diversion-Related Analysis Approach

Diversion-related effects were evaluated for the Middle Fork American River, Folsom Reservoir, Lake Natoma, the lower American River, Sacramento River reservoirs, the upper and lower Sacramento River, and the Delta. The project alternatives' increased water diversions may result in reductions in river flows and reservoir storage volumes. To evaluate diversion-related impacts to regional water bodies, therefore, recreation impacts were analyzed based on a comparison of reservoir elevations and river flows under existing conditions and project alternative conditions (over a 70-year period of record). The cumulative analysis of recreation impacts is based on a comparison of these parameters under cumulative and existing conditions. In instances where a potentially significant or significant cumulative impact is identified, further analysis was performed to assess the project's incremental contribution to the future cumulative condition.

Hydrologic modeling results were reviewed to determine whether the magnitude of reductions in elevations or flows would affect recreation on these water bodies. The model simulations and comparisons are described in Section 3.3.2. Additional details of the hydrologic modeling are included in Appendix E of the Draft EIS/EIR.

3.8.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Auburn State Recreation Area Interim Resource Management Plan

CDPR, through a management agreement with Reclamation, manages the public use of the Reclamation lands in the Auburn SRA. The area supports and offers the potential for unique and diverse recreational opportunities. The Auburn Interim Resource Management Plan provides planning goals and objectives to address agency and public concerns for protection and enhancement of recreation and natural resources of the area. CDPR and Reclamation will soon be undertaking efforts to update this plan. These efforts will include re-assessment of existing resources, public interests, and possible improvements to accommodate recreation while protecting the natural resources and primitive setting of the upper American River reaches.

American River Parkway Plan

The American River Parkway Plan was adopted by the County of Sacramento in 1985 (Sacramento County 1985). The plan is an element of the Sacramento County General Plan. It establishes goals and policies for the parkway, presents a description of parkway resources, and provides area plans to guide resource protection and development. Policy 3.1 of the plan discusses flow issues, as follows:

> *"Water flow in the lower American River should be maintained at adequate levels to permanently sustain the integrity of the water quality, fisheries, waterway recreation, aesthetics, riparian vegetation, wildlife, and other river-dependent features and activities of the Parkway. The required flow levels of the lower American River should be established at higher levels than those required under Decision 1400 of the State Water Resources Control Board. State and federal policy should provide for the maintenance of flows in the optimum range in the lower American River."*

The plan explains that Decision 1400 flows (e.g., 1,500 cfs for recreation) are inadequate and that the decision has no legal effect without the completion of the Auburn Dam. It acknowledges that research is ongoing to establish adequate flows for the lower American River, including recreation flows. When required flows are determined, the plan states that "those flows will be incorporated into the policies of this Plan."

State Wild and Scenic Rivers Act

The State Wild and Scenic Rivers Act was passed by the California Legislature in 1972 (Public Resources Code (PRC) Section 5093.50 *et seq.*). The Legislature declared that it was the state's intent that "certain rivers which possess extraordinary scenic, recreation, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state." The Act restricts the construction of dams, reservoirs, diversions, and other water impoundments. A diversion facility may be authorized if the Secretary of the Resources Agency determines that (a) it is needed to supply

domestic water to the residents of the county through which the designated river flows, and (b) it will not adversely affect the natural character of the river (PRC Section 5093.55[a]; DWR 1994).

The upper portion of the North Fork American River from Colfax-Iowa Bridge to the upper end of Lake Clementine is eligible for listing for its scenic values. The North Fork American River from below lake Clementine to the bypass tunnel in the project area is eligible for listing for its recreational values. The Middle Fork American River from Oxbow Dam to the confluence with the North Fork American River is eligible for listing for its scenic values (City of Sacramento 1993). The lower American River was included in the state Wild and Scenic River System and was given the classification of "recreational river" (PRC Sections 5093.54[e], 5093.545 [h]). The state defines a recreational river as a river "readily accessible by road or railroad, that may have some development along [its] shorelines, and that may have undergone some impoundment or diversion in the past" (PRC Section 5093.53[c]).

National Wild and Scenic Rivers Act

The National Wild and Scenic Rivers System was established in 1968 with the enactment of P.L. 90-542 (16 USC 1271 *et seq.*). Under this system, rivers possessing "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" can (or will?) be protected as wild, scenic, or recreational.

The upper portion of the North Fork from Colfax-Iowa Bridge to the upper end of Lake Clementine is eligible for listing for its scenic values. The North Fork from below lake Clementine to the bypass tunnel in the project area is eligible for listing for its recreational values. The Middle Fork from Oxbow Dam to the confluence with the North Fork is eligible for listing for is scenic values (City of Sacramento 1993). The lower American River from Nimbus Dam to its confluence with the Sacramento River was added to the National Wild and Scenic Rivers System based on the state's petition in 1981 and is designated a "recreational river." Recreational rivers are ones "that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past" (16 USC 1273[6][3]).

As a result of its designation under the act, federally assisted projects affecting the lower American River are subject to the Secretary of the Interior's determination that the project "will not invade the area or unreasonably diminish" the river's recreational value (16 USC 1278[a]; see also *Swanson Mining Corporation v. FERC*, 790 F.2d 96 [D.C. Cir. 1986]; and the American River Parkway Plan). When seeking authorization or appropriations for a project that affects the protected values of the lower American River, the relevant federal agency must notify the Secretary of the Interior of its intent, and report to Congress on the project's conformity with the act and its effect on the protected values of the river (16 USC 1278[a]).

El Dorado County General Plan

The El Dorado County General Plan was adopted in 1996 (El Dorado County General Plan 1996). It is a long range statement of local public policy for the use of public and private land, which provides a framework for encouraging economic development while managing growth,

conserving agricultural lands, protecting the environment, developing effective and efficient public services and preserving the County's rural character. The Non-Motorized Transportation Systems component defines a network of regional bikeways and trails that interface with and complement adjacent counties' and local (city) routes. Under this component, Hiking and Equestrian Trails shall be separated from the travel roadway whenever possible by curbs and barriers (such as fences and rails), landscape buffering, and special distance. The plan calls for use of existing public corridors such as power transmission line easements, railroad rights-of-way, irrigation district easements, and roadways for multiple-use trailways, where possible.

3.8.2.3 Impact Indicators and Significance Criteria

Significance criteria for recreational use of the Middle Fork American River were developed from various sources (Cassady and Calhoun 1995; T. Reed, pers. comm. 1998; Anderson 1998). The significance criteria used for recreation use of Folsom, Shasta, and Trinity reservoirs, the lower American River, and the upper and lower Sacramento River and Delta are based on the Water Forum Proposal Final EIR (CCOMWP 1999). The Water Forum Proposal Final EIR presents an extensive review of sources that suggest minimum, maximum, and optimum flows for common recreational activities at each of the water bodies in the regional study area. These discussions and evaluations are herein incorporated by reference. The results of these evaluations and the thresholds of significance that were developed from them in the Water Forum Final EIR are used in this document to evaluate regional recreational impacts. Significance criteria for each of the potentially affected water bodies are presented in **Table 3.8-1** along with other recreational criteria.

Table 3.8-1
Recreation Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Accessibility of recreational trails.	❑ Permanent closure of recreation trails through the project site.
❑ Recreational safety hazards.	❑ A substantial increase in exposure to hazards for recreationists, for either land- or water-based activities.
❑ American River public access and river conditions that contribute to water-based recreational activities.	❑ A substantial change in river access or channel conditions that contribute to water-based recreational activities, relative to the basis of comparison, with sufficient frequency to adversely affect recreation..
❑ Consistency with applicable regulations and planning documents, guiding recreation in the study area.	❑ A conflict or inconsistency with relevant policies, plan goals, or objectives relative to the basis of comparison such that recreation would be adversely affected.

Table 3.8-1 (Continued)
Recreation Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ River flows that determine whitewater rafting and other boating opportunities.	❑ A substantial decrease in the duration of Middle Fork flows below the 850 cfs threshold for whitewater boating, relative to the basis of comparison, sufficient to adversely affect recreation. ❑ A substantial change in lower American River flows above or below the 1,750 to 6,000 cfs minimum/maximum range of adequate recreational flow, relative to the basis of comparison, with sufficient frequency to adversely affect recreation (CCOMWP 1999). ❑ A substantial change in lower American River flows above or below the 3,000 to 6,000 cfs optimum range of recreational flows, relative to the basis of comparison, with sufficient frequency to adversely affect recreation (CCOMWP 1999). ❑ A substantial decrease in upper or lower Sacramento River flows below 5,000 cfs or a substantial decrease in flows, relative to the basis of comparison, with sufficient frequency to adversely affect recreation (CCOMWP 1999). ❑ A substantial decrease in the contribution of lower Sacramento River flows to the Delta, relative to the basis of comparison, with sufficient frequency to adversely affect recreation.
❑ Folsom Reservoir water surface elevations that determine boat ramp availability.	❑ A change in Folsom Reservoir elevation that would result in a substantial decrease in availability or optimum use of boat ramps, wet slips or swimming beaches, relative to the basis of comparison, with sufficient frequency to adversely affect recreation (CCOMWP 1999): ▪ When all boat ramps are useable (420 feet or higher) ▪ When the marina wet slips are useable (412 feet or higher) ▪ When the swimming beaches are useable (420 to 455 feet) ▪ When at least one of the low-water ramps is useable on both the east and west sides of the lake (375 feet or higher) ▪ When the lake level is within its optimum range for high quality recreation activities (435 to 455 feet)

Table 3.8-1 (Continued)
Recreation Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Shasta and Trinity reservoir water surface elevations that determine boat ramp availability.	❑ A change in Shasta Reservoir elevation that would result in a substantial increase in boat ramp closures, relative to the basis of comparison, with sufficient frequency to adversely affect recreation (CCOMWP 1999): ▪ When all boat ramps are useable (1,020 feet or higher) ▪ When at least one boat ramp is useable on each arm of the lake (941 feet or higher) ▪ When recreational use of shoreline areas begins to decline (1,007 feet) ❑ A change in Trinity Reservoir elevation that would result in a substantial increase in boat ramp closures relative to the basis of comparison, with sufficient frequency to adversely affect recreation (USFWS et al. 1999): ❑ When only one major boat ramp is useable (2,170 feet to <2,295 feet)
❑ Feather River flows below Oroville Dam for all months of the year.	❑ Reservoir water surface elevations that Reservoir water surface elevations that A substantial change in Feather River flows, relative to the basis of comparison, with sufficient magnitude and frequency to adversely affect recreation in the Feather River.
❑ Oroville Reservoir water surface elevation.	❑ A substantial change in Oroville Reservoir elevation, relative to the basis of comparison, with sufficient magnitude and frequency to adversely affect recreation in Oroville Reservoir.

Source: Water Forum EIR (CCOMWP 1999); Trinity River Mainstem Fishery Restoration Draft EIS/EIR (USFWS et al. 1999)

3.8.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related recreation impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.8-1: Impacts to public recreation trail access.

Continued installation and removal of the seasonal pump station under the No Action/No Project Alternative would not affect recreation in the project area beyond that which currently occurs. Because the project site conditions would not change from existing conditions under this alternative, there would be a less-than-significant impact to trails through the area.

Impact 3.8-2: Impacts to public safety.

Construction activities associated with installation and removal of the seasonal pump station, as well as operational activities, would not increase hazards to land or water-based recreational activities within the project area beyond those currently experienced. Because the project site conditions would not change from existing conditions under this alternative, potential hazards associated with unauthorized recreational activities and presence of the bypass tunnel remain a significant issue.

Increased patrolling of the area by Reclamation or CDPR may further reduce but would not eliminate all unauthorized uses. Under this alternative, there would be no feasible means for eliminating the bypass tunnel hazard.

Proposed Project

Impact 3.8-3: Impacts to public recreation trail access.

Several trails pass around or through the project study area including Pioneer Express, Cardiac Hill, Cardiac Hill Bypass, Auburn to Cool, Riverview, Western States, Robie Point Fire Break, Pointed Rocks Fire Break and Olmstead Loop trails (Figure 3.8-2). Construction of the Proposed Project would not affect public use of the Pioneer Express, Western States, Robie Point Fire Break, Pointed Rocks Fire Break or Olmstead Loop trails.

The Proposed Project would result in temporary closure of recreation trails through the project area during construction, although Reclamation and CDPR would work with special trail event coordinators to provide access through or around the project site such that annual events would not be adversely affected by construction or operation of the Proposed Project. Closure of the bypass tunnel and restoration of North Fork American River flows would result in bifurcation of the Auburn-to-Cool Trail where it currently crosses the dewatered river channel. The Proposed Project also includes development of new trails to provide access to Oregon Bar and along access roads to minimize multiple user conflicts in the area that may result as a result of increased public access in the area.

Closure of active construction areas to restrict public access would be necessary to protect the public and facilitate pump station construction, bypass tunnel closure, and river channel

restoration. Restricted access in the project area is appropriate and required to protect the health and safety of the general public from the various hazards (i.e., heavy construction equipment operations, blasting, extensive earthwork and unsafe materials, including explosives) associated with construction of the Proposed Project as well as to protect the construction area and equipment. The total area closed to public access would vary by construction phase and activity.

Reclamation's construction contractor would place security fencing around all active construction and equipment storage areas and post warning and no trespassing signs at restricted areas. During blasting, the construction contractor would restrict use of portions of the Auburn-to-Cool, Riverview and other project area trails as needed to protect the public from potential injury. Although blasting activities would be confined to relatively small sites within the project area, trail access would be closed at the canyon rim, or at safe distances away from the blasting activity. Such closures would vary in duration depending upon blasting activity. In some instances, trail access detours may be provided to maintain uses in the area; re-routed trails would be indicated by trail markers or other visible cues. Permitted trail use (i.e., equestrian, pedestrian) would be the same as existing designations.

Trail closure information would be provided to the general public through a public outreach program to include local signage (i.e., at the canyon rim on both the Placer and El Dorado county sides), newspaper notices, radio announcements, and coordination with trail advocacy organizations, as determined appropriate. Through these efforts, Reclamation, with assistance from CDPR, would minimize the extent and duration of trail closure impacts and public trail access during construction of the Proposed Project to the extent possible while still addressing public safety concerns and facilitating project construction with minimal disruption. Overall, the temporary impacts due to limitations on public access to project area recreation trails would be reduced to less than significant.

Special annual events utilizing these trails would not be expected to be adversely affected by construction of the Proposed Project. CDPR would work with special event coordinators and Reclamation's construction contractor for annual events including the Western States Endurance Run, Tevis Cup Western States Trail Ride and the American River 50 Mile Endurance Run, and to avoid trail access impacts for these events. Coordination with event sponsors would enable CDPR and Reclamation to ensure safe, adequate passage along event routes for the set-up, operation and break-down/clean-up associated with each event. The impact of the Proposed Project upon these annual trail events would be considered less than significant.

Closure of the bypass tunnel and river channel restoration would result in the bifurcation of the Auburn-to-Cool Trail through the project site. Loss of the Auburn-to-Cool access would be considered a significant unavoidable impact. The lead agencies and CDPR have developed a mitigation measure to prepare a feasibility study evaluating the provision of a multi-use bridge or alternative trail alignment(s) to provide a crossing of the North Fork American River within the Auburn SRA, near the project site. As part of this commitment, PCWA and the State of California would provide funding toward the study and implementation of such a project, if determined to be feasible (see Section 3.8.2.4, Environmental Protection and Mitigation Measures).

Reclamation would be responsible for oversight of the construction contractor's management of public trail impact mitigation, including approval of trail use restrictions and monitoring the placement and condition of posted closure and/or warning signs. Any damaged signs would be replaced upon discovery. With the exception of the loss of the Auburn-to-Cool Trail river crossing in the project area, the Proposed Project construction impacts upon public recreation trails would be considered less than significant due to the incorporation of environmental protection and mitigation measures.

Impact 3.8-4 Impacts to public safety.

Public access to the site would be restricted and directed away from active construction areas, thereby reducing potential safety hazards for recreation or other public activities in the project area. This would be considered a less than significant impact.

Closure of the bypass tunnel results in the removal of a significant public safety hazard. This is considered a beneficial aspect of the Proposed Project.

Final design of the pump station facilities and the river restoration components would consider the anticipated increased public use of the project area. The PCWA project components would not be considered appropriate for access by the general public. As appropriate, the water supply facilities would be fenced and gates locked to prevent unauthorized access.

The diversion structure would be integrated into the river channel restoration and would be designed to provide a recreation benefit. River boating and swimming activities have associated hazards that cannot be totally eliminated, but are not directly or indirectly due to the project itself. As part of the channel design, areas would be developed to allow easy entry and exit of the river.

CDPR would manage the project area recreation activities and provide emergency assistance as needed. Additionally, rangers, park aids and volunteers would patrol the area to control and stop inappropriate use of the area that may pose safety or other hazards.

Overall, the impacts upon safety and recreation at the site would be considered an improvement over existing conditions.

Impact 3.8-5: Diversion upstream backwater effect on North Fork American River.

The diversion structure would result in a backwater effect upstream from the project site that would potentially inundate the Tamaroo Bar rapids. Preliminary design information indicates that this effect would be minimized through project design, to the extent feasible. Because the Proposed Project provides an overall improvement for boating, including a navigable artificial rapid as part of the diversion design, the anticipated increased frequency of inundation at Tamaroo Bar, relative to the existing condition, is considered less than significant.

Impact 3.8-6: Increased recreation use at the Middle Fork/North Fork confluence associated with public river access at Auburn Dam and Oregon Bar.

The improved river access and river restoration features of the Proposed Project would result in related increased use of the Middle Fork/North Fork confluence area, primarily for boating-related activity. Because the access to the project area would be considered "limited" the potential increase in demand at the confluence would not be considered substantial. However, on peak summer days and weekends, the confluence area does not have sufficient parking to accommodate users. The increased demand for parking and access to the confluence area under the Proposed Project would therefore result in a potentially significant impact for recreation facility management and enjoyment. There are not feasible measures to reduce this impact as part of the Proposed Project. However, CDPR and Reclamation will be initiating long-term planning efforts to update the Auburn SRA Interim Resource Management Plan (IRMP) to address issues throughout the Auburn SRA. This future planning effort will be comprehensive and would undergo environmental review (preparation of environmental documentation) to provide the public an opportunity to evaluate the influences of increased recreation activity in the area upon the environment.

In the interim, the unmet demand for increased parking at the confluence remains a potentially significant and unavoidable impact.

Upstream Diversion Alternative

Impact 3.8-7: Impacts to public recreation trail access.

Project area trails are listed under Impact 3.8-3 and shown on Figure 3.8-2. As with the Proposed Project, active construction areas would be closed to public access during construction of the Upstream Diversion Alternative. These measures are considered necessary and appropriate to protect the public and facilitate pump station construction. The total area closed to public access would vary by construction phase and activity.

The Upstream Diversion Alternative impacts upon project area trails would be similar to the Proposed Project (Impact 3.8-3) with the following exceptions: (1) Auburn-to-Cool Trail would not be bifurcated as the North Fork American River would not be restored to the dewatered channel; and (2) no additional trails would be developed as the public river access features would not be constructed.

Similar to the Proposed Project, special events or activities utilizing these trails would not be expected to be adversely affected by construction of the Upstream Diversion Alternative. CDPR would work with special event coordinators and Reclamation's construction contractor to avoid trail access impacts to annual events including the Western States Endurance Run, Tevis Cup Western States Trail Ride and the American River 50 Mile Endurance Run. The impact of the Upstream Diversion Alternative upon these annual trail events would be considered less than significant.

The public outreach program included in the Mitigation Plan, and trail management practices related to blasting activities would generally be the same as discussed for the Proposed Project.

Overall, the potential Upstream Diversion Alternative construction and project operation impacts upon public recreation trails would be considered less than significant due to the incorporation of environmental protection and mitigation measures.

Impact 3.8-8: Impacts to public safety.

Public access to the site would be restricted during construction, thereby reducing potential safety concerns due to recreation or other public activities in the project area, making construction-related impacts less than significant. The design of the pump station and related facilities would include fencing and other features to eliminate risk of injury to the public.

Hazards associated with unauthorized use of the river in the project area and presence of the bypass tunnel would remain significant safety issues. Environmental protection measures proposed as part of the Upstream Diversion Alternative include providing public information regarding the potential hazards and recreational use restrictions prior to reopening the area; posting of additional safety information/warning signs; placement of a buoyed cable line upstream of the tunnel inlet to discourage boat travel toward or through the tunnel; and creation of a flat-water pool area to enable exiting the river prior to the tunnel to reduce the hazards to recreationists, but would not eliminate them. This would be considered a potentially significant impact.

Impact 3.8-9: Diversion upstream backwater effect on North Fork American River.

As discussed under Impact 3.8-5, the year-round diversion would result in an upstream backwater effect. Because the Upstream Diversion Alternative does not involve rewatering of the river channel and creation of a new navigable rapid in the project area, the loss of rapids due to increased inundation of Tamaroo Bar is a potentially significant impact of this alternative.

Diversion-Related Impacts

Under current operating procedures, Lake Natoma and Keswick and Lewiston reservoirs serve as regulating reservoirs for Folsom Reservoir, Shasta Reservoir and Trinity Reservoir, respectively. This function enables releases from the larger upstream dams to fluctuate as needed for electrical power generation or other purposes while releases from the regulating dams on the downstream rivers can be made to change less abruptly. As a result, the water levels of Lake Natoma and Keswick and Lewiston reservoirs fluctuate regularly, but within a much smaller range of water surface elevation than Folsom, Shasta, and Trinity reservoirs. This creates relatively stable shoreline and launch-ramp conditions for swimming, fishing, and boating.

Therefore, although under the Action Alternatives, the upstream dam release schedules would change, they would not alter the function of the three regulating reservoirs. Even though water release patterns would be different from the existing condition, the Folsom and Nimbus dams, the Shasta and Keswick dams, and the Trinity and Lewiston dams would still be operated in a

coordinated way. Consequently, the historical range of water level fluctuations on Lake Natoma and Keswick and Lewiston reservoirs would be expected to continue into the future without substantial change.

Whiskeytown Reservoir acts in some respects like a large regulating reservoir between the Trinity and Sacramento river basins. It is subject to small daily fluctuations due to power and water temperature operations, but would be unaffected by the diversions of the Proposed Project or alternatives.

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.8-1, H-3.8-2, etc.).

No Action/No Project Alternative

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant impacts upon recreation activities associated with water bodies of the American River, Sacramento River or Delta, within the regional and project study areas.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP or SWP operations associated with the Action Alternatives also would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the Action Alternatives.

Impact 3.8-10: Impacts to water recreation activities on the Middle Fork American River.

Operation of the Action Alternatives would require some reoperation of the MFP as diversion amounts are increased. This reoperation would alter flow through the Middle Fork American River. Flow modifications during the summer and early fall months could affect the ability of whitewater boaters to travel down the river, thereby reducing Middle Fork American River whitewater boating opportunities. In addition, commercial whitewater companies could be economically affected by reservoir re-regulation if flow modifications reduced their ability to provide whitewater services to consumers.

Flows in the Middle Fork American River often occur as a result of regulated releases from Ralston Afterbay. The Ralston Afterbay, located approximately 20 miles east of the City of Auburn, is one of five MFP diversion dams and is operated as a re-regulating reservoir for the MFP.

Under the Action Alternatives, PCWA would continue to release higher flow rates from Ralston Afterbay on summer weekend mornings according to its informal agreement with Middle Fork commercial whitewater boating companies. However, to meet the higher base flows necessary for the project diversion and minimum flow requirements, the duration of higher flows suitable for rafting could be reduced.

To evaluate the impacts to whitewater boating on the Middle Fork American River, a hydrologic study of the Middle Fork American River was performed. This study, the Upstream Hydrologic Analysis (SWRI 1998), evaluates changes in operations of the MFP and associated changes in flows of the upper American River that would be necessary for proposed diversion patterns in the project area.

Table 3.8-2 shows the results of this hydrologic analysis as they pertain to whitewater boating on the Middle Fork American River. Analysis results indicate that the duration of daily releases for recreation may be reduced by up to eight hours each month of the June through October recreation season. This represents a potentially significant and unavoidable impact on whitewater boating and commercial whitewater companies along the Middle Fork American River.

Table 3.8-2
Total Monthly Hours When Middle Fork American River Flows Would be Greater than 850 cfs

	June	July	August	September	October
Existing Condition	440	469	458	200	166
Action Alternatives	439	461	454	197	166
Unit Change (Hours)	-1	-8	-4	-3	0
Percent Change	0	-2	-1	-2	0

The Proposed Project would provide public boating opportunities within the North Fork American River Canyon below the confluence to Oregon Bar/Folsom Reservoir. Restoration of this opportunity through the project area would provide a different type of boating experience and would not be considered a replacement for the loss of more challenging whitewater boating opportunities found an the Middle Fork American River. Boating miles for commercial rafting would not increase as a result of this project, but additional boatable river miles and greater public accessibility would be provided. Because this area presently is not officially open for public boating use, the additional boating access, primarily suited for novices, would be considered a beneficial aspect of the project. The Upstream Diversion Alternative would not provide this opportunity.

Impact 3.8-11: Impacts to lower American River recreation.

Water-dependent and water-enhanced recreation use on the lower American River is higher in May through September than in other months because of the warm, sunny weather. Therefore,

the focus of this evaluation was the effect of changes in CVP operations associated with the Action Alternatives during May through September.

When compared to the existing condition, the Action Alternatives would result in, at times, less frequent occurrences of lower American River flows within the optimal and maximum and minimum ranges for recreation. However, neither the frequency nor the magnitude of these changes is sufficient to adversely impact recreation. Therefore, this impact would be considered less than significant.

Table H-3.8-1 presents a summary of the number of years of the 70-year simulation in which the monthly mean flows below Nimbus Dam would remain within the optimal range for river recreation (3,000 to 6,000 cfs) and within the minimum to maximum range for adequate river recreation flow (1,750 to 6,000 cfs) under the existing condition and Action Alternatives. The table shows that over the course of the 70-year simulation, the Action Alternatives would result in monthly mean flows within the optimal flow range for recreation slightly less often than under existing conditions. In May, the number of years with flows in the optimal range would decrease by two years, in June it would increase by one year, in July it would decrease by three years, and in August and September it would decrease by one year when compared to the existing condition. For the entire May through September recreation season, there is a 3.6 percent decrease in the total number of months in which the flows would fall within the optimal range when compared to existing conditions.

According to the simulation results presented in Table H-3.8-1, the number of months the flows in the lower American River would be within the minimum to maximum range would be unchanged in May, July, and September and would decrease by one month in June, and one month in August. This is a decrease from existing conditions of 0.8 percent for the May through September recreation season.

Based on the above assessment, the Action Alternatives would have a less-than-significant impact on water-dependent and water-enhanced recreation use on the lower American River.

Impact 3.8-12: Impacts to boating at Folsom Reservoir.

When compared to the existing condition, the Action Alternatives would result in slightly less years when the reservoir surface elevation would be above the minimum required for boaters' access to launching ramps and marinas. However, this effect is not sufficient to adversely impact boating at Folsom Reservoir. Therefore, this impact is considered less than significant.

The primary boating season at Folsom Reservoir encompasses the months March through September, with peak use occurring in May, June, July, and August. Therefore, the focus of this assessment is the effect of changes in CVP operations associated with the Action Alternatives during the boating season. Because boating opportunity is heavily influenced by boaters' access to the launching ramps and marina, the relationship of expected lake levels to the usability of these facilities is evaluated.

Table H-3.8-2 compares the reservoir elevation and usability of boat launching facilities under the existing and Action Alternative conditions. For the months of March through September, Folsom Reservoir levels would fall below the 420-foot elevation necessary to keep all boat ramps operable in 4 more months (out of 490) under the Action Alternatives condition than under the existing condition.

Table H-3.8-2 also shows that at least one low-water boat ramp would remain available on each side of Folsom Reservoir approximately the same (only one month less) under the Action Alternatives as under the existing condition.

As indicated in H-3.8-2, the Action Alternatives would not reduce the usability of the Folsom Reservoir Marina wet slips (which require a minimum 412-foot elevation) in the primary boating season when compared to the existing condition.

Overall, the decrease in boating opportunities under the Action Alternatives would be negligible when compared to the existing condition. Consequently, the overall effect of the project on Folsom Reservoir boating opportunities would be less than significant**.**

Impact 3.8-13: Impacts to swimming at Folsom Reservoir.

The most popular swimming months at Folsom Reservoir are May through September, when the weather is typically sunny and hot. Designated swimming beaches at Beal's Point and Granite Bay are generally usable between the elevations of 420 and 455 feet. Below 420 feet, the water declines below sandy areas and/or is too distant from parking and concessions; visitation decreases substantially when low-water conditions occur. Even with reservoir levels in the vicinity of 430 feet, the water is relatively far from parking and concessions and some special low-water facilities are necessary to adequately accommodate swimmers. Above 455 feet, the high water limits the width of the available beach area, reducing the capacity of the beaches. As a result, to evaluate the effects on swimming opportunities of the Action Alternatives, the number of months when water levels are in the usable range during the peak swimming period were examined and compared to the existing condition.

As indicated in Table H-3.8-2, the Action Alternatives would reduce the availability of swimming beaches during the months of May through September compared to the existing condition. Overall, the number of years with water levels within the usable beach range during the months of May through September decrease by two out of 350 months. The number of years with water levels within the optimum range (435 to 455 feet) would be slightly reduced. There would be two fewer months (out of 350 summer months) when water levels are within the optimum range.

Over the recreation season, the effect of the Action Alternatives would be negligible when compared to the existing condition. Therefore, the overall impact on Folsom Reservoir swimming opportunities would be less than significant.

Impact 3.8-14: Impacts to recreation at Shasta Reservoir.

When compared to the existing condition, the Action Alternatives would result in no changes in the frequency of Shasta Reservoir surface elevation within the ranges required for boating and other water-related recreation activities at Shasta Reservoir. Therefore, there would be no impact to recreation at Shasta Reservoir.

The primary season for water-dependent and water-enhanced recreation activities at Shasta Reservoir is May through September. Therefore, the potential to affect reservoir levels during these months was assessed to evaluate impacts on boating-related activities, shoreline recreation, and boat-in camping. Because boating opportunity is heavily influenced by access to launching ramps, the relationship of reservoir levels to the operability of ramps was evaluated. Also, the drawdown distance of water from the vegetated shoreline was considered as an important factor in sustaining shoreline recreation use and boat-in camping.

Table H-3.8-3 presents a summary of the relationship between certain water surface elevation thresholds and recreation facilities and uses, based on a comparison of the existing and Action Alternatives. The most important lower threshold for boating is elevation 941 feet, above which at least one public launching ramp is available on each of the three major arms of Shasta Reservoir. Also presented is the information for elevation 1,017 feet, above which all public ramps are operable. For boat-in camping and shoreline use, the key threshold is elevation 967 feet, below which substantial decreases in use typically occur, because of the influence of the distance between the water and the vegetated shoreline. Also presented is an assessment of elevation 1,007 feet, below which shoreline use typically begins to decrease because of low water levels.

The Action Alternatives would result in no change in the total number of years when all boat ramps are usable (elevation 1,017 feet) during any month of the season compared to the existing condition. The number of years when at least one public ramp is maintained on each of the reservoir arms (elevation 941 feet) also would not change under the Action Alternatives, compared to the existing condition.

With regard to Shasta Reservoir shoreline and camping facilities, repeat visitors have come to expect the level to decline as the summer progresses; therefore, they appear to exhibit some tolerance of low-water conditions. Using the 60-foot drawdown criterion where boat-in camping and shoreline use begin to decline (1,007 feet), the analysis indicates that the Action Alternatives would result in no reduction in the number of years in which Shasta Reservoir levels would be suitable. The Action Alternatives would result in a slight increase in the number of years that Shasta Reservoir levels would be at or above the 100-foot drawdown (967 feet) during May through September. Therefore, the impact on Shasta Reservoir recreation opportunities would be less than significant.

Impact 3.8-15: Impacts to recreation at Trinity Reservoir.

When compared to the existing condition, the Action Alternatives would result in no changes in the frequency of Trinity Reservoir surface elevations below the levels required for boating and

other water-related recreation activities at Trinity Reservoir. Therefore, there would be no impact to recreation at Trinity Reservoir.

Similar to Shasta Reservoir, the primary recreation use season for water-dependent and water-enhanced recreation activities at Trinity Reservoir is from May through September. Therefore, the potential to affect reservoir levels during these months of the year was assessed for boating-related activities and shoreline recreation. Because boating opportunity is heavily influenced by access to launching ramps, the relationship of Trinity Reservoir levels to operability of ramps was considered. Also, the drawdown distance of water from the vegetated shoreline was evaluated as an important factor in sustaining shoreline recreation use.

As presented in Table H-3.8-4, the Action Alternatives would result in no change in the frequency of reservoir levels required to allow for boat launching from the three major public ramps during May through September. Therefore, there would be no impact on recreation at Trinity Reservoir.

Impact 3.8-16: Impacts to recreation on the upper Sacramento River.

When compared to the existing condition, the Action Alternatives would result in a greater frequency of upper Sacramento River flows above the minimum flow required for recreation. Therefore, there would not be an adverse impact associated with recreation on the upper Sacramento River.

Water-dependent recreation use on the upper Sacramento River, between Keswick Dam and the confluence of the American River, is higher in May through September than in other months of the year, coincident with the warmer summer weather. Consequently, effects of the Action Alternatives on Sacramento River flows during this period is important for evaluating recreation opportunity impacts.

A minimum recreation flow of 5,000 cfs is identified for the Sacramento River in the California Water Plan Update (DWR 1994). This is an overall standard that is not related to specific reaches of the upper Sacramento River, so it provides only general guidance in assessing recreation impacts. Definitive optimum and maximum/minimum river flows for recreation uses are not available for the upper Sacramento River, so the relative change in river flows are compared between the Action Alternatives and the existing condition to assess potential recreation impacts. If relative flows are not substantially less for the Action Alternatives compared to the existing condition, boat ramps and access points along the river between Keswick Dam and Colusa would not be adversely affected.

Figures H-3.8-1 and H-3.8-2 show probability of exceedance plots for the Sacramento River flow below Keswick Dam for May through September. These graphs demonstrate that the probability of the flow below Keswick exceeding 5,000 cfs is identical in all months. Therefore, flow conditions under the Action Alternatives result in a less-than-significant impact upon recreation opportunities in the upper Sacramento River.

Impact 3.8-17: Impacts to recreation on the lower Sacramento River.

When compared to the existing condition, the Action Alternatives would result in identical or improved flow conditions for recreation in the lower Sacramento River. Therefore, there would not be an adverse impact associated with recreation in the lower Sacramento River.

Similar to other water recreation areas of northern California, the highest recreation use period for the lower Sacramento River (between the American River confluence and the Delta) is from May to September. Under the existing condition, monthly mean flow in the Sacramento River at Freeport averages from 13,300 to 19,300 cfs during this period. As with the upper Sacramento River, although 5,000 cfs has been identified as an overall flow standard, no definitive thresholds for optimal or minimum/maximum recreation flows are available. Therefore, the relative difference between the existing condition and the Action Alternatives was evaluated.

Figures H-3.8-3 and H-3.8-4 show probability of exceedance plots for the Sacramento River flow at Freeport for May through September. These graphs demonstrate that the probability of the flow at Freeport exceeding 10,000 cfs is identical in all months. The entire flow range is virtually identical throughout the May to September period, except for August, where the Action Alternatives provides a clear benefit over the existing condition when flows are below 10,000 cfs. Therefore, there would be no impacts on recreation opportunities on the lower Sacramento River associated with the Action Alternatives.

Impact 3.8-18: Impacts to recreation at the Delta.

The Delta's hydrology is complex and influenced by other water sources, specifically tidal action, San Joaquin River inflows, and east-side tributary inflows. Consequently, differences in Delta inflow from the Sacramento River would not translate directly into Delta water recreation effects. For instance, incoming tidal action in the summer contributes approximately 70,000 cfs in the Sacramento River near Rio Vista and 58,000 cfs in the central Delta reach of the San Joaquin River (DWR 1994).

Table H-3.8-5 shows the impact of the project on Delta inflows to be about 0.1 percent. Consequently, the differences in summertime inflow to the Delta resulting from the project alternative condition would be a less-than-significant impact on Delta recreation opportunities.

When compared to the existing condition, the project alternative condition would result in no significant impact on flows entering the Delta. Therefore, this impact is considered less than significant.

Impact 3.8-19: Impacts to Oroville Reservoir or Feather River recreation.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the existing condition. Any small changes that might occur would be considered less-than-significant impacts upon recreation resources.

Impact 3.8-20: Consistency with the American River Parkway Plan.

American River Parkway Plan Policy 3.1 on water flow anticipates that flow requirements are being researched and should be defined in the plan once the research is completed. The policy indicates that flow standards associated with the SWRCB's D-1400 (1,500 cfs for recreation) would be too low if they went into effect. This analysis indicates that the minimum flow for adequate recreation opportunity on the lower American River, based on a review of known flow criteria, would be 1,750 cfs. The low end of an optimum flow range appears to be about 3,000 cfs. Both the minimum and optimum flow criteria used in the EIS/EIR are higher than the D-1400 standard, and CVP operations associated with the Action Alternatives would not result in summertime flows being reduced below these criteria more often than under the existing condition. Therefore, the Action Alternatives would be consistent with the American River Parkway Plan, and no conflicts with environmental plans or goals of the plan would occur.

Impact 3.8-21: Consistency with state and federal Wild and Scenic River Act designations.

CVP operations associated with the Action Alternatives would not result in summertime flows being reduced below optimal and minimum flow criteria for recreation on the lower American River more often than under the existing condition. Therefore, CVP operations associated with the Action Alternatives would not diminish the recreational values of the lower American River, consistent with the state and federal recreational river designations.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.8-22: Impacts to water recreation activities on the Middle Fork American River.

As discussed previously (see Impact 3.8-10), PCWA would continue to release higher flow rates from Ralston Afterbay on summer weekend mornings according to its informal agreement with Middle Fork American River commercial whitewater boating companies. To meet the higher base flows necessary for the project diversion and minimum flow requirements, the duration of the higher flows suitable for rafting could be reduced. However, based on a study of the Middle Fork American River (SWRI 1998), the reduction in the duration of higher flows is likely to be negligible.

Impact 3.8-23: Impacts to lower American River recreation.

When compared to No Action/No Project Alternative, the Action Alternatives would result in essentially the same mean monthly flows on the American River below Nimbus Dam (less than one percent difference) during the May to September recreation season.

Table H-3.8-6 presents a summary of the results pertaining to recreation on the lower American River. According to Table H-3.8-6, over the course of the 70-year period of record, implementation of the future cumulative condition would result in mean monthly flows within the maximum/minimum flow range for recreation (1,750 to 6,000 cfs) slightly less often than

under future no project conditions. June would experience an increase of one year within the maximum/minimum range, while August and September would each experience a decrease of one year. For the entire May through September recreation season, the decrease from No Action/No Project Alternative in the total number of months in which the flows would fall within the maximum/minimum range would be less than one percent.

The frequency of occurrence of Nimbus Dam releases within the optimal range (3,000 to 6,000 cfs) would increase or decrease depending on the month. The number of years within the optimal range would remain unchanged in May and September, would increase by one year in June, and decrease by one and two years in July and in August, respectively. The net long-term effect during the irrigation season would correspond to a decrease of less than one percent.
Based on the above assessment, when compared to the No Action/No Project Alternative, the Action Alternatives would have a less-than-significant impact on water-dependent and water-enhanced recreation use on the lower American River.

Impact 3.8-24: Impacts to boating at Folsom Reservoir.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in slightly less years when the reservoir surface elevation would be above the minimum required for boaters' access to launching ramps and marinas.

Table H-3.8-7 presents the number of years in which Folsom Reservoir surface water elevation falls within the desirable ranges for recreation. By comparison with the No Action/No Project Alternative, the net long-term effect of Action Alternatives is a positive one for boating at Folsom Reservoir. Consequently, there would be no adverse impact on Folsom Reservoir boating opportunities.

Impact 3.8-25: Impacts to swimming at Folsom Reservoir.

When compared to No Action/No Project Alternative, the Action Alternatives would result in negligible changes in the frequency of reservoir surface elevations within the range required for access to swimming beaches. As shown in Table H-3.8-7, there would be no net effect on the usability of swimming beaches during the months of May to September, and a net decrease of less than one percent in the number of months in which the reservoir levels would fall within the optimal range for swimming (435 to 455 feet). Therefore, the overall impact on Folsom Reservoir swimming opportunities would be less than significant.

Impact 3.8-26: Impacts to recreation at Shasta Reservoir.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in essentially the same long-term mean end-of-month surface water elevation during the May to September recreation season. In addition, over the recreation season, there would either be no net effect on the frequency of Shasta Reservoir surface elevation within the range required for boating and other water-related recreation activities at Shasta Reservoir, or a slight increase in frequency (Table H-3.8-8). Therefore, there would be a less-than-significant impact to recreation at Shasta Reservoir.

Impact 3.8-27: Impacts to recreation at Trinity Reservoir.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in no reductions in the frequency of Trinity Reservoir surface elevation above the level required for boating and other water-related recreation activities at Trinity Reservoir (Table H-3.8-9). Therefore, there would be no impact to recreation at Trinity Reservoir.

Impact 3.8-28: Impacts to recreation on the upper Sacramento River.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in essentially the same mean monthly flows below Keswick Dam during the May to September recreation season (Table H-3.8-10). Therefore, there would be no adverse impact associated with recreation in the upper Sacramento River.

Impact 3.8-29: Impacts to recreation on the lower Sacramento River.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in essentially the same mean monthly flows in the lower Sacramento River (Table H-3.8-11). Therefore, there would be no adverse impact associated with recreation in the lower Sacramento River.

Impact 3.8-30: Impacts to recreation at the Delta.

When compared to the No Action/No Project Alternative, the Action Alternatives would result in no impact on flows entering the Delta. Therefore, there would be no adverse impact associated with recreation at the Delta.

Impact 3.8-31: Impacts to Oroville Reservoir and Feather River recreation.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered to represent less-than-significant impacts upon recreation resources.

Cumulative Impacts

Impact 3.8-32: Impacts to lower American River recreation.

Based on the future cumulative condition compared to the existing condition, additional diversions and potential CVP operations would result in substantial decreases in lower American River monthly mean flows during the high recreation use season. Compared to the existing conditions, the long-term average flow during the period of May through September would be approximately seven percent lower under the future cumulative condition.

Figure H-3.8-5 shows the probability of exceedance plots for lower American River flows below Nimbus Dam during May through September. Significant flow reductions are shown for July,

August, and September. Table H.3-8-12 presents a summary of the number of years in which the monthly mean flows below Nimbus Dam would remain within the optimal (3,000 to 6,000 cfs) and maximum/minimum (1,750 to 6,000 cfs) ranges for river recreation under existing and cumulative conditions. Reductions in the number of years out of the 70 years modeled in which the flows in the lower American River would be within the optimal range would occur in all months of the recreation season except for June. May and August would each experience a decrease of two years, while for July and September there would be reductions of 12 and six years, respectively. For the entire May through September recreation season, the long-term decrease from existing conditions in the total number of months in which the flows would fall within the optimal range is slightly over five percent (19 out of 350).

The simulation results presented in Table H-3.8-12 show that the number of months the flows in the lower American River would be within the minimum to maximum range would be increased in June by three years. The remaining months of the recreation season would experience decreases of two years in May, four years in July, six years in August, and three years in September. This represents an overall decrease from existing conditions of approximately three percent (12 out of 350) for the May through September recreation season.

Based on the above assessment, changes in CVP operations associated with the future cumulative condition would have a significant impact on water-dependent and water-enhanced recreation use on the lower American River.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that the monthly mean flows in the lower American River during the peak recreation season would be slightly increased (approximately 1.5 percent change) under cumulative conditions (with project) relative to the future base condition (without project). CVP operations associated with implementation of the project would contribute to a small increase (five out of 350 months) in the number of times the monthly mean flows would be reduced below the minimum recreation flow threshold of 1,750 cfs below Nimbus Dam.

Table H-3.8-13 presents a summary of the number of years in which the monthly mean flows below Nimbus Dam would remain within the optimal (3,000 to 6,000 cfs) and maximum/minimum (1,750 to 6,000 cfs) ranges for river recreation under the future base and cumulative conditions. Reductions in the number of years in which the flows in the lower American River would be within the optimal range would occur in the last three months of the recreation season. July and September would each experience a decrease of two years out of the 70 years modeled, while in August there would be a reduction of one year. This represents an overall decrease from existing conditions of about one percent for the May through September recreation season.

The number of months the flows in the lower American River would be within the minimum to maximum range (1,750 to 6,000 cfs) would remain unchanged in May and September and be increased by one year out of 70 years in June. July and August would experience decreases of one and two years, respectively. For the entire May through September recreation season, the

long-term decrease from existing conditions in the total number of months in which the flows would fall within the minimum to maximum range would be less than 1 percent.

Based on the above assessment, changes in CVP operations associated with the future cumulative condition would have a less-than-significant impact on water-dependent and water-enhanced recreation use on the lower American River.

Impact 3.8-33: Impacts to boating at Folsom Reservoir

Table H-3.8-14 compares the surface water elevation at Folsom Reservoir and the usability of boat launching facilities under the existing and cumulative conditions. For the months of March through September, Folsom Reservoir levels would fall below the 420-foot elevation necessary to keep all boat ramps operable in 37 more months (out of 490) under the cumulative condition than under the existing condition. This corresponds to a 7.6 percent decrease in the usability of all boat ramps.

Table H-3.8-14 shows that between July and September there is no net change in the frequency at which at least one boat ramp is available at each side of Folsom Lake. During the early months of the recreation season, the cumulative condition would result in a decrease of two years in March and a one year decrease in April, May, and June. In August and September, the cumulative condition would result in increases of four and one year, respectively, in which at least one ramp on each side of the reservoir would be usable. Over the entire boating season, there would be no net change in the number of years in which the at least one boat ramp would be usable on each side of the reservoir.

As indicated in Table H-3.8-14, the cumulative condition would reduce the usability of the Folsom Lake Marina wet slips (which require a minimum 412-foot elevation) in all months of the primary boating season when compared to the existing condition. The cumulative condition would result in an overall 7.6 percent decrease in the frequency in which the wet slips would be usable during the recreation season.

Under the set of assumptions for the future cumulative condition, the impact analysis indicates that in comparison to existing conditions surface water elevation at Folsom Reservoir would be frequently reduced. This would be a significant future impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that impacts to usability of boating facilities would be slight. Table H-3.8-15 shows that the Action Alternatives would reduce the usability of boat ramps one year out of 70 relative to the future base and cumulative condition. This represents a less-than-significant contribution to the cumulative impact to recreation at Folsom Reservoir.

Impact 3.8-34: Impacts to swimming at Folsom Reservoir.

As presented in Table H-3.8-14, the cumulative condition would impact the availability of swimming beaches during the months of May through September. The frequency in which the water levels would be within the usable beach range during the months of May through September would be reduced by seven percent (26 out of 350). The number of years with water levels within the optimum range (435 to 455 feet) would be reduced by four percent (15 out of 350 summer months).

Comparisons of simulated results for future cumulative and existing conditions show that during the recreation season Folsom Reservoir surface water elevation would fall outside the useable and optimal ranges more often for the cumulative scenario. The overall impact on Folsom Reservoir swimming opportunities would be considered significant.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that the monthly mean water surface elevation at Folsom Reservoir would be essentially the same for the peak recreation months (May to September). The results also indicate that the Action Alternatives would result in a negligible number of additional occurrences of Folsom Reservoir water level elevations dropping below the 420-foot boat ramp threshold or the 412-foot marina wet-slip threshold when compared to the future base condition (Table H-3.8-15). The usability of swimming beaches also would be only very slightly decreased (less than one percent decrease) under future conditions with or without the project. Therefore, any contribution of CVP operations associated with the implementation of the project to future potentially significant Folsom Reservoir recreation impacts would be negligible.

Impact 3.8-35: Impacts to recreation at Shasta Reservoir.

Table H-3.8-16 presents the modeling results concerning recreation at Shasta Reservoir. In comparison to the existing condition, the future cumulative condition would result in a reduction in the total number of years when all boat ramps are usable (elevation 1,017 feet), in every month of the recreation season. Over the long-term, there would be 25 fewer months (out of 350) in which the surface water elevation at Shasta would be high enough to allow all boat ramps to be used. This would correspond to a seven percent decrease in the frequency in which all boat ramps would be usable.

The number of years when at least one public ramp is maintained on each of the reservoir arms (elevation 941 feet) would also decrease under the future cumulative condition. Over the long-term, there would be 12 fewer months (out of 350) in which the surface water elevation at Shasta Reservoir would be high enough to allow the use of at least one boat ramp on each side of the lake. This would represent a decrease of three percent when compared to the existing condition.

With regard to Shasta Reservoir shoreline and camping facilities, the analysis indicates that the cumulative condition would result in an increase in the number of years in which Shasta Reservoir levels would drop below 1,007 feet. Over the long-term, there would be 27 fewer

months (out of 350) in which the surface water elevation at Shasta Reservoir would be suitable to shoreline uses.

With regard to boat-in camping use, the future cumulative condition would result in an increase in the number of years in which Shasta Reservoir levels would be at or above the 100-foot drawdown (967 feet) during May through September. Over the long-term, there would be 17 fewer months (out of 350, corresponding to a five percent change) in which the surface water elevation at Shasta would be high enough to sustain boat-in camping uses.

Under the set of assumptions for future conditions, the analysis indicates that in comparison to existing conditions the long-term average surface water elevation at Shasta Reservoir would be reduced by less than one percent during the recreational use period of the year (May to September). Although the overall reduction in elevation would be small, the reductions below critical thresholds would diminish recreation opportunities at Shasta Reservoir. Therefore, this would be a potentially significant cumulative impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis indicates that CVP operations associated with implementation of the project would result in no additional occurrences of Shasta Reservoir water level elevations dropping below the 1,017-foot boat ramp threshold or the 967-foot boat-in camping use threshold when compared to the future base condition (Table H-3.8-17). Shoreline use availability would decrease in one year for the month of June, representing a less than one percent decrease over the long-term. Therefore, any contribution of CVP operations associated with the implementation of the project to future potentially significant Shasta Reservoir recreation impacts would be negligible.

Impact 3.8-36: Impacts to recreation at Trinity Reservoir.

As presented in Table H-3.8-18, the cumulative condition would result in a slight decrease in the frequency of reservoir levels sufficient to allow for boat launching from the Fairview and Main Arm boat ramps. Over the 70 years modeled, the decrease in the number of months would be six and nine months, respectively. The future cumulative condition would result in no changes in the frequency in which the Stuart Fork Arm boat ramp could be used during the May through September recreation season.

When compared to the existing condition, the future cumulative condition would result in infrequent changes in the frequency of Trinity Reservoir surface elevations below the levels required for boating and other water-related recreation activities at Trinity Reservoir. Therefore, the future cumulative impact to recreation at Trinity Reservoir would be less than significant.

Impact 3.8-37: Impacts to recreation on the upper Sacramento River.

Water-dependent recreation use on the upper Sacramento River between Keswick Dam and the confluence of the American River is generally higher in May through September than in other months of the year, coincident with the warmer summer weather. Consequently, effects of the

future cumulative condition on upper Sacramento River flows during this period are important for evaluating recreation opportunity impacts.

Although the long-term average flow at Freeport would be reduced in all months relative to the existing condition, the decreases would generally be small. The greatest percent decrease in long-term average flow would occur in June (6.1 percent), when the flows are above 7,000 cfs. Figures H-3.8-6 and H-3.8-7 show the exceedance probability plots for the Sacramento River flow below Keswick Dam for May through September. These graphs demonstrate that the probability of the flow below Keswick exceeding 5,000 cfs is identical in all months except for May and September, when there is a slight decrease in the probability. Further inspection of the modeling results demonstrates that under the future cumulative condition the flow below Keswick Dam would be above 5,000 cfs in two fewer years in May and one fewer year in September, when compared to existing conditions.

When compared to the existing condition, the future cumulative condition would result in a negligible decrease in the frequency of upper Sacramento River flows below the minimum flows required for recreation. Therefore, there would be no significant adverse impact associated with recreation in the upper Sacramento River.

Impact 3.8-38: Impacts to recreation on the lower Sacramento River.

Figures H-3.8-8 and H-3.8-9 show the probability of exceedance plots for the Sacramento River flow at Freeport for May through September. These graphs demonstrate that the probability of the flow at Freeport exceeding 5,000 cfs is identical under the cumulative and existing conditions in all months.

When compared to the existing condition the future cumulative condition would result in identical frequency of upper Sacramento River flows above the minimum flow required for recreation. Therefore, there would be no impacts associated with recreation in the lower Sacramento River.

Impact 3.8-39: Impacts to recreation at the Delta.

The tidally influenced flows of the Delta are substantially more than the 13,200 to 19,200 cfs range of average inflow to the Delta from the lower Sacramento River from May to September. As a result, in-flows from the Sacramento River would not translate directly into Delta water recreation effects and any effect the lower Sacramento River flows could have on water-dependent and water-enhanced recreation would be at least moderated and, potentially, overshadowed completely, depending on the location in the Delta. Table H-3.8-19 shows that the greater decrease in average Sacramento river inflow to the Delta during the May through September period would be approximately 850 cfs. This would be an insignificant impact on Delta recreation opportunities.

Impact 3.8-40: Impacts to recreation on Oroville Reservoir.

Oroville Reservoir would experience substantial long-term average elevation reductions for most months of the year over the 70-year period of record. Long-term average Oroville Reservoir end of month elevation under the cumulative conditions would be reduced up to 18 feet during the month of September. Given the importance of water-related recreation activities in Oroville Reservoir (i.e., boating, fishing, camping, sailing), and the relatively large reduction in water surface elevation that would be experienced under the cumulative condition relative to the existing condition, impacts on recreation for the Oroville Reservoir would represent a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

Impact 3.8-41: Impacts to recreation of Feather River.

The Feather River would experience some substantial changes in flow for most months of the year for the 70-year period of record. Changes in long-term average monthly mean flow would range from decreases in flow of up to 14.1 percent (i.e., November) to increases in flow of up to 36.4 percent (i.e., August). Given the uncertainty associated with the potential effects that these flow reductions may have on recreation activities in the Feather River, impacts on recreation for the Feather River would represent a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in river flow would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

3.8.2.5 Environmental Protection and Mitigation Measures

Several mitigation measures have been incorporated into the Mitigation Plan to reduce the significance of potential recreation impacts associated with implementation of the Proposed Project or Upstream Diversion Alternative. These measures are presented below.

Maintain Public Recreation Trail Access During Construction

Commitment: Provide public recreation trail access to the Project area during construction, to the extent feasible, without compromising public health and safety and Project construction progress.

Responsible Parties: Reclamation/Construction Contractor

Location: Project area
Timing: During all phases of construction (2002 through 2004); as feasible
Monitoring: Monitor fencing and temporary markers or other posted signs used to indicate areas open for public trail use in Project vicinity during construction.
Reporting Requirements: Record trail access restrictions in daily inspector report

Description of Activities:
Reclamation will require the Construction Contractor to identify, with temporary construction fencing, flagging, and posted signs, all areas of restricted or limited public access. Additionally, Reclamation will provide public notification of such limitations through a Public Outreach and Information Program.

Success Criteria: Appropriate, safe trail access is provided, to extent feasible.

Avoid Recreation Trail Closures That Affect the Western States Endurance Run, Tevis Cup Western States Trail Ride, or the American River 50-Mile Endurance Run Events

Commitment: Project construction scheduling will avoid impacting the route or timing of the Western States Endurance Run, Tevis Cup Western States Trail Ride, and the American River 50-Mile Endurance Run annual events.
Responsible Parties: Reclamation/Construction Contractor and CDPR Event Coordinator
Location: Project area recreation trails
Timing: Once annually per event (as needed)
Monitoring: Indicate event in compliance report
Reporting Requirements: No specific reporting requirements

Description of Activities:
As part of the event permitting process, CDPR will coordinate with event sponsors and Reclamation's Construction Contractor to ensure safe passage along event routes during set-up, operation and breakdown activities through the suspension and elimination of all potentially hazardous construction associated risks during these events.

Success Criteria: Planned annual events and routes are maintained.

Auburn-to-Cool Trail

The Auburn-to-Cool Trail crossing of the dewatered channel North Fork American River will be lost once the bypass tunnel is closed and river flows returned to the natural river channel.

PCWA Commitment:
In order to mitigate PCWA's share of the recreational impact associated with bifurcation of the Auburn-to-Cool Trail, PCWA shall pay a maximum of $500,000 to be used for costs associated with the construction of a new bridge across the North Fork American River or another alternate mitigation program (e.g., the construction of new trail segments). Such money, or some lesser amount if the full amount is not required, shall be made available to CDPR only after all of the following have occurred: (1) CDPR and Reclamation have completed the environmental review necessary to implement such a Project, have chosen to proceed with such a Project, and have obtained all regulatory approvals necessary to proceed with the Project; (2) any litigation over such environmental review or regulatory approvals has been resolved in favor of CDPR and/or Reclamation or other approving agency; and (3) the American River Pump Station Project has obtained all necessary regulatory and/or discretionary approvals necessary for construction, and any litigation over any such approvals has been resolved in favor of PCWA.

PCWA will have met its obligations under this mitigation measure once it has provided payment for costs associated with construction of a bridge or alternate trail.

California Resources Agency Commitment: The State of California has indicated that $1.0 million would be available to apply toward the design, planning and construction of crossing or alternate trail access near the Project site.

Responsible Parties: California Resources Agency, CDPR/PCWA
Location: To be determined by future study
Timing: Ongoing

Description of Activities:
Various trail replacement alternatives are being considered by state and federal agencies to determine the best approach to provide trail access for multiple user groups. Feasibility studies will be performed.

Success Criteria:
Lead agencies and CDPR participate in funding and evaluation of providing alternate river crossing or trail access to replace ACT crossing.

Minimize Trail User Conflicts Due to Increased Public Access

Commitment: Design and improve trails to accommodate designated uses and avoid conflicts between multiple user types.
Responsible Parties: Reclamation/CDPR

Location: Project area trails
Timing: Ongoing Project operations
Monitoring: Maintain trail features and posted signs that indicate hours of operation and trail use designation; CDPR park staff and/or volunteers to assist in informing and enforcing trail uses.
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to construct trail and access road improvements from the Auburn Dam batch plant parking area to Oregon Bar and to the North Fork American River turnaround/handicap-accessible parking area with proper width and informational/directional signage.

Through the management agreement for the Auburn SRA, Reclamation will require CDPR to monitor sign conditions, and repair or replace as needed. Additionally, CDPR staff and/or volunteers will provide enforcement of specific trail use rules and regulations in the Project area.

Success Criteria: Trail uses remain clearly demarcated and user conflicts avoided.

Minimize Littering at Public River Access Locations

Commitment: Control litter within the Project area and nearby adjacent areas.
Responsible Parties: Reclamation/CDPR
Location: Project area/Maidu Drive
Timing: Ongoing Project operations
Monitoring: Monitor adequacy of trash containers provided as part of Project; increase number, if needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Through the management agreement for Auburn SRA, Reclamation will require CDPR to provide and maintain animal-proof trash containers at several locations in the public river access areas, including the Maidu Drive entrance, Auburn Dam batch plant parking area, Oregon Bar turnaround (at Cardiac Hill trailhead), near Oregon Bar, and at the riverside turnaround/handicap-accessible parking lot. CDPR's park staff and volunteer patrols will work to enforce litter control rules.

Success Criteria: Document placement and maintenance of trash containers.

Provide Disabled Access Parking Area

Commitment: CDPR will coordinate with the lead agencies on design specifics to provide disabled river users with parking and river access.
Responsible Parties: CDPR/Reclamation

Location: Project area
Timing: Ongoing Project operations
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to grade and construct three handicap-accessible parking spaces adjacent to the riverside turnaround, including one van accessible space. Design/construction will include placement of base rock and vibra-packing or rolling to provide a firm compact surface.

Reclamation will require the Construction Contractor to install signs indicating "loading zone, no parking" at the turnaround and signs indicating handicap-accessible parking, as appropriate.
Reclamation will require the Construction Contractor to create a short trail meeting American Disabilities Act standards. The trail will consist of compacted gravel will lead from the handicap-accessible parking lot to a location near the river.

Success Criteria: Provision of handicap-accessible river access.

3.9 VISUAL RESOURCES

3.9.1 AFFECTED ENVIRONMENT

3.9.1.1 Regional Setting

The regional setting includes visual resources that may be indirectly affected by the Proposed Project or alternatives through reductions in flows or reservoir elevations due to changed CVP and SWP operations that result in a change in visual character of the water body. Regional water resources included in this evaluation include the Sacramento River from Trinity and Shasta reservoirs downstream to the Delta, the American River from Folsom Reservoir downstream to the mouth at the Sacramento River confluence, Oroville Reservoir, and the Feather River. The visual resources of these water bodies and waterways are described in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.9.1.2 Project Area Setting

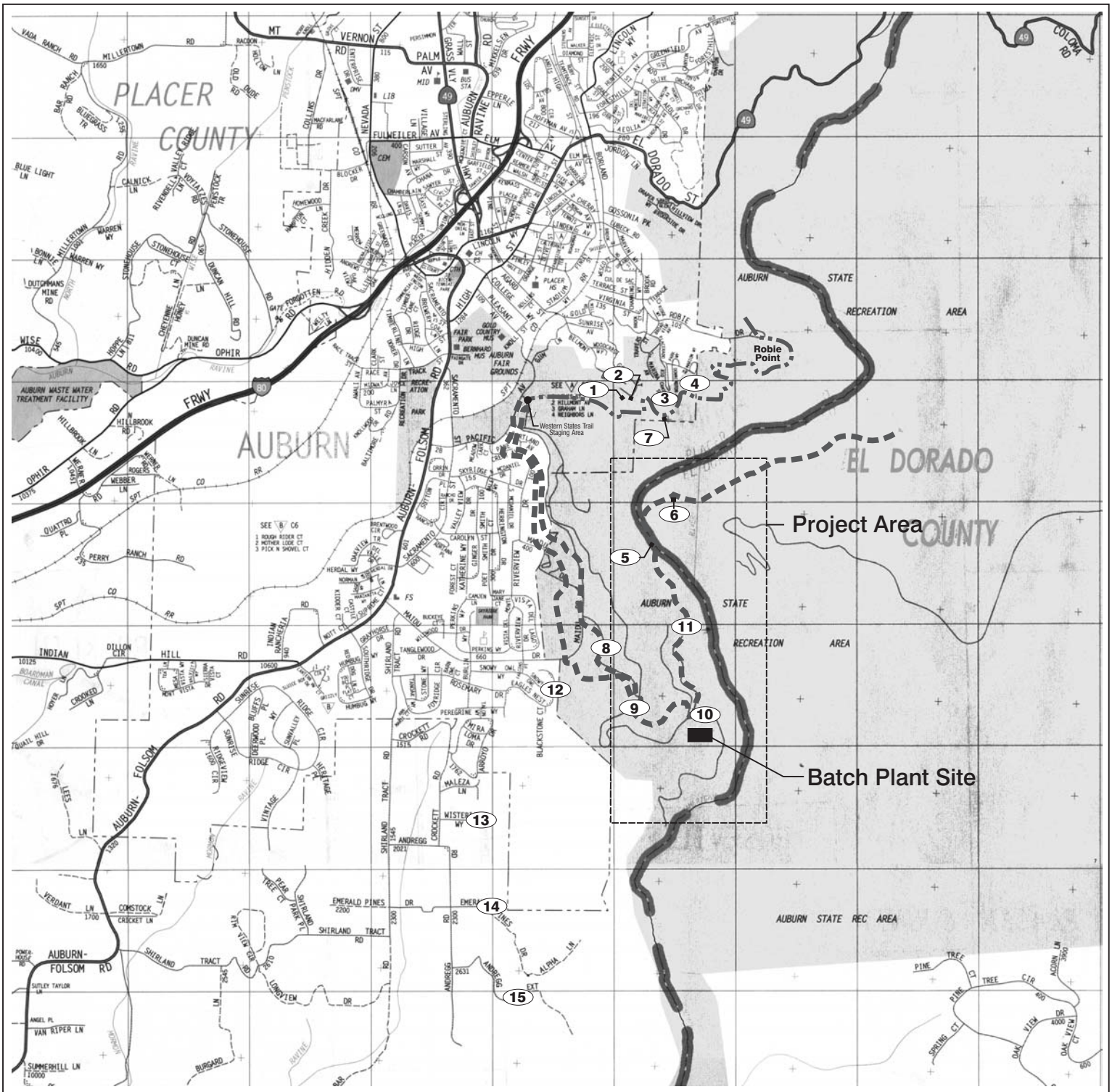
The project area represents the direct effect study area and encompasses the views/visual resources of the Middle Fork American River from below Ralston Afterbay and the North Fork American River from the confluence with the Middle Fork to just downstream of Oregon Bar (Figure 2-2). This area includes homes on the western rim of the canyon from which construction activities or project features could be visible to residents or recreationists.

North Fork American River

The Bureau of Land Management (BLM) conducted a habitat study along a five-mile segment of the North Fork American River from the bypass tunnel inlet upstream to the North Fork Debris Dam (which forms Lake Clementine). Through this study, the BLM determined this five-mile river segment is high quality foothill-canyon habitat with low habitat fragmentation due to human activities. The BLM assigned Outstandingly Remarkable Resource values to this river segment for scenic resources.

Project Area

The study area lies within Placer and El Dorado counties, with the river at the boundary of the two counties. The homes on the rim of the western side of the canyon are in Placer County, some within the Auburn city limits (**Figure 3.9-1**). (There are no homes with views of the project area on the El Dorado County side of the canyon.) CDPR maintains recreation trails that pass through or near the site. The Auburn-to-Cool Trail and the Western States Trail were selected as having representative views of the project site. Both trails are used frequently by hikers and equestrians; the Auburn-to-Cool Trail also is open to mountain bikers. (Refer to Section 3.8, Recreation, for a more detailed discussion of these trails.)



Scale 0 2000 feet

LEGEND

- Auburn-to-Cool Trail
- Western States Trail
- (1) Key Viewpoints (see key below)

Viewpoints Key

1 - Ridgetop-Gold West Viewpoint
2 - Ridgetop-Gold East Viewpoint
3 - Ridgetop-Rio Camino Viewpoint
4 - Ridgetop-Placerado Viewpoint
5 - Auburn-to-Cool Canyon Floor Viewpoint
6 - Auburn-to-Cool Cofferdam Viewpoint
7 - Western States Trail Viewpoint
8 - Foresthill Bridge Viewpoint
9 - Construction Yard Viewpoint
10 - Auburn Dam Batch Plant Plateau
11 - Auburn-to-Cool Trail
12 - Eagles Nest Viewpoint
13 - Wisteria Street Viewpoint
14 - Emerald Pines Drive Viewpoint
15 - Andregg Road Viewpoint

Figure 3.9-1 Location of Viewpoints

3.9.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.9.2.1 Methodology

Facilities-Related Analysis Approach

To evaluate impacts on the visual resources of the project study area, the size and character of the alternatives' structures and facilities were examined by consulting with the project design team. In addition, sensitive receptors were identified by reviewing aerial photographs and topographic maps, and by conducting site visits. Specific viewpoints of project components from these receptors were identified during field visits.

Sensitive Receptors/Viewpoints

Facility construction, operations, and maintenance would occur in the project area. Two categories of sensitive receptors were identified in the project area: recreationists and residents. These sensitive receptors were identified as valuing the scenic quality of their views integrally with their use of the area.

To assess the potential for visual impacts on these sensitive receptors, one or more viewpoints were selected for each receptor category to characterize views from various receptor locations. Impacts were identified based on the following criteria:

- The extent to which project components are visible from the viewpoint (e.g., duration of views from a trail, how many project components can be seen);
- The clarity of views from the viewpoint (e.g., whether the view is obstructed by trees); and
- The distance from the project site to the viewpoint.

These receptors were evaluated from the following types of viewpoints: (1) ridgetop residences on the western rim of the canyon; (2) recreationists on the Auburn-to-Cool Trail; (3) recreationists on the Western States Trail; and (4) recreationists in the Oregon Bar area. The sensitive receptors are grouped in this manner because they represent relatively distinct geographic locations with corresponding distinct visual perspective of the study area. Although subviewpoints are identified for the Auburn-to-Cool Trail and Ridgetop Homes, the views are relatively similar within each viewpoint.

These viewpoints are described below, and their locations and project component views are depicted on Figure 3.9-1

Ridgetop Homes (Viewpoints 1 to 4)

Most of the residences near the edge of the western (Placer County) side of the canyon have views of the upper half of the canyon, or of the El Dorado County side, but not the canyon floor or Placer County canyon slopes where the Proposed Project alternatives' components would be

located. Homes that would have the "greatest" potential for views of the proposed facilities, referred to here as the Ridgetop Homes Viewpoints, have clearer views of the study area than most of the Ridgetop Homes.

The Ridgetop Homes Viewpoints include: Gold Street West, Gold Street East, Rio Camino, and Placerado, Viewpoints 1 through 4, respectively.

From the Ridgetop Homes Viewpoints, the canyon appears mostly natural and is generally covered with vegetation. The viewpoints generally have good views of the upper half of the canyon, but less clear views of the lower half. Some canyon wall defacing is evident (e.g., the keyway), as well as portions of the gravel deposits which fill the dewatered river stretch. The river stretch downstream of the bypass tunnel outlet is more consistently visible than the dewatered stretch, and in some cases it is not apparent that the river's course has been altered. In addition, the distance to the site lessens the unnatural-looking aspects of the canyon.

Auburn-to-Cool Trail (Viewpoints 5, 6, 8, 9, 10 and 11)

The Auburn-to-Cool Trail begins at the Auburn Overlook (for equestrians) and at Maidu Drive (for mountain bikers). It follows a construction access road down the canyon, crosses the dewatered river stretch between the tunnel outlet and the cofferdam, climbs the side of the cofferdam, and continues along Salt Creek towards Cool. The Auburn-to-Cool Trail viewpoints include the canyon floor and the cofferdam, Viewpoints 5 and 6, respectively, and four points along the trail beginning at Viewpoint 8 near Maidu Drive and descending into the canyon approximately 600 feet to Viewpoint 11.

The canyon floor is not visible from the Auburn-to-Cool Trail until just before the trail reaches the canyon floor near the bypass tunnel outlet (Viewpoint 5). From this vantage point, and also as the trail crosses the dewatered channel, most of the canyon floor and Placer County canyon side is visible. As the trail ascends the cofferdam, most of the canyon floor and Placer County canyon side remain in sight, but views of the upstream river segment replace the downstream segment.

From Viewpoints 5 and 6, the canyon appears mostly altered, and has relatively little vegetation. Viewpoints near 5 and 6 generally have good views of the lower half of the canyon, and good views—but at a greater distance and at a less natural line-of-sight—of the upper half of the canyon. For virtually the entire length of the trail on the canyon floor, the canyon wall alterations (e.g., the keyway and excavations) are very evident, as are the gravel deposits which fill the dewatered stretch. The upstream river stretch is visible as recreationists reach the cofferdam, and continues to be visible as the trail continues down Salt Creek. The dewatered river canyon segment is still visible facing west, but recreationists can see the upstream river stretch facing east. As the trail continues towards Salt Creek, the dewatered canyon segment slowly recedes from sight, and the upstream river segment remains in view. The view upstream is one of a virtually unaltered river canyon. The existing seasonal pump station and sump pond are the exception to the natural views in the upstream river channel.

From Viewpoints 8 through 11, views into the canyon are obstructed by trees and hillsides. Viewpoint 8 has a clear view of the Forresthill Bridge on the North Fork American River and a view of Auburn Dam excavation on the upper east side of the canyon, but no view directly into the canyon floor. Similar views can be seen at the construction storage yard (Viewpoint 9) and the batch plant (Viewpoint 10). At Viewpoint 11, views into the canyon are entirely blocked by vegetation.

Western States Trail (Viewpoint 7)

The trailhead for the Western States Trail is immediately north of the Auburn Dam Overlook. The trail continues along the Placer County side of the canyon at an elevation of approximately 1,100 feet. The trail crosses the river just downstream of the confluence of the North and Middle forks at the No Hands Bridge. The trail then follows the Middle Fork American River to the town of Foresthill and beyond.

As the trail descends from the Western States Trail staging area, recreationists have their best view of the canyon just past where a trail from Marina Avenue joins the main trail. This location is identified as the Western States Trail Viewpoint (Viewpoint 7).

As the trail continues to Robie Point, near a sharp westward bend of the river, recreationists occasionally have a view of the upper portion of the canyon and the upstream river stretch, but cannot see the canyon floor or the Placer County side of the canyon where the Proposed Project alternatives' components would be sited. Therefore, no additional viewpoints were selected.

From this viewpoint, there is a good view of both the upper and lower portions of the canyon. Therefore, recreationists can see both the natural-looking upper portion and the Auburn Dam construction-altered lower portion. The canyon wall excavation and spoils areas are evident, as are portions of the boulder and gravel cofferdam remnant deposits which fill the dewatered stretch. Existing seasonal pump station construction access roads that traverse the site are visible. The dewatered river stretch is as visible as the downstream stretch. Overall, the canyon appears unnatural-looking, both in general and compared to the surrounding area.

Ridgetop Homes (Viewpoints 12, 13, 14, and 15)

From the western side of the canyon extending south toward Folsom Reservoir, the homes along the ridgetop have the greatest potential to see into the canyon floor and the construction site at Oregon Bar. Viewpoint 12 is not able to view the riverbed because the Eagles Nest neighborhood sits too far back on a gently sloping ridge. Trees and the hillside are all that are visible at that site. Even further south at Viewpoint 13, trees block direct view into the canyon; although the hillside itself is not obstructing the direct view to Oregon Bar. At the top of Emerald Pines Drive (Viewpoint 14), residents have direct view of both Oregon Bar and the batch plant site looking northeast. These homes sit at the crest of a very sharply sloped hill facing northeast. Several of the homes on Andregg Road also have direct northeast-facing views of Oregon Bar and the batch plant sites at a line of sight distance of about one mile.

Other Sensitive Receptors/Viewpoints

The recreation trails in the vicinity of Oregon Bar would have views of the parking area and road and trail improvements proposed under the Proposed Project. As these facilities would be designed and operated to support existing and anticipated recreation uses in this local area, there would be no adverse effect on visual resources.

CDPR is planning to re-establish the trail along the Old Railroad Grade as a multi-use trail (Wells 1998). The trailhead would be at the Auburn Dam Overlook, and the trail would end at the confluence of the North and Middle forks. This trail would generally parallel the Western States Trail in the vicinity of the project site at a lower elevation. Therefore, the viewpoints for this trail would be very similar to those for the Western States Trail. Because this trail is not yet in place, it is not discussed further in this document.

The Auburn Dam Overlook was not considered a sensitive viewpoint for visual impacts because the canyon floor is generally not visible from this location. The only portion of the North Fork American River that is visible is downstream of the bypass tunnel outlet. None of the dewatered stretch, or the upstream river segment can be seen. Therefore, none of the Action Alternatives' structures would be visible.

Diversion-Related Analysis Approach

Increased water diversions and changes in CVP operations associated with the Proposed Project or alternatives could result in changes in river flow patterns and fluctuations in reservoir surface water elevations within the study area. Significant reductions in river flows would result in a reduced river expanse, which can contribute to the thinning of the riparian corridor, loss of valuable border zone vegetation, and subsequent degradation of wildlife habitat. In general, fluctuations in surface water elevations are considered an accepted feature of these reservoirs. However, large decreases in surface water elevations can result in significant increases in the drawdown zone around the edge of the reservoir. Because drawdown zones are typically unvegetated, decreases of greater than 10 feet are generally considered to be visually significant.

To evaluate diversion-related effects upon regional water bodies, visual impacts were analyzed based on a comparison of surface water elevations and river flows under existing and future scenarios with and without the project. Because the Action Alternatives would result in the same effect upon the regional system, they are evaluated together. Hydrologic modeling results were reviewed to determine whether reductions in reservoir elevations or river flows, if identified, would affect the visual character of the water bodies within the study area. The model simulations and comparisons are described in Section 3.3.2. Refer to the Hydrologic Modeling Technical Memorandum for additional detail (Appendix E of the Draft EIS/EIR).

3.9.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The City of Auburn, the counties of Placer and El Dorado and CDPR have jurisdiction or management responsibilities over lands surrounding the project site. Visual resources-related objectives and policies expressed in the respective city and county general plans and CDPR

resource management plan, are listed below (City of Auburn 1993; Placer County 1994; El Dorado County 1995; CDPR and Reclamation 1992).

City of Auburn

Policy 5.4 In making land use decisions, recognize the trail development and recreational potential of major open space features such as:

Major Ridge Tops: Ridge tops offer outstanding scenic value and have the potential to be linked to existing trails. Development should not detract from the overall viewshed quality of and from the ridge top.

Placer County

Goal 1.K: To protect the visual and scenic resources of Placer County as important quality-of-life amenities for county residents and a principal asset in the promotion of recreation and tourism.

Policy 1.K.1 The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

a. Incorporate design and screening measures to minimize the visibility of structures and graded areas.

b. Maintain the character and visual quality of the area.

Policy 1.K.2 The County shall require that new development in scenic areas be designed to utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.

Policy 1.K.5 The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.

Policy 1.K.6 The County shall require that new development on hillsides employ design, construction, and maintenance techniques that:

d. Maintain the character and visual quality of the hillside.

El Dorado County

Objective 7.6.1 Importance of Open Space

Policy 7.6.1.1 [Primary purposes of open space include:]

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors.

California Department of Parks and Recreation

The project area is located within the Auburn SRA, which is operated by the CDPR. The Auburn Interim Resource Management Plan (CDPR and Reclamation 1992) for the site lists general "constraints" that were considered in the planning process, which includes the following statement:

Since the biological, natural, cultural, and visual resources are valuable and integral components to the Auburn SRA and the surrounding areas, they should be protected to the extent possible when various facilities, improvements, or projects occur.

Specific management guidelines were developed in the Interim Plan to direct existing and potential land uses and activities in the Auburn SRA. Guidelines that relate to visual resources are listed below.

Design Standards of New Facilities

6. Structures should be screened from view with vegetation or other naturally occurring features whenever possible.

Scenic Viewshed

1. The viewshed is to be maintained. Development should be located outside of scenic areas, adjacent to existing structures, or along the edges of scenic areas where vistas will be less interrupted. Development should not be allowed on ridgelines.

2. Newly proposed roads, parking areas, and other developments should be evaluated to determine their effects on scenic quality. Proposals that would have an adverse impact on the viewshed should be revised or rejected.

3.9.2.3 Impact Indicators and Significance Criteria

Significance criteria were developed based on local general plan objectives and policies, the CDPR resource management plan guidelines and the CEQA Guidelines Environmental Checklist (CEQA Appendix G). Impact indicators were developed using visual component characteristics and PROSIM modeling output for river flows and reservoir surface elevation. **Table 3.9-1** presents the impact indicators and significance thresholds used to evaluate the project. Impacts

to visual resources were considered less than significant if they did not violate or exceed these thresholds.

Table 3.9-1
Visual Resources Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ The contrast, including size and visual character, of project components within the visual setting of the project area.	❑ Are inconsistent with relevant city or county general plan policies or guidelines.
❑ The visibility of project components from sensitive viewpoints.	❑ Substantially change the character of the landscape/view in terms of both physical characteristics and land use types, as visible from sensitive viewpoints.
❑ Monthly mean flows (cfs) of the American, Sacramento, and Feather rivers.	❑ A decrease in flow, relative to the basis of comparison, contributing to substantial reduction in the width of the riparian corridor or loss of valuable riparian vegetation and/or habitat sufficient to adversely affect the visual character.
❑ Monthly mean surface water elevation of Folsom, Shasta, Trinity, and Oroville reservoirs.	❑ A decrease in monthly mean surface water elevation of more than 10 feet, relative to the basis of comparison, of the study area reservoirs with sufficient frequency to adversely affect the visual character.

3.9.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related visual resources impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.9-1: Construction effects on the character of the landscape from the residential viewpoints.

No Action/No Project Alternative installation and removal would be virtually the same as under existing conditions with regard to visual impacts. There would be no substantial change in the types of construction activities at the seasonal pump station and diversion structure locations. The existing seasonal pump station and diversion structure are not visible from the residential viewpoints. Only a few road segments, which would be used for construction travel, are visible from the residences north of the project site (Viewpoints 1, 2, 3, and 4). Therefore, the only visual impact of construction activities would be the potential increased frequency of construction traffic on the road segments if the seasonal pump station is dismantled and reinstalled in years with high flows early and/or late in the operating season. Nevertheless, the limited visibility of the seasonal components would result in less-than-significant impacts to the residential viewpoints.

Impact 3.9-2: Construction effects on the character of the landscape from the Western States Trail Viewpoint.

Only a few road segments are visible from the Western States Trail Viewpoint, and for less than 100 feet along the trail. Therefore, construction activities associated with the No Action/No Project Alternative would be less than significant. For a further discussion of this impact, refer to Impact 3.9-1.

Impact 3.9-3: Operations effects on views from residential viewpoints.

The seasonal pump station and sump pond are not visible from any of the residential viewpoints; therefore, there would be no visual impact upon these receptors.

Impact 3.9-4: Operations effects on the character of the landscape from the Auburn-to-Cool Trail Viewpoints.

The seasonal pump station and sump pond are not visible from the Canyon Floor Viewpoint (5); however, they are visible from the Cofferdam Viewpoint (6). The pump station and sump pond would not change in appearance under this alternative, however, the pump station would be in place up to four additional months each year. Because materials (e.g., pipeline) related to the seasonal pump station remain at the site year-round, this would not be a substantial change in the landscape; the visual impacts would be negligible.

Impact 3.9-5: Operations effects on the character of the landscape from the Western States Trail Viewpoint.

The existing seasonal pump station and sump pond are not visible from the Western States Trail viewpoints; therefore, there would be no visual impacts.

Proposed Project

Impact 3.9-6: Construction effects on the character of the landscape from the residential viewpoints.

Overall, the visible extent of the construction activities from the Ridgetop Homes is fairly limited.

- From the Gold Street West Viewpoint, the construction staging area would not be visible, however, much of the construction vehicle traffic would be. No project facility construction sites would be visible.

- From the Gold Street East Viewpoint, the construction staging area and most of the road would not be visible, nor would the pump station and intake construction sites.

- From the Rio Camino Viewpoint, the construction staging area and much of the construction vehicle traffic would be visible.

- From the Placerado Viewpoint, some of the pump station access road would be visible from this viewpoint; therefore, construction vehicle traffic would be visible. The construction staging area and the pump station and intake facilities would not be visible.

Because only some of the construction activities would be intermittently visible from these sites and would not differ substantially from the existing or No Action/No Project Alternative annual construction activities of the seasonal pump station, the visual impacts would be less than significant.

From the Emerald Pines Drive (14) and Andregg Road (15) viewpoints (residential area south of project site), both the Oregon Bar area, including the batch plant construction site, is clearly visible. These viewpoints are shared by at least 6 homes. The proposed construction activities and associated construction traffic would be visible. Construction activities would involve the use of heavy machinery such as cement trucks and backhoes for a likely duration of up to two months. Under existing conditions the batch plant site is a disturbed and unnatural site void of natural vegetation, landscaped, and filled with mounds of gravel.

Due to the limited nature of the proposed construction activities at the Oregon Bar site, the existing disturbed condition of the batch plant site, and the limited number of residents with direct view of this construction site, visual impacts associated with the parking lot construction and access road improvements would likely be less than significant as compared to existing or No Action/No Project Alternative.

Impact 3.9-7: Construction effects on the character of the landscape of the Western States Trail Viewpoint.

The construction staging area and some of the construction vehicle traffic would be visible from this viewpoint. Views of these project construction activities would be less than clear and complete, and for a very limited stretch (approximately 100 feet) of the trail from a distance of one-quarter mile. Because of the limited visibility of project construction, and the less than substantial differences from existing condition or No Action/No Project Alternative annual construction activities, the visual construction impacts of this alternative would be less than significant.

Auburn-to-Cool Trail access would be limited during heavy construction activities; therefore, the impacts on viewpoints from the trail during construction would be considered less than significant. Recreation impacts from the trail closure are discussed in Section 3.8, Recreation.

Impact 3.9-8: Operations effects on the character of the landscape from the residential viewpoints.

Only the Placerado Viewpoint (4) would be able to see the new pump station; however, operations and maintenance traffic along several road stretches would be visible from all viewpoints. The visual impacts of the addition of the project components would be less than significant because of the limited views of the facilities from these viewpoints. The restored river channel would enhance the views of the canyon floor compared to existing or No

Action/No Project and Upstream Diversion alternative conditions for the Gold Street East, Rio Camino, and Placerado viewpoints north of the project site. The overall impact on views from these homes would be potentially beneficial.

Impact 3.9-9: Operations effects on the character of the landscape from the Western States Trail Viewpoint.

Short road segments would be visible from this viewpoint so recreationists would infrequently see operations and maintenance vehicles. Because of the limited visibility of project components, and the lack of substantial changes to the character of the landscape, the visual impacts would be less than significant.

Impact 3.9-10: Operations effects associated with use of the parking and staging facilities on the visual character of the project site.

Visual changes in the project area associated with public river access at Oregon Bar would include the presence of a staffed CDPR entrance station, parking and turnaround areas, improved roads, and recreation-related public use. Related visual impacts may include public vehicles lined up at the entrance station; however, public access would be controlled and monitored at the entrance station and limited to the number of available parking spaces. The majority of new recreationists are anticipated to be boaters who would be using the project site exclusively as a pull-out destination rather than prolonged visitation. CDPR maintenance personnel would remove trash generated by public use of the project site. Overall, residences at the Ridgetop Homes (see Figure 3.9-1) (Viewpoints 1 through 4) would have no views of the parking lot and turnaround area near the dewatered channel.

These facilities would not be visible from the Western States Trail, except for very limited stretches because views from the trail toward the canyon floor are almost completely obstructed by trees downslope of the trail. Approximately half of the river channel would be visible from this viewpoint. Restoring the river would improve the visual setting of this viewpoint; therefore, a beneficial visual impact would result under this alternative.

The Oregon Bar area, including the batch plant construction site, is clearly visible from homes south of the project site (Figure 3.9-1, Viewpoints 14 and 15). Under the existing condition, these residents view a disturbed and unnatural site at the batch plant area. The proposed parking lot would result in additional graded ground surfaces and additional recreational use of the area as compared to the existing condition or the No Action/No Project Alternative. These facilities would be "rustic" to minimize changes to the character of the area and would be consistent with the intent of river-related recreation planning goals.

Due to the disturbed nature of the site, presence of recreation already in the area and the rustic design considerations, these proposed facilities would be expected to result in a less-than-significant impact.

Upstream Diversion Alternative

Impact 3.9-11: Construction activities effects on the character of the landscape from the residential viewpoints.

As described for the Proposed Project, only some of the construction activities would be visible from the residential viewpoints north of the project site. These activities would be primarily related to construction vehicle access and storage, and would not differ substantially from the arrival of construction activities under existing or No Action/No Project Alternatives. Visual impacts due to construction also would be limited to the duration of the project construction period and would no longer occur on an annual basis. Overall, construction-related activities would result in less-than-significant visual effects.

Impact 3.9-12: Construction effects on the character of the landscape from the Western States Trail Viewpoint.

The construction staging area, pump station construction activities, and some of the construction vehicle traffic would be visible from this viewpoint. Views of these project construction activities would be less than clear and complete, and for a very limited stretch (approximately 100 feet) of the trail from a distance of one-quarter mile. Because of the limited visibility of project construction, and the less than substantial differences from existing or No Action/No Project Alternative annual construction activities, the visual impacts of this alternative would be less than significant.

Impact 3.9-13: Operation effects on the character of the landscape from the residential viewpoints.

The only project component visible from the Rio Camino Viewpoint would be the pump station, and from the Gold Street East viewpoint, only the top of the pump station. No project components would be visible from the Gold Street West and Placerado viewpoints. Operations and maintenance traffic would be visible for several road stretches from all viewpoints. Despite the generally natural views of the canyon from these viewpoints, the visual impacts of changes compared to existing or No Action/No Project Alternative operations would be less than significant because of the limited views of the project components from these viewpoints.

Impact 3.9-14: Operation effects on the character of the landscape from the Auburn-to-Cool Trail Viewpoints.

The Proposed Project features would have a less-than-significant impact because, while it would somewhat lessen the visual value of one viewpoint, it would substantially improve the visual qualities of another.

The year-round pump station would be visible from both viewpoints, and from the Cofferdam Viewpoint, the intake diversion structure also would be visible. Operations and maintenance traffic would be visible for several road stretches from both viewpoints. The pump station would be enclosed in a pump house constructed of steel panels, painted a light/neutral tone to blend

with the surrounding area. Therefore, the net visual impacts of the changes would be less than significant.

Impact 3.9-15: Operation effects on the character of the landscape from the Western States Trail Viewpoint.

Only the year-round pump station would be visible from this viewpoint. Short road segments are visible from this viewpoint, so recreationists would infrequently see operations and maintenance vehicles. Because of the limited visibility of project components, and the lack of substantial changes to the character of the landscape, the visual impacts would be less than significant.

Cumulative Facilities-Related Impacts

No substantial adverse changes to the visual character of the canyon would be expected to occur with the project alternatives; Foresthill Bridge modifications would provide improvement. No significant cumulative impact would result.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.9-1, H-3.9-2, etc.).

No Action/No Project Alternative

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant reductions of river flows or reservoir elevations such that visual resources would be adversely affected.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP or SWP operations associated with the Action Alternatives also would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the Action Alternatives. Visual resources in the upper American River would not be impacted by changes in MFP operations.

Impact 3.9-16: Operations effects on the visual character of Folsom Reservoir.

There were no years in the 70-year period of record in which the Action Alternatives would result in reductions of surface water elevations of greater than 10 feet. Therefore, the visual impact of the Action Alternatives' reduction in surface water elevations at Folsom Reservoir is considered less than significant.

Impact 3.9-17: Operations effects on the visual character of the lower American River.

Changes in river flow patterns would not result in a significant visual effect because (1) releases from the lower American River must maintain adequate instream flows for fishery, wildlife, recreational, and aesthetic values (based on the Hodge standard); (2) fluctuations in river flows are a common occurrence along the lower American River, and (3) Action Alternatives' diversions result in insignificant differences in lower American River flows at H Street Bridge and at the mouth compared to existing conditions.

Impact 3.9-18: Operations effects on the visual character of Trinity and Shasta reservoirs.

As with Folsom Reservoir, there were no years in the 70-year period of record in which the Action Alternatives would result in reduction of surface water elevation of greater than 10 feet. Therefore, the visual effect of the Action Alternatives' reduction in surface water elevations at Trinity and Shasta reservoirs is considered less than significant.

Impact 3.9-19: Operations effects on the visual character of the upper Sacramento River, lower Sacramento River, and Sacramento-San Joaquin Delta.

Changes in river flow patterns throughout the Sacramento River and Delta would not result in significant visual effects because (1) fluctuations in river flows are a common occurrence throughout the Sacramento River and Delta, and (2) Action Alternatives result in insignificant differences in Sacramento River flows at Keswick and Freeport compared to the existing condition.

Impact 3.9-20: Operations effects on the visual character of Oroville Reservoir and the Feather River.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the existing condition. Any small changes that might occur would be considered less-than-significant impacts upon visual resources.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.9-21: Operations effects on the visual character of Folsom Reservoir.

There is one month in the 70-year period of record in which the Action Alternatives would result in a reduction of surface water elevation of greater than 10 feet compared to the No Action/No Project Alternative. This reduction would occur in the winter (February) when there is considerably less aesthetic concern of the reservoir. The visual impact of the reduction in surface water elevations at Folsom Reservoir from the Action Alternatives is considered less than significant.

Impact 3.9-22: Operations effects on the visual character of the lower American River.

Changes in river flow patterns would not result in a significant visual effect because (1) releases from the lower American River must maintain adequate instream flows for fishery, wildlife, recreational, and aesthetic values (based on the Hodge standard); (2) fluctuations in river flows are a common occurrence along the lower American River, and (3) diversions from the Action Alternatives would result in insignificant differences in lower American River flows at H Street Bridge and at the mouth compared to the No Action/No Project Alternative.

Impact 3.9-23: Operations effects on the visual character of Trinity and Shasta reservoirs.

There were no years in the 70-year period of record in which the Action Alternatives would result in reductions of surface water elevations of greater than 10 feet compared to the No Action/No Project Alternative. Therefore, the visual effect of reductions in surface water elevations at Trinity and Shasta reservoirs from the Action Alternatives is considered less than significant.

Impact 3.9-24: Operations effects on the visual character of the upper Sacramento River, lower Sacramento River, and Sacramento-San Joaquin Delta.

Changes in river flow patterns throughout the Sacramento River and Delta would not result in significant visual effects because: (1) fluctuations in river flows are a common occurrence throughout the Sacramento River and Delta, and (2) pump station project diversions and changes in CVP operations associated with the Action Alternatives result in insignificant differences in Sacramento River flows at Keswick and Freeport compared to the No Action/No Project Alternative.

Impact 3.9-25: Operations effects on the visual character of Oroville Reservoir and the Feather River.

The Action Alternatives would not result in substantial changes in storage or elevation at Oroville Reservoir, or in flow in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered less than significant impacts upon visual resources.

Cumulative Impacts

The cumulative impact assessment is based on a comparison of anticipated future cumulative conditions (2025) to existing conditions. In instances where a potentially significant or significant cumulative effect is identified, an additional evaluation of the Action Alternatives' incremental contribution to the cumulative condition is assessed. See the Hydrologic Modeling Technical Memorandum (Appendix E of the Draft EIS/EIR) for additional detail.

Impact 3.9-26: Operations effects on the visual character of Folsom Reservoir.

Under the cumulative condition, additional diversions and potential changes in CVP operations would result in more frequent declines in the water surface elevation of Folsom Reservoir. However, over the 70-year period of record, only 9 of 840 months (one percent of the simulation) would result in reductions of Folsom Reservoir surface water elevations of greater than 10 feet compared to the existing condition. Therefore, the visual impact of the cumulative condition's reduction in surface water elevations at Folsom Reservoir would be considered less than significant.

Impact 3.9-27: Operations effects on the visual character of the lower American River.

For the cumulative condition, additional diversions and potential CVP operations would result in decreases in lower American River flows. Because discernible aesthetic impacts along river corridors are primarily associated with adverse impacts to localized vegetation, the aesthetic quality of the lower American River, under cumulative conditions, could be adversely affected. As described in Section 3.6, Terrestrial Resources, the cumulative condition would not result in a substantial decrease in flows during the growing season. Therefore, the cumulative condition impact to the visual quality of the lower American River would be less than significant.

Impact 3.9-28: Operations effects on the visual character of Trinity and Shasta reservoirs.

Under the cumulative condition, additional diversions and potential changes in CVP operations would result in more frequent drawdowns in the water surface elevation of Trinity and Shasta reservoirs. The cumulative condition would result in reductions of surface water elevations of greater than 10 feet in 11 months at Shasta Reservoir and 13 months at Trinity Reservoir out of the 840-month period of record. Therefore, compared to existing conditions, the visual effect of the cumulative condition's reduction in surface water elevations at Trinity and Shasta reservoirs would be considered less than significant.

Impact 3.9-29: Operations effects on the visual character of the upper Sacramento River, lower Sacramento River, and Sacramento-San Joaquin Delta.

As described in the Section 3.6, Terrestrial Resources, the cumulative condition would not result in a substantial decrease in flows during the growing season for the upper or lower Sacramento River. Therefore, the cumulative condition impact to the visual quality of the upper and lower Sacramento rivers would be less than significant.

Impact 3.9-30: Operations effects on the visual character of Oroville Reservoir.

Compared to the existing condition, the cumulative condition would result in substantially lower long-term average end-of-month elevation for the March through September vegetation growing period, over the 70-year period of record. Long-term end of month elevation reductions for Oroville Reservoir would range from six feet to 18 feet. During individual years, reductions of up to 76 feet in end–of-month elevation would occur. As previously discussed, in many areas along the reservoir, during periods of relatively large reductions in water surface end-of-month elevation, the bare red and gray soils that become exposed create a drawdown zone that contrast vividly with the vegetated areas above the usual high water level and the water surface below. In narrow, steeply sided arms of the lake, large drawdowns can create conditions in which it appears that the lake is set within a deep, red-sided canyon. In areas where the slopes are gradual, large reductions in water surface elevation create areas that appear to be large reddish mudflats. Given the relatively large reduction in end-of-month water surface elevation, potentially significant visual resources impacts would occur at Oroville Reservoir under the cumulative condition.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in river flow would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

Impact 3.9-31: Operations effects on the visual character the Feather River.

The largest long-term average flow reduction under the cumulative condition relative to the existing conditions would be 5.7 percent during the month of March. Conversely, long-term average flow increases under the cumulative condition relative to the existing condition would be up to 36.4 percent (i.e., August). However, because monthly mean flows for some months of the March through October growing period are already relatively low, reductions in flow may adversely affect riparian vegetation associated with the Feather River, and therefore represent a potentially significant impact to the visual quality.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in river flow would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives contribution to the cumulative condition would not be considerable.

3.9.2.5 Environmental Protection and Mitigation Measures

Construction of the Proposed Project or Upstream Diversion Alternative would change the visual character of the project area. Design considerations to minimize visual impacts have been included in the Mitigation Plan (Appendix D to the Final EIS/EIR) as stated below.

Blend Project Features with Surrounding Landscape

Commitment: Minimize visual quality impacts by designing Project features to blend with the surrounding landscape, to the extent feasible. Public river access features will be limited and "rustic."
Responsible Party: Reclamation
Location: Project area
Timing: Project design
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will ensure that final project design includes measures to blend the Project features into the surrounding landscape/viewshed. Preliminary Project design elements identified to minimize visual impacts include the following:

- Pump station will be composed of light colored split-face block to avoid introducing new source of glare to area.
- Intake will be designed and constructed to look like a natural component of the river channel.
- Bypass tunnel openings will be enclosed in such a way that the closure blends with the surrounding environment.
- Trails and access roads will be constructed to blend in with surrounding landscape. Limited improvements will be made such that these features are "rustic" in nature, consistent with the Auburn Interim Resources Management Plan.
- Removal of vegetation will be minimized to extent necessary to create trails, roads and fire breaks.

Success Criteria: Completed structures/features blend with surrounding area.

Incorporation of these design considerations minimizes the potential for visual impacts to less than significant.

3.10 CULTURAL RESOURCES

3.10.1 AFFECTED ENVIRONMENT

3.10.1.1 Regional Setting

The regional setting includes cultural resources that may be indirectly affected by the Proposed Project or alternatives. The cultural resources of the regional study area water bodies and waterways (CVP and SWP system facilities) are described in the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.10.1.2 Project Area Setting

The Area of Potential Effect (APE) for cultural resources within the project area represents the direct effect study area and includes the river banks of the Middle Fork American River below Ralston Afterbay, to its confluence with the North Fork American River, and the North Fork American River extending from the confluence downstream to Oregon Bar. At the project site, the APE includes the areas of anticipated construction activity associated with each alternative.

The American River canyon upstream and downstream of the Auburn Dam construction site contains both prehistoric and historic archeological sites. Prehistoric sites consist primarily of bedrock milling stations and historic sites are generally related to historic mining. Some sites occur along the river bank and others are located further upslope. No recorded resources are known to occur within the proposed construction areas for any of the alternatives.

3.10.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.10.2.1 Methodology

Facilities-Related Analysis Approach

Cultural resource records for the APE were reviewed and an on-the-ground examination of the APE was conducted. No previously recorded cultural resources were found within the APE. Field examination confirmed that all activity associated with the alternatives would fall within the footprint of Auburn Dam construction or areas previously influenced by related activity. The dam construction site is greatly altered and the area within the APE has been totally changed by dam construction and seasonal pump station installation/removal activities. No historic properties are present within the APE. The APE of the Proposed Project encompasses lands that would be developed for road improvements, a parking area at Oregon Bar, the pump station, and pipelines. The pump station and pipelines would be placed on existing cleared areas and roads. The proposed Oregon Bar parking area would be placed on an area that was cleared for storage of Auburn Dam construction materials.

Diversion-Related Analysis Approach

The impact assessment focuses primarily on fluctuations in water levels at water bodies within the regional study area. Increased fluctuations in water levels, exposure of previously inundated lands, or the inundation of previously exposed lands, may more rapidly degrade sensitive cultural sites along the perimeter of water bodies.

To evaluate diversion-related impacts to cultural resources, a comparison was made of reservoir surface water elevations and river flows under the existing condition and the Proposed Project using 70-year simulations (the Upstream Diversion Alternative would have the same diversion pattern as the Proposed Project—they are referred to as the Action Alternatives). Hydrologic modeling results were reviewed to determine whether changes in reservoir elevation or river flow, if identified, would be large enough to potentially affect the cultural resources underlying or adjacent to these water bodies. Modeling also was conducted and comparisons made for the future condition with and without the project and for the cumulative condition compared to the existing condition.

To evaluate potential impacts to cultural resources in and around the reservoirs, hydrologic modeling was performed to determine the changes in the minimum and maximum end-of-month water surface elevations for the conditions being compared (see Appendix E of the Draft EIS/EIR). If the reservoir's water surface elevation rises above the existing condition maximum water elevation, cultural resources previously untouched by water could be inundated. Conversely, a water surface elevation below the reservoir's minimum level could expose cultural resources that were previously submerged. Additionally, and perhaps more significantly, if the Proposed Project or alternatives would result in a shift in the zone of fluctuation, cultural resources located within the zone also could be potentially affected through increased exposure to erosion, hydrologic sorting caused by wave action, and breakdown of organic matter through repeated wetting and drying. Any changes in water levels caused by increased diversions or other changes in operation of the CVP system, have the potential to impact important or unevaluated cultural resources within a particular reservoir basin. It also is the case, however, that many of the cultural deposits in the upper part of a reservoir have been scoured down to bare granitic sand and bedrock.

Many of the recorded cultural resources within the study area have been inundated by earlier projects; a large number of these lie submerged under Folsom Reservoir. Studies of reservoir impacts to cultural sites have shown that the greatest impacts are from wave action, which erodes the deposit and moves artifacts, and from cycles of inundation and drawdown, which also cause erosion and movement, in addition to repeated wetting and drying of the deposit (Foster et al. 1977; Foster and Bingham 1978; Henn and Sundahl 1986; Lenihan et al. 1981; Stoddard and Fredrickson 1978; Ware 1989). These same studies suggest that sites that lie permanently submerged, for example, within the deep pool of a reservoir, suffer much less damage than those within the drawdown zone. For sites that already are submerged, continued submergence does not constitute an effect. However, inundation to sites that lie above the present waterline (and that have not been subject to inundation before) potentially would be an adverse effect. Additional wave impact on already eroded ground may be insignificant. Conversely, sites below

this zone have suffered much less from seasonal water-level fluctuations, and new impacts to these sites probably would be more significant in terms of data loss.

In order to estimate the magnitude and frequency of bank exposure and bank inundation along rivers in the study area, the maximum and minimum monthly flows over the 70-year period were compared.

3.10.2.2 Applicable Laws, Ordinances, Regulations and Standards

Cultural resources in California are regulated by the State Historic Preservation Office (SHPO) which was established by the National Historic Preservation Act of 1966. This office is responsible for administering preservation programs established by state and federal law, including the National Historic Preservation Act, the Archeological and Historic Preservation Act (P.L. 93-291), the American Indian Religious Freedom Act (P.L. 95-34), and the Archeological Resources Protection Act (P.L. 96-95). As required by Section 106 of the National Historic Preservation Act and CEQA, the SHPO, in conjunction with state and federal agencies, identifies resources that may be eligible for inclusion in the National Register of Historic Places. If a historic site may be affected by a project, the SHPO must review project impacts to that site and mitigation measures to reduce the significance of the impact. During this process, SHPO's Native American Coordinator ensures that Native American concerns for archaeological sites and other cultural properties also are considered.

3.10.2.3 Impact Indicators and Significance Criteria

Indicators of potential impacts were developed by evaluating the project scope, site conditions, and impact issues identified by the public. Applicable laws, ordinances, regulations, and standards and CEQA Guidelines also were consulted. Significance criteria were developed from the indicators to measure the impacts expected to occur from the Proposed Project and alternatives.

CEQA requires that *important* cultural resources be protected. The CEQA Guidelines define an important resource as one listed on, or eligible for listing on, the California Register of Historical Resources (PRC Section 5024).

In addition to CEQA compliance, any project that involves federal undertakings, lands, funds, or permits must comply with Section 106 of the National Historic Preservation Act (NHPA). This Act defines important (significant) resources as those listed on, or eligible for listing on, the National Register of Historic Places. National Register criteria are very similar to those for the State Register, defining an important cultural resource as one that is associated with important persons or events, or that embodies high artistic or architectural values, or that has scientific value (36 CFR 60.6). State Historic Landmarks, and any cultural resource that has been determined eligible to the National Register, automatically qualify for the State Register. Where a cultural resource has not been evaluated for its importance, it is treated as potentially important until an evaluation can be done. For this project, Reclamation, as the federal lead agency, has responsibility for project compliance with the NHPA.

Table 3.10-1 lists the impact indicators and significance criteria used in the evaluation of potential effects on cultural resources.

Table 3.10-1
Cultural Resources Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Important cultural resource sites or historic properties within the APE.	❑ Disturbance or damage of known or unknown cultural resources.
❑ Maximum, minimum and average end-of-month water surface elevation fluctuations and annual frequency of water level fluctuations for Folsom, Shasta, Trinity, and Oroville reservoirs.	❑ Substantial elevation or lowering water level fluctuation zone, relative to the basis of comparison, which would result in increased inundation of previously exposed areas or exposure of previously inundated lands with sufficient frequency to adversely affect sensitive cultural resources.
❑ Maximum and minimum monthly mean river flows on the American, Sacramento, and Feather rivers.	❑ Substantial increase in maximum monthly mean river flows or decrease in minimum monthly mean river flows, relative to the basis of comparison, which would result in increased inundation of previously exposed areas or exposure of previously inundated lands with sufficient frequency to adversely affect sensitive cultural resources.

3.10.2.4 Impact Analysis

This section presents the analysis of potential facilities- and diversion-related cultural resources impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.10-1: Effect of No Action/No Project Alternative on cultural resources in the project area.

Continued installation and operation of the seasonal pump station facilities would occur in areas already disturbed by Auburn Dam-related construction activities and by past seasonal pump station-related earthwork. No known cultural resources would be disturbed by these activities. The potential to discover unknown resources would not differ from existing conditions. Therefore, the No Action/No Project Alternative would represent a less-than-significant impact upon these resources.

Proposed Project

Impact 3.10-2: Effect of Proposed Project construction activities on cultural resources in the project area.

There are no previously recorded cultural resources within the APE for the Proposed Project. The field examination confirmed that the project area falls within the Auburn Dam construction

site area, which has been totally altered by dam construction activities and by the previous placement of the seasonal pump station facilities. No historic properties are present within the APE; therefore, the Proposed Project would have no effect on historic properties. Because of the disturbed nature of the APE, there is little likelihood that construction would result in the discovery of buried cultural resources (J. West, Reclamation, pers. comm. 2001). Therefore, the construction of the Proposed Project would have a less-than-significant impact (no effect) on cultural resources

Impact 3.10-3: Operations effects associated with the use of the public river access on cultural resources in the project area.

As explained above, the APE contains no previously recorded cultural resources nor historic properties. The Auburn Dam construction site is greatly altered and there is little likelihood that increased public use associated with the public river access sites would result in the discovery of buried cultural resources. Therefore, operation of the Proposed Project would have a less-than-significant impact on cultural resources.

Upstream Diversion Alternative

Impact 3.10-4: Effect of Upstream Diversion Alternative on cultural resources in the project area.

As for the Proposed Project, the APE for the Upstream Diversion Alternative has been altered and disturbed by past construction and earthwork associated with Auburn Dam and seasonal pump station installation. The Upstream Diversion Alternative, therefore, would have a less-than-significant impact to cultural resources.

Cumulative Facilities-Related Impacts

The potential for facilities-related cultural resources impacts is considered to be of site-specific nature. The Proposed Project would not be expected to disturb any known cultural resources, and proper protection measures would be in place in the event an unknown resource becomes discovered during construction. Because of the site-specific conditions, the Proposed Project would not result in a considerable contribution to cumulative impacts upon cultural resources.

Diversion-Related Impacts

No Action/No Project Alternative Compared to the Existing Condition

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in changes in river flows or reservoir elevations for water bodies in the study area that would contribute to a significant effect upon cultural resources.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP and SWP operations associated with the Action Alternatives also generally would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the Action Alternatives.

Impact 3.10-5: Effect of changes in flows of the upper American River.

Flows of the upper American River from Ralston Afterbay releases to the project site would be similar to the existing condition for much of the year. Flows under the Action Alternatives would be slightly lower in spring months (i.e., April and May) than under existing conditions, but would not drop below minimum flow levels. During summer low flow months, the Action Alternatives' flows would remain above the existing condition minimum flows.

Below the diversion, the Proposed Project would result in lower monthly mean flows relative to the existing condition. However, minimum flows would not fall below those of existing conditions. Additionally, as for upstream of the diversion, under low-flow conditions, river flows would remain above the existing condition minimum flow levels.

These changes in flow would not result in increased exposure of buried cultural resources. Therefore, potential impacts to cultural resources along the upper American River from changes in river flows would be less than significant.

Impact 3.10-6: Effect of changes in water surface elevation at Folsom Reservoir.

The modeling results indicate that the Action Alternatives would not result in a higher maximum water surface elevation at Folsom Reservoir during the 70-year simulation, compared to the existing condition. With regard to maximum drawdown, the comparison of the minimum end-of-month water surface elevations indicates that the minimum elevation would be lower under the Action Alternatives than under the existing condition in December, January and February. However, these lower elevations would be during winter months when the reservoir is at a relatively high elevation. In the months with the lowest minimum elevation (i.e., July through November), the minimum elevations would be increased. Thus, impacts on cultural resources at Folsom Reservoir from changes in maximum and minimum water levels would be less than significant.

Impact 3.10-7: Effect of changes in flows of the lower American River.

For the lower American River, the maximum and minimum monthly mean flows over the 70-year simulation were compared between the existing condition and the Action Alternatives. In order to estimate the magnitude and frequency of bank exposure and bank inundation along the lower American River, two locations were assessed: Nimbus Dam and the river mouth (confluence with the Sacramento River).

A stage/discharge relationship has not been developed for the entire reach of the lower American River. For this reason, it is difficult to quantify precisely the potential for exposure or inundation of cultural resources along the banks of the lower American River. Of course, higher water surface elevation occurs under higher flows and lower water elevations occur under lower flows. A comparison of flows under the existing condition and the Action Alternatives provides an estimate of the relative changes in river stage that could result.

Because no significant sites are expected to have survived within the riverbed itself near Nimbus Dam, lower flows would not expose previously submerged (and intact) cultural resources. It is possible that historic-era (post-1869) shipwrecks lie beneath the silty river bottom near the mouth, and that very low river flows could expose these resources. However, the magnitude of the changes predicted under the Action Alternatives is so small that this is highly unlikely. Also, known resources along the riverbank (two historic levees, a portion of the Natomas East Main Drainage Canal and prehistoric mound CA-SAC-26) lie outside the present river channel, and decreases in river flows would have no impact on these resources. Therefore, lower flows are not a concern with regard to cultural resources.

The Action Alternatives would result in maximum monthly mean river flows downstream of Nimbus Dam and at the mouth that would be virtually identical to those under the existing condition. Therefore, the impacts to cultural resources along the American River from changes in river flows would be less than significant.

Impact 3.10-8: Effect of changes in water surface elevation at Shasta Reservoir.

The modeling results indicate that the Action Alternatives would not result in a higher maximum elevation over the 70-year simulation, compared to the existing condition. With regard to maximum drawdown, the comparison of the minimum end-of-month elevation indicates that water surface elevation would be slightly lower (by less than four feet) during the winter and spring when the reservoir is typically at a higher elevation and slightly higher in the summer when the reservoir is typically at a lower elevation. Thus, impacts on cultural resources from changes in minimum and maximum water levels at Shasta Reservoir would be less than significant.

Impact 3.10-9: Effect of water surface elevation at Trinity Reservoir.

The modeling results indicate that the Action Alternatives would not result in any significant difference in Trinity Reservoir water surface elevation compared to the existing condition. Therefore, no impacts to cultural resources would be expected to occur within Trinity Reservoir.

Impact 3.10-10: Effect of changes in flows of the upper and lower Sacramento River/Delta.

The Action Alternatives would result in maximum and minimum monthly mean flows on the Sacramento River from Keswick Reservoir and at Freeport that are virtually identical to those under the existing condition. These flow results indicate that no new areas of the riverbank would be inundated or exposed. Therefore, the impacts to cultural resources along the upper and lower Sacramento River from changes in river flows would be less than significant.

Impact 3.10-11: Impacts to Oroville Reservoir or Feather River cultural resources.

The Action Alternatives would not result in substantial changes in minimum or maximum storage or elevation at Oroville Reservoir, or in minimum or maximum flow in the Feather River, relative to the existing condition. Any small changes that might occur would be considered to represent less-than-significant impacts upon cultural resources.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.10-12: Effect of changes in flows of the upper American River.

Flows of the upper American River from Ralston Afterbay releases to the project site would be similar to the No Action/No Project Alternative for much of the year. Flows under the Action Alternatives would be slightly lower in spring months (April and May) than under existing conditions, but would not drop below minimum flow levels. During summer low flow months, the Action Alternatives would remain above the No Action/No Project Alternative minimum flow level due to the release of replacement water.

Below the diversion, the Action Alternatives would result in lower monthly mean flows relative to the No Action/No Project Alternative. However, minimum flows would not fall below those of the No Action/No Project Alternative. Additionally, as for upstream of the diversion, under low-flow conditions, river flows would be higher than the existing condition minimum flows.

These changes in flow would not result in increased exposure of buried cultural resources. Therefore, potential impacts to cultural resources along the upper American River from changes in river flows would be less than significant.

Impact 3.10-13: Effect of changes in water surface elevation at Folsom Reservoir.

The modeling results indicate that the Action Alternatives would not result in a higher maximum elevation during the 70-year simulation, compared to the No Action/No Project Alternative. With regard to maximum drawdown, the comparison of the minimum end-of-month water surface elevation indicates that in December, January and February, the minimum elevation would be lower under the Action Alternatives than under the No Action/No Project Alternative. However, the decrease in elevation would be during winter months when the reservoir is at a relatively high elevation. In the months with the lowest minimum elevation (July through November), the minimum elevation would be increased. Thus, impacts on cultural resources from changes in maximum and minimum water levels at Folsom Reservoir would be less than significant.

Impact 3.10-14: Effect of changes in flows of the lower American River.

Changes in minimum monthly mean flows would not be expected to affect cultural resources (see Impact 3.10-7). The maximum monthly mean river flows downstream of Nimbus Dam, and at the mouth of the lower American River, under the Action Alternatives, compared to the No

Action/No Project Alternative, would result in a less than 3 percent increase in flow in August, September and December, when flows are not typically at their peak. Therefore, the impacts to cultural resources along the river from changes in river flow would be less than significant.

Impact 3.10-15: Effect of changes in water surface elevation at Shasta Reservoir.

The modeling results indicate that the Action Alternatives would not result in a higher maximum elevation over the 70-year period of record compared with the No Action/No Project Alternative. With regard to maximum drawdown, the comparison of the minimum end-of-month elevation indicates that water surface elevation would be lower for 10 of the 12 months ranging from one to five feet. Because the differences are relatively small, impacts on cultural resources from changes in extreme water levels would be less than significant.

Impact 3.10-16: Effect of changes in water surface elevation at Trinity Reservoir.

The modeling results indicate that the Action Alternatives would not result in a higher maximum elevation over the 70-year period of record, compared with the No Action/No Project Alternative. With regard to drawdown, the comparison of the minimum end-of-month elevations indicates that water surface elevations would be lower in December through June, when the reservoir is typically at a higher elevation. In the months with the lowest minimum elevation (July through November), the minimum elevation would be increased. Therefore, no impacts to cultural resources within Trinity Reservoir would be expected to occur.

Impact 3.10-17: Effect of changes in flows of the upper and lower Sacramento River.

The Action Alternatives would result in maximum monthly mean river flows from Keswick Reservoir and at Freeport that are virtually identical to those under the No Action/No Project Alternative. Overall, impacts to cultural resources along the upper and lower Sacramento River would be expected to be less than significant.

Impact 3.10-18: Impacts to Oroville Reservoir or Feather River cultural resources.

The Action Alternatives would not result in substantial changes in minimum or maximum storage or elevation at Oroville Reservoir, or in minimum or maximum flow in the Feather River, relative to the No Action/No Project Alternative. Any small changes that might occur would be considered to represent less-than-significant impacts upon cultural resources.

Cumulative Impacts

Impact 3.10-19: Effect of changes in flows of the upper American River.

Cumulative condition flows of the upper American River from Ralston Afterbay releases to the project site would be similar to the existing condition for October through March. Mean monthly flows under the cumulative condition would be slightly lower in spring months (April and May) than under existing conditions, but would not be expected to drop below existing

minimum flow levels. During summer low flow months, the cumulative condition would result in flows above the existing condition minimum low flows.

Below the diversion, the cumulative condition would result in lower monthly mean flows relative to the existing condition. However, cumulative condition minimum flows would not be expected to fall below those of the existing condition. Additionally, as for upstream of the diversion, under low-flow conditions, flows would remain higher than the existing condition minimum flows.

These changes in flow would not result in increased exposure of buried cultural resources. Therefore, potential cumulative impacts to cultural resources along the upper American River from changes in river flows would be less than significant.

Impact 3.10-20: Effect of changes in water surface elevation at Folsom Reservoir.

The modeling results indicate that the cumulative condition would not result in a higher maximum elevation during the 70-year period simulation compared to the existing condition. With regard to maximum drawdown, the comparison of the minimum end-of-month water surface elevation indicates that in two of the summer/fall months where elevation is typically low (July through November), the minimum elevation would be lower under the cumulative condition than under the existing condition. The reductions in these months, September and November, would be only two feet and three feet, respectively. Therefore, impacts on cultural resources from cumulative changes in maximum and minimum water levels would be less than significant.

Impact 3.10-21: Effect of changes in flows of the lower American River.

The cumulative condition would result in maximum monthly mean river flows downstream of Nimbus Dam and at the mouth of the lower American River that are essentially identical to or slightly less than the existing condition. Therefore, the impacts to cultural resources along the lower American River from changes in river flows would be less than significant.

Impact 3.10-22: Effect of changes in water surface elevation at Shasta Reservoir.

The modeling results indicate that the cumulative condition would not result in a higher maximum elevation over the 70-year simulation compared to the existing condition. With regard to maximum drawdown, the comparison of the minimum end-of-month elevations indicates that for each month water surface elevation would be lower, ranging from eight to 45 feet. This is a potentially significant impact to cultural resources at Shasta Reservoir.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The project's incremental contribution to the minimum end-of-month water surface elevation during the 70-year simulation would be reductions ranging from one to six feet msl in each month except June and November. In particular, the decreases of six feet in September and six feet in October reduce the reservoir elevation to 837 and 834 feet in September and October,

respectively. (The end-of-month minimum elevation would be 840 feet without the project [future conditions with PCWA diversions at 8,500 AF].) These reductions represent a potentially significant impact and represent a considerable contribution to the cumulative condition. The cumulative effects of minimum elevations during greater than the normal range of reservoir drawdown at Lake Shasta could have an adverse effect on historically significant prehistoric and historic archaeological sites above the existing effects. Sites would be subject to adverse effects of erosion, cycles of wetting and drying, recreation, and vandalism.

The reductions of end-of-month minimum elevations described above occur, in the 70-year simulation in 1934 at the end of a severe six-year drought. These reductions reflect the cumulative impact of this multi-year drought. In addition, the modeling simulated operational considerations such that reservoir drawdown effects were shifted from Folsom Reservoir to Shasta Reservoir so that minimum releases could be maintained from Folsom Reservoir. A portion of this reduction is an indirect response to changed conditions (e.g., AFRP modifications) resulting from the Proposed Project.

To reduce the potential for significant adverse effects to cultural resources at Shasta Reservoir, due to the increased potential for reservoir elevation to fall below normal minimum end-of-month elevations, Reclamation would enter into a Programmatic Agreement with the State Historic Preservation Officer, Advisory Council on Historic Preservation and any other interested parties or tribes. The Programmatic Agreement would be developed in compliance with Section 106 of the National Historic Preservation Act and would specify when and how measures would be used to assess the effects of reservoir drawdown upon cultural resources. The agreement would identify measures to reduce impacts upon these resources to levels considered less than significant.

Impact 3.10-23: Effect of water surface elevation at Trinity Reservoir.

The modeling results indicate that the cumulative condition would not result in any difference in Trinity Reservoir maximum water surface elevation compared to the existing condition. Minimum end-of-month elevations show decreases in April, May and June when the elevation is generally higher. Therefore, no impacts to cultural resources within Trinity Reservoir would be expected to occur.

Impact 3.10-24: Effect of changes in flows of the upper Sacramento River.

The cumulative condition would result in maximum monthly mean river releases on the Sacramento River from Keswick Reservoir that are higher than those under the existing condition in June and July when maximum flows are considerably less than peak winter flows. The cumulative condition would result in minimum monthly mean river flows on the Sacramento River below Keswick Reservoir that are lower than those under the existing condition in April and May (when flows are generally high), and in September, but by less than two percent. Therefore, impacts to cultural resources along the upper Sacramento River from differences in river flows would be less than significant.

Impact 3.10-25: Effect of changes in flows of the lower Sacramento River/Delta.

The cumulative condition would result in maximum monthly mean river flows in the lower Sacramento River at Freeport that are lower than or virtually identical to those under the existing condition. The cumulative condition would result in minimum monthly mean river flows in the lower Sacramento River at Freeport that are lower than those under the existing condition in June through December and in March. In particular, October and November would see a 70-year minimum flow that is 10 to 13 percent less under the cumulative condition. However, since no significant sites are expected to have survived intact within the riverbed itself, impacts to cultural resources on this stretch of the Sacramento River are expected to be less than significant.

Impact 3.10-26: Effects of water surface elevation at Oroville Reservoir

Compared to the existing condition, the cumulative condition would result in substantially lower long-term average end-of-month storage over the 70-year period of record. Long-term end of month elevation reductions for Oroville Reservoir would range from six feet to 18 feet. During individual years, reductions of up to 76 feet in end–of-month elevation would occur. Given the relatively large reduction in end-of-month water surface elevation, the potentially significant impacts to the cultural resources of the Oroville Reservoir would occur under the cumulative condition.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' contribution to the cumulative condition would not be considerable.

Impact 3.10-27: Effects of changes in flow on the Feather River

The largest long-term average flow reduction under the cumulative condition relative to the existing conditions would be 5.7 percent during the month of March. Conversely, long-term average flow increases under the cumulative condition relative to the existing condition would be up to 36.4 percent (i.e., August). These relatively sharp flow fluctuations may represent a potentially significant impact to the cultural resources of the Feather River.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' contribution to the cumulative condition would not be considerable.

3.10.2.5 Environmental Protection and Mitigation Measures

Construction of the pump station facilities, under all alternatives, would occur in areas already highly disturbed by past construction activities associated with Auburn Dam, therefore, it is considered highly unlikely that any buried resources remain within the construction area. However, the following measures have been incorporated into the Mitigation Plan (Appendix D to the Final EIS/EIR) and would be included as part of the construction specifications for the selected alternative to protect any cultural resources.

Stop Construction Activities if Cultural Resources or Human Remains are Uncovered

Commitment:	Protect any undiscovered prehistoric (e.g., arrowheads, mortar, human bones) or historic artifacts (e.g., glass, ceramics, metal, nails) according to CEQA Guidelines and Reclamation's Directives and Standards, LND 07-01. Notify authorities and follow procedures according to Reclamation's Directives and Standards, LND 07-01.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Entire Project construction area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	No specific monitoring requirement
Reporting Requirements:	The discoverer of human remains must contact Reclamation's Regional Director/designee (contract officer's representative) immediately by telephone or in person, followed by written confirmation of the discovery within 48 hours.

Description of Activities:
If previously unidentified cultural resources are encountered during Project construction, Reclamation will require the Construction Contractor to stop construction work within 20 meters of the material(s) and the contract officer's representative will be sought immediately and will contact Reclamation's Regional Archaeologist/designee. If human remains are uncovered the Construction Contractor will notify Reclamation immediately.

Success Criteria:
Through communication with construction personnel, provide procedure to respond to uncovering of any discovered prehistoric or historic artifacts.

Develop and Implement Programmatic Agreement with State Historic Preservation Officer Regarding Potential Indirect Impacts at Shasta Reservoir

Commitment:	Reclamation will develop a Programmatic Agreement with SHPO that defines what action(s) will be taken, if needed.
Responsible Party:	Reclamation
Location:	Shasta Reservoir
Timing:	Project operation

The monitoring and reporting requirements would be determined in the Programmatic Agreement between Reclamation and SHPO. Additionally the specific description of the activities would be described in the Programmatic Agreement.

Success Criteria:
Protection of cultural resources at Shasta Reservoir, as needed based on water year conditions.

3.11 POWER SUPPLY

3.11.1 AFFECTED ENVIRONMENT

Hydropower generation at CVP facilities is an important resource for contributing to the reliability of the electrical power system in California. Impacts to CVP hydropower operations can result from increased water diversions that result in both lower reservoir levels and less water flow through turbines. In addition to potential impacts to electric system reliability, loss of hydropower capacity and generation also can result in indirect environmental impacts by necessitating increased power generation using means that are less environmentally sensitive.

Central Valley Project Hydropower System

The CVP hydropower system consists of nine power plants and two pump-generating plants (**Table 3.11-1**). This system is fully integrated into the Northern California Power System and provides a significant portion of the hydropower available for use in northern and central California. The installed power capacity of the system is 2,085,350 kilowatts (kW). By comparison, the combined capacity of the 368 operational hydropower plants in California is 12,866,000 kW and PG&E is the area's major power supplier with a generating capacity from all sources of over 20,000,000 kW.

Table 3.11-1
Power Resources of the Central Valley Project

Unit	Maximum Generating Capacity (kW)
Sacramento River Service Area	
Carr [a]	184,000
Lewiston	350
Keswick	105,000
Shasta [b]	625,000
Spring Creek	200,000
Trinity	140,000
Subtotal	**1,254,350**
American River Service Area	
Folsom	215,000
Nimbus	17,000
Subtotal	**232,000**
Delta Export and San Joaquin Valley	
New Melones	383,000
O'Neill [c]	14,000
San Luis [c,d]	202,000
Subtotal	**599,000**
TOTAL	**2,085,350**

[a] Limited by tunnel restrictions.
[b] With rewinds as of summer 2000.
[c] Pump-generating plant.
[d] Operated by DWR for Reclamation; eight 53,000 kW units for a total installed capacity of 424,000 kW, of which Reclamation's share is 202,000 kW.
Source: WAPA 2000

Once a strong influence on CVP operations, power operations are now secondary to other considerations. In part, this subordination is caused by the elevation of environmental needs to a higher standing, but changes in contractual relationships also have reduced the priority of power.

Power produced by the CVP hydropower system is used first for meeting CVP project water pumping loads, which is deemed "project use power," at CVP pumping facilities **(Table 3.11-2)**. Power surplus to project use is "commercial power" and is marketed by the Western Area Power Administration (WAPA) under long-term firm contracts to municipal and government entities (preference customers) at cost-based rates pursuant to Reclamation Law. In an average year, 4,600 gigawatthours (GWh) of energy and 1,700,000 kW of capacity are marketed to preference customers at rates that recover full cost of production and repayment obligations of CVP project investment with interest. Energy surplus to CVP project use and preference customer power needs is "banked" under WAPA-PG&E Contract 2948A, to be repaid when needed by WAPA and its customers. The contractual agreements between WAPA and its customers terminate in 2004, and it is unlikely that the contract will be renewed. WAPA is currently in the process of determining how it will market the CVP hydropower resources surplus to CVP project use power needs once the contract has expired.

Table 3.11-2
Major Pumping Plants in the CVP

Unit	Capacity (cfs)	Average Annual Energy Use (kilowatthours (kWh))
American River Service Area		
Folsom Pumping Plant	350	1,041,000
Delta Export and San Joaquin Valley		
Contra Costa Canal	410	18,908,000
Dos Amigos [a]	13,200	180,146,000 [b]
O'Neill	4,200	87,185,000
San Luis [a]	11,000	306,225,000 [b]
Tracy	4,600	620,712,000

[a] Joint state-federal facility.
[b] Federal energy use.
Source: Corps 1992

Folsom Dam and Reservoir

The Folsom Power Plant has three generating units, with a total release capacity of approximately 8,600 cfs. By design, the facility is operated as a peaking facility. Peaking plants schedule the daily water release volume during the peak electrical demand hours to maximize generation at the time of greatest need. At other hours during the day there may be little or no release (and no generation) from the plant.

To avoid fluctuations in flow in the lower American River, Nimbus Dam and Reservoir is operated as a regulating facility. While the water surface elevation in Nimbus Reservoir fluctuates, releases to the lower American River are kept constant. The Nimbus Power Plant consists of two generating units with a release capacity of approximately 5,100 cfs. Electric generation from this facility is continuous throughout the day.

Pumping Plants on Folsom Reservoir

There are two pumping plants located on Folsom reservoir: the Folsom Pumping Plant, located at Folsom Dam, and the El Dorado Irrigation District (EID) Pumping Plant. The Folsom Pumping Plant serves the City of Folsom, Folsom Prison, the City of Roseville, and the San Juan Water District. These entities take delivery of their water at different elevations. At times when the reservoir is high, gravity flow is possible and pumping is not required. The elevation at which pumping is required depends on the amount of water being pumped. Higher flow rates, typical of summer months, require greater pumping head, therefore the lower limit of gravity flow is higher in the summer months. **Table 3.11-3** summarizes information about how the pumping plants at Folsom Reservoir respond at various reservoir elevations.

Table 3.11-3
Folsom Reservoir Water Surface Elevation Pumping Conditions

Surface Elevations (feet msl)	Storage [a] (AF)	Pumping Condition
433	640,800	Lower limit of gravity flow to City of Roseville and San Juan Water District during irrigation season (April - October).
425	569,900	Lower limit of gravity flow to City of Roseville and SJWD during non-irrigation season.
414	480,200	Lower limit of gravity flow to City of Folsom and Folsom Prison.
356	158,900	EID pumps begin to develop vortex problems.
340	111,900	Potential vortex at dam intake, depending on volume of pumping.
335	100,000	Folsom Pumping Plant limited to 70 cfs.
325	79,200	Lower limit of EID pumps and Folsom Pumping Plant; pumps on barges required to pump water to existing intakes.
315	62,100	Elevation of Folsom Dam water intake; tap penstocks.
307	50,400	Elevation of power penstocks; portable pumps placed on a barge to supply pipeline intake.

[a] Reclamation Folsom Reservoir 1993 Area Capacity Tables.
Source: Corps 1992

State Water Project Facilities

Oroville Reservoir

DWR stores winter and spring runoff in Oroville Reservoir for release to the Feather River, as necessary for project purposes (i.e., water supply, power generation, flood protection, fish and wildlife enhancement, and recreation). Typically, power is generated when water releases are being made for these other purposes, when deliveries are being made to local irrigation districts through the Afterbay, or when pump-back operations are in effect. On a weekly basis, releases are scheduled to accommodate water supply requirements, water quality and quantity requirements in the Delta, instream flow requirements in the Feather River, power requirements, and minimum flood control space. The weekly plan is updated as needed to respond to changing conditions. The Thermalito Dam Pool and the Thermalito Forebay and Afterbay are too small for seasonal storage so they are used only in weekly and daily operations planning. Hourly releases through the Edward Hyatt and Thermalito Pumping Generating plants are scheduled on an hourly basis to maximize the amount of energy produced when power values are highest. Because the downstream water supply is not dependent on hourly releases and pumping of SWP

water can be scheduled at off-peak times, hourly operations are primarily dictated by electrical energy prices and ancillary service requirements such as spinning reserve, the supplemental energy market, and voltage regulation. Storage in Thermalito Forebay and Afterbay is used to maximize the value of project energy and maintain uniform flows in the Feather River downstream of the Oroville facilities. The Thermalito Afterbay also provides storage for pump-back operations. The pump-back operations are designed to use water in excess of what is required for downstream flow requirements for pumping back into the Thermalito Forebay and then into Oroville Reservoir in off-peak energy hours for re-release during peak hours when power rates again increase. Because the power plants are operated to maximize weekday generation when power prices are highest, there is usually higher storage in the Afterbay by the end of the week. During the weekend, water from the Afterbay is lowered to prepare for a similar operation the following week.

3.11.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.11.2.1 Methodology

The monthly gross CVP electrical generation and dependable capacity for the various conditions simulated in this study were estimated using PROSIM. Differences in energy and capacity between the conditions were then evaluated to assess impacts. Also evaluated were differences in the amount of energy needed to pump water at the Folsom Pumping Plant and the EID Pumping Plant.

Hydropower Analysis Framework

Increased water diversions leave less water in the rivers, resulting in less water flow for hydropower generation. Increased diversions also reduce the volume of water for filling reservoirs, resulting in reduced hydraulic head on hydropower turbines and, consequently, less power generation. Other changes in the pattern of CVP reservoir operation can affect CVP hydropower generation and dependable capacity.

Reductions in generation and capacity would not represent direct environmental effects, but may have economic consequences for CVP power users in the form of increased capacity/energy purchases to support loads. It is possible that thermal generation resources, which emit air pollutants, would supply some portion of the replacement power. Estimating the impact associated with the replacement energy would be speculative and is beyond the ability to predict, given the interconnection of electric utility generation in the western United States.

Pumping Power Analysis Framework

Pumping energy requirements also are affected by total reservoir storage, since less storage means that water must be lifted a greater height from the reservoir surface. Reductions in Folsom Reservoir elevations caused by the Proposed Project or alternatives would increase energy requirements for pumping water at the Folsom and EID pumping plants. These impacts, like those for hydropower, would not be expected to cause direct environmental effects, but

would have economic consequences and may cause indirect effects by requiring additional energy generation.

Energy usage at the pumping plants was estimated based on the amount of acre-feet pumped, the feet of lift required from the reservoir surface to the delivery elevation and the average plant efficiency. New, variable -speed pumps were made operational at the Folsom Pumping Plant in fall of 2000. Because of this, the absolute magnitude of future impacts at the Folsom Pumping Plant may be less than estimated herein, however the percentage impact shown should not be affected by the change in plant facilities.

Note that the Folsom and EID pumping plants serve local water purveyors and increased water deliveries by these purveyors will increase the energy requirement at the respective pumping plant irrespective of any impact caused by the Proposed Project being analyzed.

State Water Project Hydropower and Pumping Power (Oroville Facilities)

Impacts to hydropower generation of Oroville Reservoir would be significant if generation or dependable capacity were substantially reduced by the cumulative condition relative to the existing condition. Impacts to pumping power could result from changes in the elevation of water stored at Oroville Reservoir. Such impacts would be considered significant if pumping energy requirements for purveyors at Oroville Reservoir were to increase substantially.

3.11.2.2 Impact Indicators and Significance Criteria

CEQA Guidelines do not provide guidance related to changes in hydropower capacity or pumping power costs. Significance criteria have been tailored specifically to address these issues.

Hydropower

Hydropower impacts may result from reduction in generation or dependable capacity. Reduction in CVP generation could be a cost impact either because WAPA would be precluded from selling excess energy or might be required to purchase additional energy for its customers. Similarly, if dependable capacity was reduced as a result of the Proposed Project or alternatives, then a cost impact could be incurred. This analysis assumed that impacts would be significant if hydropower generation or dependable capacity were substantially reduced by the Proposed Project or alternatives.

Gross hydropower generation, that is, the amount before project use, is evaluated in this report. The values shown are reduced for transmission loss to represent the energy generation available at the load center near Tracy. The values shown herein include generation from New Melones Dam.

This EIS/EIR includes evaluation of dependable hydropower capacity. This differs from many earlier environmental documents that only looked at the instantaneous hydropower capacity, that is, the hydropower capacity corresponding to the current reservoir elevation. In response to

concern by WAPA about the availability of electrical power in California, this analysis evaluates the amount of hydropower capacity available over a specified, minimum period of time. This capacity is referred to as dependable capacity and is defined as the monthly generation divided by the hours specified in Table 1 of Contract 2948 between the CVP and PG&E (but not more than the instantaneous capacity). Similar to generation, the dependable capacity presented in this report is gross before project use, includes capacity at New Melones Dam, and is adjusted for transmission to reflect capacity at the load center near Tracy.

Pumping Power

Impacts to pumping power could result from changes in the elevation of water stored in Folsom Reservoir. Such impacts would be considered significant if pumping energy requirements for purveyors at Folsom Reservoir were to increase substantially.

3.11.2.3 Impact Analysis

This section presents the analysis of potential diversion-related power supply impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Diversion-Related Impacts

The diversion-related analysis refers to certain tables and graphs prepared to provide additional representation of the modeling results and comparison of simulated conditions. These tables and figures are included in Appendix H to the Draft EIS/EIR and are labeled by the appendix letter, resource section number, and ordered as it is referenced in the impact analysis (H-3.11-1, H-3.11-2, etc.).

No Action/No Project Alternative Compared to the Existing Condition

The increased pump station diversion under the No Action/No Project Alternative would be less than evaluated for the Action Alternatives (see below). Based on the evaluation of modeling performed for the Action Alternatives, it is expected that the No Action/No Project Alternative would not result in significant effects on gross hydropower generation, gross hydropower dependable capacity or upon pumping energy requirements.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the Existing Condition

The Proposed Project and the Upstream Diversion Alternative would result in the same timing and quantity of increased diversions from the American River. Changes in CVP or SWP operations associated with the Action Alternatives also would be the same. Therefore, the diversion-related analysis presented below represents the potential impacts that could occur with the "Action Alternatives."

Impact 3.11-1: Effects on gross hydropower generation.

Table H-3.11-1 summarizes the gross hydropower generation, in GWh, generated at CVP facilities under the existing and Action Alternatives conditions, as well as the difference between those two conditions. These values are gross before CVP project use, include generation at New Melones Dam, and are adjusted for transmission loss to be the amount available at Tracy. As shown in Table H-3.11-1, the impact on annual generation is estimated to average reduction by 8 GWh, or less than 0.2 percent. This would be considered a less-than-significant impact.

Impact 3.11-2: Effects on gross hydropower dependable capacity.

The difference in the amount of dependable capacity generated by CVP facilities under the existing condition and Action Alternatives is shown in Figures H-3.11-1, H.3.11-2, and H-3.11-3. Negative values indicate there would be less dependable capacity under the Action Alternatives (project condition) relative to the No Action/No Project Alternative. Note that over the long-term, the negative values, or impacts, are to an extent offset by positive values.

Table H-3.11-2 summarizes key data from these figures. Shown is the median difference and the 90 percent exceedance difference in dependable capacity between the two simulations. The 90 percent exceedance value indicates that 90 percent of the time the impact will be smaller or negative, i.e., a benefit. The median difference in dependable capacity between simulations is largest in September, at 2 MW. This is less than one percent of the 832 MW of total dependable capacity in September under the existing condition. The 90 percent exceedance in dependable capacity between the existing and Action Alternatives conditions is largest in February, at 14 MW. This is less than one percent of the 1720 MW of dependable capacity in February, under the existing condition. (The CVP dependable capacity data is included in Appendix I of the Draft EIS/EIR.)

Overall, the effect of the Action Alternatives on dependable capacity would be considered a less-than-significant impact.

Impact 3.11-3: Effects on pumping energy requirements.

The Folsom and EID pumping plants lift water from Folsom Reservoir to treatment plants for treatment and distribution to water users. The Action Alternatives would result in lower water elevations in Folsom Reservoir which creates need for greater amounts of energy to accomplish the required pumping. The increased energy requirement under the Action Alternatives compared to the existing condition is only 1.4 percent greater at the Folsom Pumping Plant and 0.1 percent greater at the EID Pumping Plant. These increased energy requirements are not considered substantial; therefore, it is considered a less-than-significant impact.

Impact 3.11-4: Effects on Oroville Reservoir water elevation that could affect power.

No substantial changes in reservoir elevation would be anticipated under the Action Alternatives relative to the existing condition. Any small changes in elevation would be considered to represent less-than-significant impacts.

Proposed Project and Upstream Diversion Alternative (Action Alternatives) Compared to the No Action/No Project Alternative in the Future (2025)

Impact 3.11-5: Effects on gross hydropower generation.

Impact of the Action Alternatives under the future condition on CVP gross generation was estimated to be 7 GWh. This represents less than 0.2 percent loss of generation compared to the No Action/No Project Alternative. This would be a less-than-significant impact.

Impact 3.11-6: Effects on gross hydropower dependable capacity.

The difference in amount of dependable capacity generated by CVP facilities under the No Action/No Project Alternative and Action Alternatives is summarized in Table H-3.11.3. Shown is the median difference and the 90 percent exceedance difference in dependable capacity between the No Action/No Project Alternative and Action Alternatives conditions. The median difference in dependable capacity would be 1 MW or less. The 90 percent exceedance in dependable capacity would be greatest in November, at 33 MW. This represents only two percent of the total dependable capacity in November compared to the No Action/No Project Alternative.

Overall, the effect of the Action Alternatives on dependable capacity compared to the No Action/No Project Alternative under future system conditions would be considered a less-than-significant impact.

Impact 3.11-7: Effects on pumping energy requirements.

The Action Alternatives would result in slightly lower future water elevations in Folsom Reservoir, creating a need for greater amounts of energy at the Folsom and EID pumping plants compared to the No Action/No Project Alternative. The increased energy requirement would be 0.7 percent greater at the Folsom Pumping Plant and less than 0.1 percent greater at the EID Pumping Plant. This would be considered a less-than-significant impact.

Impact 3.11-8: Effects on Oroville Reservoir water elevation that could affect power.

No substantial changes in reservoir elevation would be anticipated under the Action Alternatives relative to the No Action/No Project Alternative. Any small changes in elevation would be considered to represent less-than-significant impacts.

Cumulative Impacts

Impact 3.11-9: Effects on gross hydropower generation.

Table H-3.11-4 summarizes the gross hydropower generated at CVP facilities under the cumulative and existing conditions, as well as the difference between those two conditions. As shown in Table H-3.11-4, the impact on annual generation is estimated to an average reduction

of 356 GWh. This represents a seven percent loss of generation. This represents a significant economic cumulative impact.

The time-series of generation impacts due to the cumulative condition as compared to the existing condition is shown in Figure H-3.11-4. Figure H-3.11-5 provides an exceedance curve of generation impacts.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental analysis shows the Action Alternatives would result in a 9 GWh per year reduction in generation on average. That represents less than 0.2 percent of the generation and this would be considered a less-than-significant contribution to the cumulative condition.

Impact 3.11-10: Effects on gross hydropower dependable capacity.

Figures H-3.11-6 and H-3.11-7 show the difference in dependable capacity between the existing and cumulative conditions. Negative values indicate the extent to which dependable capacity under the cumulative condition would be less than under the existing conditions. Impacts would be largest in August through November.

Table H-3.11-5 shows the median and 90 percent exceedance of the difference in dependable capacity between the existing and cumulative conditions. This shows October to have the largest median impact, at 94 MW (Table H-3.11-6). This represents seven percent of the median total dependable capacity under existing conditions. The largest 90 percent exceedance impact is in August, at 371 MW. This represents 24 percent of the total dependable capacity in August under existing conditions. Overall, this is a significant cumulative impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental analysis shows, however, that the Action Alternatives would have a very small contribution to the cumulative condition. The month with the largest median impact would be September, at 2 MW. This represents less than one percent of the total. The largest difference at the 90 percent exceedance level would be 33 MW in November, representing two percent of the total dependable capacity. This would be considered a less-than-significant contribution to the cumulative condition.

Impact 3.11-11: Effects on pumping energy requirements.

The Action Alternatives result in lower water elevations in Folsom Reservoir which creates need for greater amounts of energy to accomplish the required pumping at Folsom and EID pumping plants. A more significant effect derives from the fact that far more water is delivered by the respective water purveyors through these pumps in the cumulative condition as compared to the existing condition. The energy requirement under the cumulative condition is more than doubled at the Folsom Pumping Plant and six-fold greater at the EID Pumping Plant. This is a significant cumulative economic impact which is borne by the water users who benefit from the pumping.

Action Alternatives' Incremental Contribution to the Cumulative Condition

The incremental contribution analysis shows that the Action Alternative-induced impacts on pumping energy requirements are small: a 1.8 percent increase in requirement at the Folsom Pumping Plant and a 0.1 percent increase in requirement at the EID Pumping Plant. This would be considered a less-than-significant contribution to the cumulative condition.

Impact 3.11-12: Effects on Oroville Reservoir water elevation and power supply.

The cumulative condition would result in a reduction in the long-term water elevation of Oroville Reservoir of up to 18 feet and a long-term average reduction in storage of up to 8.5 percent. Given the uncertainties associated with the effects that increased SWP demands, reflected in the cumulative condition, would have on Oroville Reservoir to facilities' hydropower dependable capacity and pumping energy requirements, this would be considered a potentially significant impact.

Action Alternatives' Incremental Contribution to the Cumulative Condition

No substantial changes in reservoir elevation would be anticipated under the cumulative condition relative to the future base. The increase in future SWP demands is the primary factor leading to cumulative effects. The Action Alternatives' contribution to the cumulative condition would not be considerable.

3.11.2.4 Environmental Protection and Mitigation Measures

The Proposed Project and alternatives would not result in significant impacts upon CVP electric generation capacity, energy requirements for pumping from Folsom Reservoir, or electrical energy generation or capacity or energy requirements for pumping. Additionally, the Proposed Project or alternatives would not result in a significant contribution to the cumulative condition. Therefore, no environmental protection or mitigation measures are proposed.

3.12 LAND USE

The Proposed Project or alternatives would have localized direct effects within the project study area. These effects are limited to facilities-related activities in the project area, including construction, operations and maintenance. The description of the affected environment and the evaluation of impacts, therefore, address only facilities-related effects within the project area. A discussion of growth-inducement within the PCWA service area also is included.

3.12.1 AFFECTED ENVIRONMENT

3.12.1.1 Project Area Setting

The project area represents the direct effect study area and includes the lands immediately adjacent to the Middle Fork American River from below Ralston Afterbay to its confluence with the North Fork American River and from the confluence to Oregon Bar.

Middle Fork American River

The Middle Fork American River forms the U.S. Forest Service (USFS) boundary between the El Dorado National Forest and the Tahoe National Forest. Land surrounding the Middle Fork are managed by the USFS as multiple use lands, which includes natural resource recreation, extraction, management, restoration, and conservation land use activities. The Tahoe National Forest provides land management direction under the policies and guidelines of the *Tahoe National Forest Land and Resource Management Plan* implemented in 1990. The El Dorado National Forest provides land management direction under the policies and guidelines of the *El Dorado National Forest Land and Resource Management Plan* implemented in 1988. Below Ralston Afterbay, in addition to USFS lands along the Middle Fork American River, land use and regulatory jurisdictions include Reclamation, BLM, CDPR, the City of Auburn, and some private landholders. CDPR manages whitewater outfitter guide activities on National Forest System land through agreement with USFS and Reclamation agreement.

North Fork American River

Below the confluence of the Middle Fork and North Fork, Reclamation has land use jurisdiction over the majority of land along the North Fork American River down to Folsom Reservoir, with some smaller fragmented parcels of land managed by BLM. CDPR manages recreational uses of Reclamation lands below the confluence of the Middle and North Fork American River with the Auburn SRA.

Project Area

Land uses of the project area primarily consist of open space and activities related to Reclamation's installation and removal of the seasonal pump station facilities. The former Auburn Dam construction roads are used for access to the water facilities. Water-based

recreation is not permitted in the project area; however, the Auburn-to-Cool and Western States trails traverse the site, which provide horseback riding, hiking, and biking uses.

3.12.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.12.2.1 Methodology

The anticipated construction, operation, and maintenance impacts of project facilities on land uses in the project area were evaluated with regard to the type and intensity of existing and planned land uses at and near the project site, including consistency with relevant local and regional planning and land use policies.

3.12.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Broad management guidelines for the public use of Auburn Dam project lands were established under P.L. 89-161, the enabling legislation for the construction of Auburn Dam. Specific management direction for the Auburn SRA is provided in the General Plan for the Auburn Reservoir Project and Folsom SRA, completed in 1978 and updated in 1990.

3.12.2.3 Impact Indicators and Significance Criteria

Impact indicators and significance criteria were determined from city, county, and agency land use general plans for the project area. The Environmental Checklist of the State CEQA Guidelines provides general guidance in the identification of circumstances that may result in a significant effect on the environment related to land use. **Table 3.12-1** Presents the impact indicators and significance criteria for impacts on land use.

Table 3.12-1
Land Use Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Land use designations	❑ Alteration of the existing or planned designated land uses of an area.
❑ Compatibility with surrounding land uses and regional character	❑ Change of the type or intensity of land uses resulting in incompatibility with existing surrounding land uses or incompatibility with the regional character.
❑ Number of affected businesses, homes, or people.	❑ Displacement of a large number of business, homes, or people that would be inconsistent with local plans for the area.
❑ Local and regional planning objectives; project planning objectives	❑ Conflict with adopted environmental plans and goals of local jurisdictions, as stated in their general, community, or other planning policy materials.

3.12.2.4 Impact Analysis

This section presents the analysis of potential facilities-related land use impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.12-1: Change in designation, type, or intensity of land uses at the project site.

The No Action/No Project Alternative would not require any changes in designated land uses at the project site, and would not affect the type or intensity of activities. No businesses, homes or individuals would be displaced by continuation of the seasonal pump station practices. This alternative, therefore, would represent a less-than-significant change from existing conditions.

Impact 3.12-2: Conflict with local or regional planning policies, goals, or objectives.

Continued installation of the seasonal pump station would not permit restoration of the river channel or associated increased public use of the area. Additionally, the bypass tunnel would remain operational and would continue to pose a public safety hazard. This alternative results in potential inconsistencies with Reclamation and CDPR long-range planning goals for the Auburn SRA and would be in direct conflict with direction provided by the State Attorney General's office to close the bypass tunnel. Because there would be no feasible means of mitigating or eliminating these issues under the No Action/No Project Alternative, these issues represent significant unavoidable impacts.

Proposed Project

Impact 3.12-3: Change in designation, type, or intensity of land uses at the project site.

The type of land uses at the project site (water supply utility, recreation, open space) generally would remain the same as under the existing condition and the No Action/No Project Alternative. Land use designations would not change although the intensity and activity associated with these uses would change. Operation and maintenance of the pump station would result in activity year-round, rather than seasonally. Public access and recreational use of the restored river channel also would result in increased seasonal use of the area. These changes would be compatible and consistent with existing surrounding land uses (recreation activities and rural residential) as well as with the regional characteristics. No businesses, homes, or individuals would be displaced. The anticipated increased utility-related and public activities at the site therefore represent a less than significant land use impact.

Impact 3.12-4: Conflict with local or regional planning policies, goals, or objectives.

Development of the year-round pump station would not result in a conflict or inconsistency with Reclamation policies governing land use at the project site. Reclamation and PCWA would

execute and operate under a contract governing ownership and other responsibilities for the pump station, public access, and other activities to take place within the project area (Appendix B of the Final EIS/EIR). This would be considered a less-than-significant impact.

Closure of the bypass tunnel would eliminate the potential conflict with the State Attorney General's office direction to close the tunnel. Restoration of the river channel would be consistent with Reclamation and CDPR long-range planning goals of enhancing recreation opportunities in the Auburn SRA.

Upstream Diversion Alternative

Impact 3.12-5: Change in designation, type, or intensity of land uses at the project site.

The Upstream Diversion Alternative would result in the same water supply utility-related activities as under the Proposed Project, including operational and maintenance site visits. These activities would not require a change in land use designations. No business, homes, or individuals would be displaced. These activities represent a less-than-significant change in land use type or intensity compared to the existing condition or No Action/No Project Alternative.

Impact 3.12-6: Conflict with local or regional planning policies, goals, or objectives.

Facility ownership and responsibilities would be agreed upon under contract between Reclamation and PCWA. Development of the Upstream Diversion Alternative would not permit restoration of the river channel or associated increased public use of the area. Additionally, the bypass tunnel would remain operational and would continue to pose a public safety hazard. This alternative would result in potential inconsistencies with Reclamation and CDPR long-range planning goals for the Auburn SRA and would be in direct conflict with direction provided by the State Attorney General's office that Reclamation close the bypass tunnel. Because there would be no feasible means of mitigating or eliminating these issues under the Upstream Diversion Alternative, these issues represent significant unavoidable impacts.

Cumulative Impacts

The Proposed Project and other future actions, specifically potential expansion of the pump station and future planning for increased recreational activity within the Auburn SRA, would result in a change in the intensity of water supply utility and public recreation use of the North Fork American River. These activities would not require a change in land use designation or zoning, although, certain ownership and management responsibilities between Reclamation and PCWA and Reclamation and CDPR require contractual agreement. These activities would be considered consistent with long-term planning goals of the agencies and would not result in policy conflicts. These activities would not be anticipated to result in adverse cumulative land use impacts within the study area.

Discussion of Growth-Inducement Issues Within the PCWA Service Area

Rapid growth has occurred in Placer County since the mid-1980s and growth demands have pushed the limits of PCWA's existing water supply delivery means from both the Drum-Spaulding Project and the MFP seasonal pump station. Further growth and development have been approved through local planning process (i.e., different City and County general plans).

PCWA's need for a larger pump station and the added capacity associated with it does not increase the quantity of PCWA's existing water entitlement. The proposed larger pump station facility would only enable PCWA to withdraw the quantity of water to which it is rightly entitled under the law, in accordance with its FERC license and two water rights permits granted by the SWRCB.

It is the responsibility of planning agencies to foresee future needs and try to develop land use development alternatives that will meet impending demands while being environmentally sound and beneficial to the overall needs of the community. PCWA does not possess land use regulating authority; however, it is PCWA's mandate to meet water demand within its service area. Provisions in existing state and county planning efforts running through 2030 have anticipated what future water supply demands will be under mid-range growth and build-out projections, and have established alternative water sources within the Central Valley as well as other combinations of efforts including reduction over time in the amount of MFP water supplied to SSWD.

PCWA's legal duties arise in part from the Placer County Water Agency Act, which is found in Section 81-1, et seq., of the appendices to the California Water Code. Section 81-4 of that enabling legislation gives PCWA the power "to do **any and every lawful act** necessary in order that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the agency, including, but not limited, to, irrigation, domestic, fire protection, municipal, commercial, industrial and all other beneficial uses and purposes." (Emphasis added.) Section 81-4.3 gives PCWA the authority to appropriate and acquire water and...[to] utilize...water for any purpose useful to the agency." Section 81-6 gives PCWA the authority to cooperate and contract with Reclamation with respect to the "construction of works" for "water supply" and other purposes.

PCWA also is subject to the Urban Water Management Planning Act (Water Code, Section 10610 et. seq.) as amended in 2001 in response to the Legislature's concern that California's water supply agencies might not be engaged in adequate long-term planning. That Act requires PCWA, as an "urban water supplier," to maintain an "urban water management plan" that must identify existing water supply and demand, and must identify any new water sources required to satisfy demand as projected at least 20 years into the future. The projected 20-year water supply must account for "average, single-dry, and multiple-dry water years."

In predicting 20-year water demands, PCWA, like other urban water agencies, must rely on "data from the state, regional, or local service agency population projections[.]" Thus, to the extent that Placer County and its incorporated cities (e.g., Roseville, Rocklin, Lincoln, Auburn and Loomis) anticipate large population increases in their adopted general plans, PCWA is required

to identify water sources necessary to serve such planned development, and is not in a position to refuse to comply with that legal obligation as a means of reducing the "growth-inducing" effects of obtaining new water supplies.

The PCWA Surface Water Supply Update for Western Placer County (PCWA 2001) contains an evaluation of the build-out demands under the existing general plans of the cities and the county within its present service area, based on a mid-range estimate of probable growth rates (PCWA 2001). The existing general plans permit development as indicated by the plans, without future evaluation. The Surface Water Supply Update indicates that the build-out demands that are documented in those plans extend to 2030 and require and additional 70,000 AF of water to be supplied by PCWA. These water demand projections assume PCWA's continued implementation and support for water use efficiency measures, as state on page 1-6 of the Draft EIS/EIR.

PCWA's Surface Water Supply Update report, which shows PCWA's long-term need for the construction of new diversion, treatment, transmission and distribution infrastructure facilities, from both the American and Sacramento rivers, of equal capacity to PCWA's existing water supply entitlements in order to meet the future demands of Placer County. Ultimately, the size of these facilities may be smaller in their final phases as PCWA moves forward with planned conservation and water use efficiency measures and others move forward with planned reclamation projects. However, nothing except a building moratorium in Placer County will allay the need to construction the American River Pump Station now.

It is unlikely that a precedent will be set allowing further construction of larger pump stations along the Middle Fork of the American River in the future, because this would require an increase in PCWA's overall water entitlements from a river whose water is already in high demand and highly regulated. Any future request for an increase in water rights allocations or alterations to annual use patterns from existing sources would require extensive and long-term adjudication affecting a multitude of numerous planning policies and regulatory actions. This would include new water rights permits, which would be opposed by downstream users, Reclamation, the Water Forum, and other environmental groups.

3.12.2.5 Environmental Protection and Mitigation Measures

No environmental protection or mitigation measures are proposed.

3.13 GEOLOGY AND SOILS

The Proposed Project or alternatives would have localized direct effects within the project study area. These effects are limited to facilities-related activities in the project area, including construction, operations and maintenance. The description of the affected environment and the evaluation of impacts, therefore, address only facilities-related effects within the project area.

3.13.1 AFFECTED ENVIRONMENT

3.13.1.1 Project Area Setting

The project study area for geology and soils is defined as the immediate vicinity of the pump station and river restoration project where these activities may contribute to changes in local geologic or soil resources.

Geology

The project area lies in the north-central portion of the western slope of the Sierra Nevada. Much of the western slope in this area is an even, west-sloping erosion surface dissected by youthful V-shaped canyons formed by westward and southward flowing rivers. The project site is located near the western edge of the Sierra Foothills in a wide, V-shaped canyon cut by the North Fork American River and falls within the older of two major lithologic groups termed the Foresthill melange-ophiolite belt. Bordering the east and west boundaries of this belt are a series of younger rocks considered to be island-arc volcanic and sedimentary rocks (MW et al. 1998).

The major rock type in the project area is amphibolite (or hornblende) schist. Amphibolite is produced by the change in structure of igneous rocks rich in iron and magnesium (ferromagnesian minerals). Schist is a metamorphic crystalline rock that is characterized by the presence of layers between which the rock may be broken. Hornblende, in particular, is a complex rock composed of silicate with a glassy luster found in the shades of dark green to black. Interlayered within the amphibolite are beds of metamorphosed, quartz-rich sedimentary marine rocks (shale and siltstone) and chlorite-rich interlayers, locally called chlorite schist. Also present are layers of serpentine rock composed essentially of serpentine mineral derived from the metamorphism of olivine peridotite. Associated with the serpentine rocks are chrysotile (asbestos) and talc-chlorite formed at lower temperatures by metamorphic fluids. The chrysotile and talc-chlorite zones (termed "T-zones") are typically weak rocks that are susceptible to erosion and deformation (MW et al. 1998).

Seismic Conditions

The closest known active fault mapped by the California Division of Mines and Geology (CDMG) is the Bear Mountain Fault. Two branches of the Bear Mountain Fault System pass upstream and downstream of the project area. The Pilot Hill lineament crosses the North Fork American River a short distance downstream of the project site, while the Salt Creek lineament crosses the river a short distance to the north of the dam site (MARK 1997). The Placer County

and El Dorado County general plans describe this area as "low severity for seismic events" (Placer County 1994; El Dorado County 1995).

Soils

Soil types within the study area include the Andregg series, Auburn-Sobrante-Rock outcrop complex, Riverwash, and Sierra sandy loam.

The Andregg series consists of moderately deep, well drained soils underlain by weathered granitic bedrock. This coarse sandy loam soil occurs in upland, rocky areas on 30 to 50 percent slopes (Rodgers 1980).

There are three variations of the Auburn-Sobrante-Rock outcrop complex in the project area, all characteristic of metamorphic rock foothills. The variation found on undulating to hilly rock side slopes of about 2 to 30 percent slope is about 45 percent Auburn soil, 30 percent Sobrante soil, and 12 percent metamorphic Rock outcrop. On steep rocky canyons of 50 to 70 percent slop, soil type is about 30 percent Auburn soil, 25 percent Sobrante soil, and 20 percent metamorphic rock outcrop.

The Riverwash soil type occurs in and along the North Fork American River channel. This soil consists of highly stratified stony and bouldery sand that is typically barren (Rodgers 1980).

The Sierra sandy loam soil type occurs on 15 to 30 percent slopes in the project area. This is a deep, hilly, well drained soil underlain by weathered granitic rock. The erosion hazard for this soil type is high (Rodgers 1980).

Although the Western Placer County Soil Survey identifies these soil types at the project area, extensive anthropogenic disturbances have occurred to these soil types due to past construction activities associated with the Auburn Dam. Extensive grading and blasting of canyon slopes, stockpiling of spoil materials, breaching of the cofferdam, and construction of dirt roads have resulted in many active erosion sites and deposition of materials within the American River canyon and throughout the project site.

Effects of Constructing the Auburn Dam Foundation and the Cofferdam Breach

Construction of the Auburn Dam foundation in the 1970s resulted in massive changes to the project study area. Two substantial modifications to the river canyon included installation of the bypass tunnel and construction of the earth-filled cofferdam. The bypass tunnel and cofferdam were used to dewater the dam construction zone. Additionally, canyon walls were cut and substantially modified to construct extensive foundations for the arch dam, power plant, tailrace, and service spillway stilling basin and tributary creek canyons upstream and downstream of the site were filled with large volumes of excavated bedrock (Reclamation 1996).

In 1986, several years after suspension of dam construction, a major flood overtopped and eroded away the northwest section of the cofferdam. An extremely large volume of water impounded behind the cofferdam poured through the failing section in a short period of time,

with the instantaneous flow reaching several hundred thousand cfs according to one estimation (Reclamation 1996). An immense volume of dam-derived sediment filled the canyon floor up to 23 feet deep downstream of the breach and extending thousands of feet downstream. Large quantities of finer sediment were deposited further downstream and into Folsom Reservoir. Due to the instability of the river bed and presence of cofferdam materials, each new flood event reconfigures the canyon floor and river channel (Reclamation 1996).

The aftermath of the arch dam foundation excavation and the cofferdam failure in the American River has left the area highly disturbed with rill and sheet erosion on natural and man-made slopes, landslide debris flows, an unstable river channel filled with cofferdam remnants, and sparse vegetative cover (both riparian and non-riparian). An estimated two million cubic yards of soil and rock debris from the cofferdam embankment now fills the dewatered river channel and downstream channel to depths ranging from 20 to 100 feet (Reclamation 1996).

Geologic and Soil Hazards

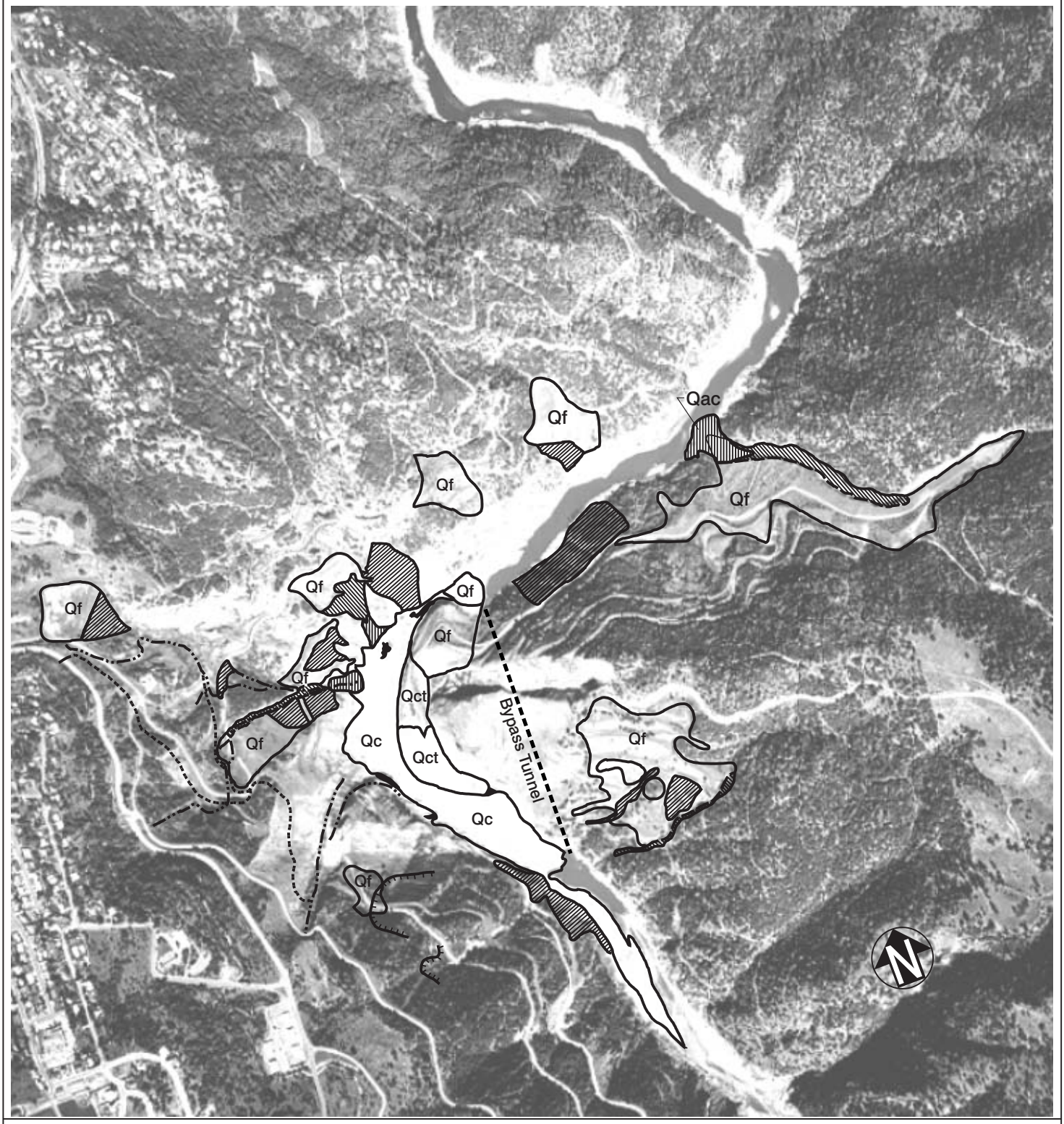
Geologic hazards generally include ground-shaking, fault rupture, liquefaction, settlement, subsidence, expansive soils, and erosion.

The river canyon slopes of the project site are characterized as steep and relatively unstable due to natural and anthropogenic factors. Mass wasting processes are responsible for fairly substantial depositions of colluvium along the base of steep slopes. Conversely, anthropogenic factors (i.e., construction of roads, construction of waste-rock embankments, spoiling of materials, blasting and grading of canyon slopes) have accelerated erosional forces along river canyon slopes. Additionally, saturated spoil materials and runoff from dirt roads have resulted in slope failures and surface erosion throughout the project site. Geologic and soil hazards in order of increasing severity, include sheet erosion, rill erosion, gully erosion, and landslides (MW et al. 1998).

Active Erosion Areas

Active erosion areas on the canyon walls in the pump station facility project area include steep natural slopes, manmade valley-fill embankments, and the north abutment (i.e., cut-slope) for the cofferdam. These active erosion sites are shown on **Figure 3.13-1** and described below. The Oregon Bar vicinity was not mapped during the preliminary geotechnical investigations, however, detailed geotechnical mapping would be conducted as part of final design efforts. This mapping and investigation would be performed for the entire study area of the selected alternative to obtain site-specific information. The information would be used to determine the final location and design parameters for each of the project features.

Sheet erosion and rill erosion occur on many slopes in the project study area. Two areas of active sheet and rill erosion exist upstream of the bypass tunnel; one a few hundred feet northwest of Tamaroo Bar and one beginning about 350 feet northeast of the bypass tunnel inlet, as shown in Figure 3.13-1. Two valley-fill embankments at the bend in the dewatered river channel have undergone sheet and rill erosion, due largely to the 1986 cofferdam failure which undercut the embankment toes. The north abutment (i.e., cut-slope) for the cofferdam, located



LEGEND

Scale: 1" = approximately 1,500'

- Qls — Landslide
- Qf — Valley-fill embankment
- Qc — Debris from cofferdam failure
- Qct — Remnant or debris from cofferdam failure (terrace)
- Qac — Alluvial cone deposit
- Sheet and rill erosion
- Gully erosion
- Gravitational rock creep
- Existing drainage
- Proposed runoff diversion
- Ponded water

Source: MWE 1998a

Figure 3.13-1 Project Study Area Geology

northwest and across the canyon from the cofferdam remnant, also was undercut by the failure of the cofferdam in 1986, resulting in significant upslope failure above the crest elevation of the former cofferdam (MW et al. 1998).

Several sites with gully erosion exist within the project area. The most significant gully erosion site is on the north side of the Salt Creek boat ramp embankment. A large debris flow of eroded embankment materials has accumulated as an alluvial cone at the toe of the embankment and has restricted the flow of the American River upstream from the bypass tunnel inlet. Field review and aerial photographic examination of the embankment area indicate the gully and cone deposit may be unstable and susceptible to continued excessive erosion (MW et al. 1998).

The second-most significant gully erosion has occurred on a valley-fill embankment located on the west side and just upstream of the bend in the dewatered river channel and immediately south of the Auburn Ravine Tunnel portal. A large alluvial cone deposit on the canyon floor resulted from the gully erosion. Severe sheet and rill erosion of topsoil also has occurred on the lower half of this embankment. The severe gully, rill, and sheet erosion were probably caused most directly by heavy rainfall run-off. This gully and cone deposit may be unstable and susceptible to continued excessive erosion.

Access roads to the seasonal pump station facilities cross erosion-prone areas. Each year, portions of the roadways erode and have to be re-built at the start of the season when the pumps are re-installed.

Active Landslide Sites

Active landslides within the project study area occur upstream from the proposed construction area. Three active canyon wall landslides and associated alluvial cone deposits exist at Tamaroo Bar and two smaller landslides are just upstream from Tamaroo Bar. The landslide and alluvial-cone deposit at Tamaroo Bar is the largest natural erosion and debris site within the project study area. The cone deposit has encroached onto the American River channel and restricts the streamflow during base flow or low flow conditions. Continued debris and cone deposition at Tamaroo Bar could result in the formation of a natural dam or contribute to turbid streamflow from this point downstream (MW et al. 1998).

3.13.1.2 Applicable Laws, Ordinances, Regulations, and Standards

Geology and soils resources are governed by the U.S. Geological Survey, California Department of Mines, and the U.S. Department of Agriculture, Soil Conservation Service.

3.13.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.13.2.1 Methodology

PCWA and Reclamation commissioned geotechnical studies to evaluate the potential geology and soils impacts of constructing the Proposed Project. These studies include geotechnical site surveys conducted by The MARK Group (MARK 1997) and a diversion and channel

stabilization design study prepared by McLaughlin Water Engineers, Ltd. (MW et al. 1998). The purposes of these reports were: (1) to assess the feasibility of constructing the Proposed Project features in consideration of potential soils- and geology-related site limitations; and (2) to recommend appropriate construction methods to overcome any limitations in order to ensure the safety and long-term reliability of the improvements. These studies and the Placer County and El Dorado County general plans were examined to identify local geology and soil conditions or limitations that may be affected by or affect construction of the Proposed Project or alternatives.

3.13.2.2 Impact Indicators and Significance Criteria

There are no formal, specific regulations for evaluating the impacts of geology and soils. The impact indicators and significance criteria developed for this analysis and presented in **Table 3.13-1** are therefore based on the CEQA Guidelines Environmental Checklist Form and the Guidelines for Geologic/Seismic Considerations in Environmental Impact Reports (CDMG 1982).

Table 3.13-1
Geology and Soils Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Amount of change in slope stability/geologic substructure.	❑ Substantially increase or exacerbate unstable earth conditions, including unstable slopes, or substantial changes in geologic substructures, relative to the basis of comparison, that could affect human safety.
❑ The number of people and facilities in the project area directly exposed to geologic hazards.	❑ Increase the exposure of people or property to major geologic hazards, including unstable slopes, ground failure, liquefaction, lateral spreading, or seismic-induced hazards, relative to the basis of comparison, that could affect human safety or structures..

3.13.2.3 Impact Analysis

This section presents the analysis of potential facilities-related geology and soils impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.13-1: Substantial change in slope stability or geologic substructures due to construction, operation, or maintenance of the seasonal pump station.

The extended diversion season anticipated under the No Action/No Project Alternative would not result in a substantial change in the construction, operation, or maintenance activities that affect geologic or soils resource conditions in the project area (Reclamation 2000). Reclamation would

continue annual installation construction activities including sump pond dredging and access road routing and stabilization. These activities would not disturb surface soils or subsurface geologic structures any more than under current conditions. Therefore, the No Action/No Project Alternative would have a less-than-significant effect upon geologic and soils resources.

Impact 3.13-2: Increased exposure of people or property to major geologic hazards due to construction, operation, or maintenance of the seasonal pump station.

The No Action/No Project Alternative would not be expected to result in the increased exposure of people or property to major geologic hazards. Under this alternative, public use of the river would remain restricted to horseback riding, hiking, and biking on selected trails. No additional public use of the area would be permitted.

In the case of a nearby substantial seismic event (i.e., 5.0 or greater on the Richter scale), settlement of soils such as alluvium, artificial fill, and dredge spoil piles could occur within the project area. In such an event, earth movement may result in some damage to the pump station, intake transmission pipeline, or roadways. However, this alternative would not result in an increased risk of human harm or property damage compared to existing conditions. Therefore, potential impacts would be considered less than significant.

Proposed Project

Impact 3.13-3: Change in slope stability or geologic substructures due to construction, operation, or maintenance of the Proposed Project.

Construction activities for the Proposed Project will require extensive site grading, excavation, and blasting to restore the river channel and to level land (bedrock) for the Proposed Project structures. These activities, although occurring on lands already substantially disturbed by Auburn Dam construction and cofferdam failure, will modify existing ground surfaces and potentially result in the creation of additional areas of slope instability and increased erosion potential.

In all areas where project features will be developed, the canyon slopes will be stabilized to the extent necessary to ensure secure placement of and access to project facilities. The stability of project area slopes will be considered during the final design and determination of facility placement. Slopes supporting project facilities will be engineered and constructed to meet federal, state, and local design considerations, including surface and subsurface drainage considerations. The final design and appropriate site-specific construction methods will be documented in a Final Geotechnical Investigation. Additionally, a geotechnical engineer will be retained to monitor earthwork activities and ensure that recommended site-specific construction methods are implemented.

Cofferdam debris to be removed from the historic river channel as part of restoration would be used to fill holes and build riverbank benches. Although resulting in further modification of existing site conditions, these changes are considered beneficial aspects of the project design.

Overall, changes to existing soil and geologic resource structures in the project area would be considered less than significant, and potentially beneficial.

Impact 3.13-4: Increased exposure of people or property to major geologic hazards.

When necessary, the project area would be closed to all public access during construction, thereby minimizing potential exposure of the general public to unstable slope conditions or other geologic hazards that may temporarily exist during construction. See Public Health and Worker Safety (Section 3.17) for further discussion of worker safety considerations.

Project facilities would be designed in accordance with Uniform Building Codes (UBC), where applicable, including seismic considerations, to minimize the potential for damage or human injury in the event of an earthquake.

Restoration of the river channel would result in increased public passage through the project area, potentially increasing the exposure of the public to existing geologic hazards. However, all areas disturbed during construction would be compacted and stabilized, either mechanically (i.e., engineered slopes) and/or through planting of erosion-control groundcover, prior to opening the area for public use. Public use of the restored river channel and local access sites potentially would result in increased public exposure to the erosion and landslide areas upstream of the immediate project site (i.e., Salt Creek, Tamaroo Bar and further upstream). Additionally, development of a parking area at the Auburn Dam batch plant site would result in increased exposure of recreationists to the disturbed slope immediately south of the site. The potential for impacts to recreationists in these areas would be minimized by placement of warning signs indicating the nature of the hazard and directing hikers and others using the area to remain on designated trails. The hiking trail that will extend from the parking flat down to the Oregon Bar turnaround shall be designed and constructed consistent with state standards. These precautions are considered feasible means of reducing this impact to less than significant.

Upstream Diversion Alternative

Impact 3.13-5: Change in slope stability or geologic substructures due to construction, operation or maintenance.

The Upstream Diversion Alternative does not include restoration of the river channel, and therefore, results in substantially less ground-disturbing activity. As with the Proposed Project (see Impact 3.13-3), site development would be in accordance with appropriate federal, state, and local regulations, and include measures to stabilize slopes to protect project facilities and public safety. The geology and soils impact would be less than significant.

Impact 3.13-6: Increased exposure of people or property to major geologic hazards.

Under the Upstream Diversion Alternative, no increase in public passage through the site is anticipated. The project would be designed to meet all applicable seismic codes to minimize potential for increased damage or exposure to earthquake-related hazards. This impact is therefore considered less than significant.

Cumulative Facilities-Related Impacts

Impact 3.13-7: Change in slope stability or geologic substructures.

Other reasonably foreseeable actions, including the near-term improvements to the Foresthill Bridge and the longer-term potential for expansion of the pump station facilities potentially would change slope stability of the North Fork American River canyon. These projects would require site-specific evaluation of geologic conditions (geotechnical reports) relative to the proposed activity and would be required to implement stabilization measures. Because the Proposed Project and Upstream Diversion Alternative construction plans would implement measures to mitigate site-specific impacts, and other local projects would contain and mitigate for geology and soils impacts onsite, cumulative effects would not be significant and the effects of the Proposed Project or Upstream Diversion Alternative would not be cumulatively considerable.

Impact 3.13-8: Increased exposure of people or property to major geologic hazards.

As described under Impact 3.13-7, mitigation of geology and soils impacts would occur on a project-specific basis to ensure stabilization of individual site conditions. Future projects within the American River canyon also would have to consider the potential for the action to result in increased public exposure to such hazards. Because other projects would have to account for such impacts and provide site-specific mitigation through evaluation and coordination with resource agencies, and because the Proposed Project and Upstream Diversion Alternative incorporate environmental protection measures to mitigate for this impact, the proposed alternatives would not result in a considerable contribution to the cumulative condition.

3.13.2.4 Environmental Protection and Mitigation Measures

The No Action/No Project Alternative would not be expected to result in significant geology and soils impacts.

The environmental protection and mitigation measures recommended in the Draft EIS/EIR were incorporated into the Public Health and Worker Safety mitigation elements in this Final EIS/EIR (see Section 3.17) as the slope stability issues addressed were determined to relate to public and worker safety.

3.14 TRANSPORTATION AND CIRCULATION

The Proposed Project or alternatives would have localized direct effects within the project study area. These effects are limited to facilities-related activities in the project area, including construction, operations and maintenance. The description of the affected environment and the evaluation of impacts, therefore, address only facilities-related effects within the project area.

3.14.1 AFFECTED ENVIRONMENT

3.14.1.1 Project Area Setting

The Proposed Project or alternatives would have direct effects on the local road network that provides access to the project site. The project study area for the evaluation of transportation issues includes the primary and secondary access roads to the project site.

The primary freeway through the City of Auburn is Interstate 80, which provides access southwest toward Sacramento and northeast toward Reno. Interstate 80 is located between two and three miles northwest of the project site. Highway 49, another major roadway close to the project site, connects Auburn to Placerville and crosses the American River approximately four miles upstream of the project area.

Local access to the project site is through the City of Auburn. Auburn-Folsom Road is a major arterial in the Auburn area and provides access from Interstate 80 and Highway 49 to Maidu Drive and Pacific Avenue. Auburn-Folsom Road provides access from residential areas to the downtown commercial and business district of the City of Auburn. Maidu Drive and Pacific Avenue are local collector streets providing access to local residential area roads as well as to the unimproved access routes to the project site. These roads are shown on **Figure 3.14-1**.

The City of Auburn recently estimated average daily traffic volumes on certain city roadways. Counts on Auburn-Folsom Road north of Maidu Drive measured approximately 11,520 vehicles per day. This roadway was determined to operate at a level of service (LOS) B (generally free to maneuver and select speed). Traffic measurements at the unsignalized intersection of Auburn-Folsom Road and Maidu Road were approximately 9,908 vehicles per day and indicate an LOS A (free to maneuver and select speed) (R. Coke, pers. comm. 2001).

Since preparation of the Draft EIS/EIR, Maidu Drive daily traffic volume and peak hour traffic through key intersections was compiled from data available from the City of Auburn (December 2001/January 2002). Daily traffic volume counts provided by the City of Auburn indicate that Maidu Drive carries about 457 vehicles per day in the area between Burlin Way and Falcons Point Drive and 297 vehicles per day east of Falcons Point. The volume rises to 3,098 near the Shirland Tract Road/Maidu Drive intersection. New traffic counts were made at the Maidu Drive/Burlin Way intersection (February 2002). These counts indicate that the highest traffic volume occurs during the morning peak hour when 641 vehicles passed through the intersection (i.e., between 7:15 a.m. and 8:15 a.m.). These volumes include travel to and from the Skyridge

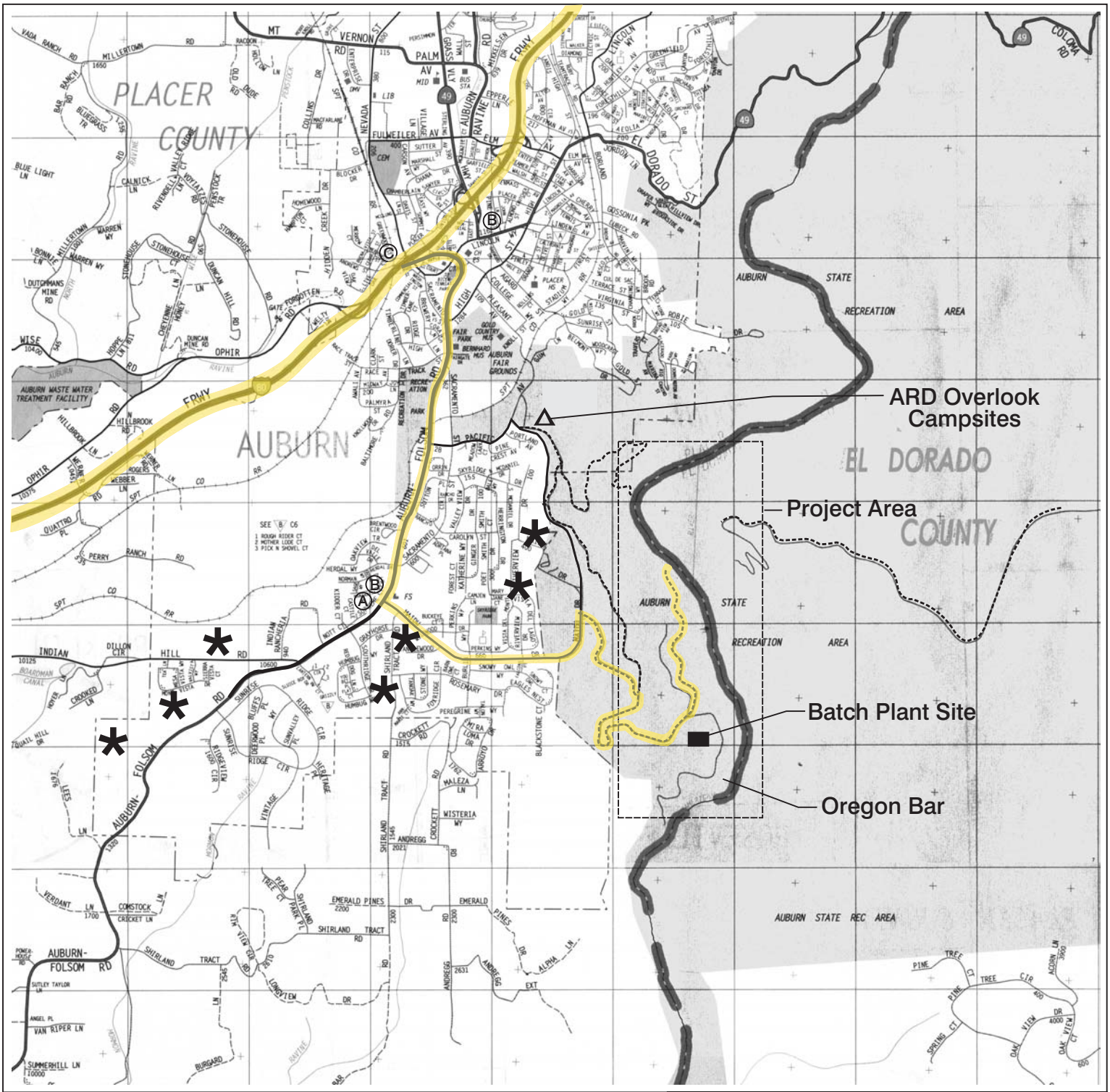


Figure 3.14-1 Access Roads to Project Site

Elementary School, located on Perkins Road, approximately one-tenth of a mile from the Maidu Drive/Burlin Way intersection. Unpublished traffic counts for Pacific Avenue were reported at 900 ADT.

Existing Seasonal Pump Station

Under existing conditions, up to 15 workers (30 trips) travel to the pump station site for seasonal installation and removal activities. These workers generally travel along Interstate 80, Highway 49, Auburn-Folsom Road, and use either the Maidu Drive or Pacific Avenue entrances. This travel results in 30 daily trips during the two to four weeks of construction. Operation of the seasonal pump station requires one daily site visit (two trips), using the same roads.

Level of Service Analysis

The quality of traffic flow and its relationship to adopted standards is evaluated based on level of service. LOS is a qualitative measure of traffic operations whereby a letter grade, A through F, is assigned to a roadway segment or intersection. LOS A is indicative of good traffic flow with little or no delay, while LOS F is indicative of "at-capacity" conditions with significant congestion and delay. The City of Auburn has established LOS D as the minimum acceptable LOS beyond which mitigation measures would be warranted to reduce the level of a project's impact upon LOS. The analysis of the Proposed Project determined LOS using the procedures of the 2000 Highway Capacity Manual.

The existing levels of service at the Maidu Drive/Burlin Way intersection for the peak travel hours (morning, afternoon and evening) and peak 15-minute intervals are shown in **Table 3.14-1**.

Table 3.14-1
Existing Condition Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer) - Overall Hour	14.8	B	10.0	B	7.6	A
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.

As indicated by these results, the greatest delay occurs during the morning peak hour reflecting commuter and school-related travel. Overall, LOS B is maintained, although LOS drops to C during the peak 15-minute period when school arrivals occur (7:15 a.m. to 8:00 a.m.). Afternoon and evening hours are rated LOS B and LOS A, respectively, with the delay being several seconds less than in the morning peak hour.

3.14.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.14.2.1 Methodology

Circulation is described in terms of peak hour LOS. The LOS designation indicates specific driving conditions ranging from LOS A (free to maneuver and select speed), the most optimal driving condition, to LOS F (roads and intersections operating below capacity), the least optimal driving condition. Driving conditions influencing LOS designations include speed, traffic interruptions, ease of traffic flow, freedom to maneuver, driver safety, and travel times.

Construction of the Proposed Project or Upstream Diversion Alternative would increase traffic trips on local area roadways. A "trip" is defined as traveling one-way to or from the project site, with the origination and destination points for each trip located outside the City of Auburn. For example, one trip would be defined as traveling from Interstate 80 to the project site. A separate trip would be from the project site to Interstate 80.

Methods used to assess impact significance included review and application of relevant laws, ordinances, regulations, and standards, as well as identification of anticipated traffic increases due to implementation of the alternatives. The existing average daily traffic volumes on City of Auburn and regional roadways were compared to anticipated average daily traffic volumes during construction and operation of the alternatives. Anticipated daily traffic was determined based on the number of workers and deliveries expected at the site. This methodology provides a quantitative measure of the potential traffic impacts and is considered to represent a conservative, or "worst-case" analysis as the traffic estimates used represent peak construction or operations activity levels, rather than average. The projected changes in traffic levels were reviewed for the alternatives to determine if the resulting traffic levels would violate City of Auburn LOS standards.

Additionally, a supplemental traffic study was performed to assess potential construction and project operation traffic effects upon the Maidu Drive/Burlin Way intersection. The study focused on obtaining updated average daily traffic counts, performed an evaluation of LOS for existing, project and cumulative conditions, and assessed the potential requirement to provide additional traffic control measures as part of the Proposed Project or Upstream Diversion Alternative, including assessment of pedestrian activity at the Maidu Drive/Burlin Way intersection. Pedestrian counts were made and compared to the California Department of Transportation (CALTRANS) Traffic Manual standards to determine the need for school pedestrian crossing improvements. The findings of this study have been incorporated into the impact analysis discussions.

The supplemental Traffic Study collected additional traffic data by monitoring morning, afternoon and evening peak hour travel along Maidu Drive, with an emphasis on the Maidu Drive/Burlin Way intersection. The study found that the morning peak hour (i.e., between 7:15 a.m. and 8:15 a.m.) has the highest traffic count, with a total of 641 vehicles passing through the Maidu Drive/Burlin Way intersection. Using this data, in combination with the City of Auburn traffic counts, the Traffic Study evaluated existing LOS conditions and determined the potential impacts upon traffic congestion (LOS) and pedestrian safety associated with construction and

operation of the Proposed Project. Additionally, the Traffic Study evaluated future cumulative conditions based on build-out of planned development projects in the Maidu Drive area.

To evaluate the potential impacts of the Proposed Project upon the Maidu Drive/Burlin Way LOS, anticipated levels of construction and operations traffic were added to the existing condition. The study focuses on the critical time periods when LOS is influenced by commuter and school-related travel (morning, afternoon, and evening peak hours). These conditions occur on weekdays during the school year. Weekend and summer travel on Maidu Drive would be expected to be less than during these critical "peak hour" timeframes, therefore, specific evaluation of weekend or summer days was not considered necessary. The evaluation of Proposed Project impacts, therefore, can be considered to represent the peak or "worst-case" conditions that could be encountered. Overall, traffic levels would be less than indicated by the evaluation because (1) construction-related travel would not occur during peak commuter or school-related travel periods; and (2) peak public river access travel generally would occur on weekends and during summer months, when school is not in session.

3.14.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Roadways adjacent to the project area are maintained and regulated by the City of Auburn and CALTRANS. The City of Auburn manages transportation routes within the city limits, including Maidu Drive, Pacific Avenue, and Auburn-Folsom Road. As stated in its General Plan, the City of Auburn has a policy to maintain a minimum peak hour LOS D (substantially restricted ability to maneuver and select speed; queues at intersections) at all city-maintained roadways and intersections. Highway 49 and Interstate 80, while within the City of Auburn, are maintained by CALTRANS. Roadways within the project site (beyond Maidu Drive and Pacific Avenue) are closed for public use. These roads are maintained by Reclamation as needed to provide access to the seasonal pump station facilities. Under the Proposed Project, future roadway maintenance and public use would be managed and regulated by PCWA and CDPR.

3.14.2.3 Impact Indicators and Significance Criteria

Table 3.14-2 lists the impact indicators and significance criteria used in the transportation and circulation analysis.

Table 3.14-2
Transportation and Circulation Impact Indicators and Significance Criteria

Impact Indicator	Significance Criteria
❑ Average daily traffic volumes.	❑ A substantial increase in average daily traffic volumes such that road capacity becomes adversely affected.
❑ Roadway levels of service.	❑ A decrease in the roadway operating level to below LOS D within the City of Auburn, as determined in relation to the existing traffic load and capacity of the street system.
❑ Conflict with existing/local drivers.	❑ An increase in traffic such that driver conflicts posing safety hazards may occur more frequently relative to the basis of comparison.

3.14.2.4 Impact Analysis

This section presents the analysis of potential facilities-related transportation and circulation impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.14-1: Increase in traffic levels on Interstate 80, Highway 49, Auburn-Folsom Road, Pacific Avenue, and Maidu Drive due to construction and operation of the No Action/No Project Alternative.

The No Action/Project Alternative would not change the number of project-related trips made to the site or within the study area. Therefore, impacts to transportation or circulation from construction and operation of this alternative would be less than significant.

Proposed Project and Upstream Diversion Alternative (Action Alternatives)

Although fewer pieces of heavy construction equipment would be used under the Upstream Diversion Alternative (refer to Table 2-5), the type and duration of impacts generated by construction and operation trips generally would be the same for the Proposed Project and Upstream Diversion Alternative (referred to as the Action Alternatives), therefore, these issues are discussed together. It is assumed that either alternative would involve a maximum of 50 workers at the site during peak construction activity.

Impact 3.14-2: Increase in traffic levels on Interstate 80, Highway 49, Auburn-Folsom Road, Pacific Avenue, and Maidu Drive due to construction and operation of a year-round pump station facility.

Construction

Traffic levels on Interstate 80, Highway 49, and Auburn-Folsom Road, would increase due to construction-related transport of personnel, equipment, and materials to the project site. On average, there would be 30 to 35 construction workers in the project area daily with up to 50 workers at the site during peak construction. These workers would generate a maximum of up to 100 daily trips. Additionally, there would be a maximum of 23 supply deliveries to the project site during peak activity, resulting in 46 trips. Using the combined peak trip estimate of 146 trips, the Action Alternatives would generate up to an additional 116 trips per day over existing conditions. This represents a 1.4 percent increase on Auburn-Folsom road near Maidu Drive, a 0.9 percent increase on Highway 49, and a 0.2 increase on Interstate 80. The increase in traffic volumes would not be expected to change the LOS of these roadways or impair roadway capacity relative to the existing condition and represents a less-than-significant impact.

Reclamation built Maidu Drive in the early 1960s to serve as a construction haul and access route for the Auburn Dam Project. As such, Maidu Drive was built to accommodate heavy loads and high capacity. Within the City of Auburn, Maid Drive serves as a collector road that connects to and receives traffic from neighborhood streets within the subdivisions along Maidu Drive. Maidu Drive is configured with one lane of traffic in each direction; each lane is 12-1/2 feet wide. The roadway shoulders are five feet wide; no parking is permitted along the shoulder. By comparison, other newer two-lane neighborhood streets typically have nine-foot wide lanes with eight-foot wide shoulders to accommodate streetside parking that commonly occurs in front of residences. Such roads also typically have curbs, gutters and sidewalks. There are no homes fronting to Maidu Drive along the segment from the Auburn-Folsom Road intersection with Maidu Drive to the Proposed Project entrance area.

Although the project is not expected to result in a substantial increase in traffic volume or roadway capacity, construction trips could potentially conflict with residential and commercial vehicular, bus, or bicycle traffic along Auburn-Folsom Boulevard or Maidu Drive, potentially posing safety hazards.

Proposed Project Construction Traffic

On average, construction of the Proposed Project would result in 30 to 35 construction workers at the project site daily, with up to 50 construction workers on site during peak construction. Using the peak condition, up to 100 daily trips would result from travel by these workers. Additionally, there would be a maximum of 23 daily supply deliveries to the site during peak construction, resulting in up to 46 additional trips to the site. Combined, the sum of construction worker and delivery trips could total up to 146 new trips per day, during peak construction. This represents up to 116 more trips than under the existing condition (30 daily trips are made during the two to four-week installation and removal activities for the seasonal pump station each year). On average, the total number of daily trips associated with Proposed Project construction and the increase relative to existing conditions would be less. These impacts all would be of relatively short-term duration, and would no longer occur after construction activities are completed.

While Maidu Drive itself has the capacity to accommodate this construction-related traffic volume increase, the local impact to the Maidu Drive/Burlin Way intersection will be linked to the actual hours of travel to and from the project site. Trips generated during the peak 15 minutes before school begins have the potential to increase delays and contribute to the perception of safety problems.

Hours of certain construction activities for the Proposed Project could extend from 7:00 a.m. to 6:00 p.m. (based on noise-level restrictions). Assuming these hours represent the typical construction work day, construction contractor personnel work trips would be outside of the peak a.m. and p.m. travel periods.

The Traffic Study evaluated two construction trip scenarios: (1) all construction personnel arrive and pass through the Maidu Drive/Burlin Way intersection within the morning peak hour, with one-quarter of these trips occurring during the critical 15 minutes before school; and (2) a worst-case representation where all construction arrival trips pass through the Maidu Drive/Burlin Way

intersection within the critical 15 minutes before school. Both analysis scenarios also assumed that deliveries of project construction supplies would be spread uniformly throughout the construction day, with four to eight trips occurring during any one hour. The distribution of peak construction-related trips is presented in **Table 3.14-3**.

Table 3.14-3
Project Construction Trip Generation Assumptions

	Time Period						
		a.m. Peak Hour		Afternoon		p.m. Peak Hour	
	Daily [a]	In	Out	In	Out	In	Out
Anticipated Construction Trips	146	54	4	4	4	4	54

[a] Number of trips represents peak construction activity; on average, the total number of daily trips would be less than evaluated.

The results of the LOS evaluations for the critical 15 minutes before school for these two scenarios are shown in **Table 3.14-4**.

Table 3.14-4
Proposed Project - Construction Traffic LOS Evaluation

	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
Maidu Drive Condition	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.
Existing (Non-summer) Plus Proposed Project Construction Traffic	32.9	D	11.3	B	7.9	A
Existing (Non-summer) Plus "Worst Case" Proposed Project Construction Traffic [b]	92.0	F	n.a.	n.a.	8.9	A

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] "Worst Case" would include all overlapping traffic including peak river access use in combination with commuter and school-related traffic.

Under the first scenario, the addition of up to one-quarter of the construction trips during the critical 15 minutes before school begins could result in an additional delay of 11.4 seconds and a reduction of LOS from C to D. Based on application of the City of Auburn LOS standard, this change in LOS would not be considered a significant impact, and would not warrant implementation of mitigation measures. The "worst-case," or second scenario, where all construction trips arrive and pass through the Maidu Drive/Burlin Way intersection during the critical 15 minutes before school, would result in significant traffic impacts. The average delay would increase by up to 70.5 seconds (compared to existing condition) and result in LOS F conditions. This change from the existing condition would represent a significant impact requiring mitigation. The results show that afternoon or evening Proposed Project construction-related trips would not affect existing LOS ratings.

The Proposed Project construction-related travel conditions would result in lesser impacts than either of the two scenarios represented for the following reasons: (1) the majority of the construction contractor personnel would arrive at the project site prior to the 7:00 a.m. start of

the work day; and (2) on average, only 30 to 35 construction personnel would travel to the project site, not 50. Additionally, Reclamation will require the construction contractor to limit employee trips and supply deliveries along Maidu Drive during the morning hours before school. Reclamation will require the construction contractor to prepare a Construction Traffic Management Plan including the following element:

Require construction personnel and supply deliveries to limit use of Maidu Drive during the peak school-related travel times, including: morning school drop-off (approximately 7:15 a.m. to 8:15 a.m.) and afternoon school pick-up (2:30 p.m. to 3:30 p.m.) throughout the school year.

Overall, the Proposed Project construction-related traffic would not result in significant impacts upon Maidu Drive traffic conditions.

Proposed Project Operation and Public River Access Traffic

As reported in the Draft EIS/EIR, PCWA anticipates that operations and maintenance personnel will make up to four visits (eight trips) to the project site each day. In addition to these trips, it is estimated that use of the public river access areas would generate up to 206 trips to the project area on a peak day. Combined, the total number of Proposed Project trips would be 214. This estimate is revised from the Draft EIS/EIR assumption of 210 trips based on the reduction in number of spaces at the riverside parking area, described earlier, and on the use of a higher rate of turnover at the 50-car parking lot (2 cars per space on a peak day based on anticipated hours of operation). The trip generation assumptions are shown in **Table 3.14-5.**

Table 3.14-5
Project Operation Trip Generation Assumptions

Condition	Time Period						
	Daily	a.m. Peak Hour		Afternoon		p.m. Peak Hour	
		In	Out	In	Out	In	Out
Anticipated Project Operation Trips	218 [a]	12	12	12	12	12	12

[a] The Traffic Study was completed before the lead agencies revised project trip counts, therefore, the assumption was 218 trips; based on the revised count of 214, however, the evaluation of 218 trips remains conservative.

Peak use of the river access features is anticipated to occur infrequently, typically on weekends or holidays during summer months. Additionally, based on the anticipated hours when vehicular access to the project site would be permitted, river access-related travel would not coincide with peak morning hour commuter and school-related trips. The Traffic Study evaluation of Proposed Project impacts on traffic and LOS at the Maidu Drive/Burlin Way intersection therefore also may be considered a "worst-case" assessment because it assumes up to 24 trips would occur during the peak 15 minutes before school during the morning peak hour. The results of the LOS evaluation are shown in **Table 3.14-6**.

Table 3.14-6
Proposed Project Operations Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.
Existing Plus Project Operations and Public River Access Traffic [b]	25.5	D	11.1	B	7.9	A

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] Public river access traffic projected during periods of peak use under the maximum use conditions.

As indicated by the analysis, even if Proposed Project operation and river access trips were to occur during the morning peak 15 minutes before school, the change in average delay and LOS would represent a less-than-significant impact, according to City of Auburn standards. No mitigation would be required. The afternoon and evening peak hour delay and LOS conditions would not be adversely affected. Further, if the 24 trips assumed to occur in the morning peak hour were shifted to the afternoon and evening peak hours, the LOS likely would not change. Even if it did, however, it would not drop below the City's standard of LOS D and would not require mitigation. Overall, the Proposed Project traffic impacts would be less than represented by these results because (1) typical use of the river access area would generate less traffic than assumed for peak holiday and summer weekend use; (2) peak use periods would not coincide with commuter and school-related trips; and (3) river access trips would not occur during the morning peak hour. Additionally, the lead agencies will pay a traffic mitigation fee to the City of Auburn, as required for other development projects that generate additional traffic on City streets.

Spillover Traffic Onto Adjoining Neighborhood Streets

There would be potential for an increase in traffic on neighborhood side streets such as Riverview Drive, Falcons Point, Sacramento Street, and Snowy Owl Way as a result of the increased traffic associated with public access to the area.

The addition of these trips to these roads, which currently have low traffic volumes, would not be considered a significant impact. Additionally, due to the distance from the river and proposed parking areas, it is highly unlikely that river users would choose to park their vehicles along these roads and walk the distance (over one-half mile and steep terrain) to the public river use areas.

Skyridge Elementary School

Skyridge Elementary School is located on Perkins Way, approximately one-tenth of a mile from Maidu Drive/Burlin Way. The entrance to the school site is directly off of Perkins Way. The school campus is setback approximately 300 feet from the roadway and enclosed behind a 6-foot high wooden fence. The school buildings and playground areas are not easily viewed from Perkins Way. The driveway to the school immediately enters the parking area and bus loading/unloading lanes. The buildings are set further back on the property and face the parking area. It is school policy that all visitors to the campus check-in at the front office and obtain a

badge to be kept visible while on school premises. Visitors are to check-out and return the badge as they leave the site.

The school year is traditional, with classes in session from late August through mid-June and a four-week summer session that generally runs from mid-June to mid-July. Student enrollment in February 2002 was about 623 students. Students are typically on campus and in class Monday through Friday between 8:00 a.m. and 2:15 p.m. School buses drop-off students at 7:30 a.m. and pick-up students at 2:30 p.m. An adult supervisor and three students provide safety patrol duties at the school entrance for 1/2-hour in the morning before school and 1/2-hour in the afternoon as school is let-out. This service is only provided during the regular school year and not during summer school.

Traffic conditions at the Maidu Drive/Burlin Way intersection during morning peak hours as children are driven to school and people leave their homes to go to work potentially could affect pedestrians. Currently, Skyridge Elementary School does not retain paid or volunteer crossing guards at any intersection in the vicinity of the school. As part of the study conducted for the project, traffic engineers evaluated the extent to which current pedestrian activity at the Maidu Drive/Burlin Way intersection warrants school pedestrian crossing improvements according to CALTRANS Traffic Manual, Chapter 10 guidelines. On-site pedestrian counts were taken during morning school arrival and afternoon school departure hours. These counts indicated approximately 15 pedestrians using the intersection and crossing Maidu Drive in the morning and 10 pedestrians in the afternoon. The CALTRANS Traffic Manual identifies traffic control strategies (i.e., traffic signals, crossing guards, etc.) and provides recommendations for minimum pedestrian and vehicular volumes that would justify each action. In this case, the observed pedestrian volumes are below the minimum thresholds determined to warrant actions such as adult crossing guards (30 pedestrians), warning beacons (40 pedestrians), or traffic signals (70 pedestrians).

Overall, given the relatively secluded location of the school and the limited access, it is unlikely that recreation users traveling along Maidu Drive would notice the presence of the school. Additionally, there are no signs posted near the intersection of Maidu Drive and Burlin Way that indicate the location of the school.

Daily school hours and operations do not coincide with anticipated periods of peak use of the river access facilities. During the week, most river users would access the recreation facilities in the late afternoon or evening and would not interfere with school ingress and egress times. As stated previously, it is expected that peak use of the river access facilities would occur on weekends and holidays during the summer months when the school is not in operation or only open in a limited capacity. The Upstream Diversion Alternative would not result in increased public river access traffic. The impact would also be less than significant.

Cumulative Impacts

Near-term and future residential development in the study area would increase the volume of traffic on Maidu Drive and through the Maidu Drive/Burlin Way intersection. Future cumulative

background traffic volumes at the study intersection were developed based on a list of approved/pending projects identified by the City of Auburn.

The City is currently considering the Canyon Rim Estates Subdivision Project in the area south of Maidu Drive. This 23-unit project would have access via Burlin Way and would generate about 17 a.m. and 23 p.m. peak hour trips. The traffic study prepared for the Canyon Rim Project identified other in-fill development that would occur at Shirland Tract Road. Some of the trips generated by that development would use the Maidu Drive/Burlin Way intersection to reach Skyridge Elementary School.

The cumulative level of service analysis assumes completion of the Proposed Project and peak use of the public river access facilities plus development of residential subdivisions in the Maidu/Skyridge area. This evaluation represents a "worst case" cumulative condition because it assumes concurrent use of the intersection by commuters, parents with elementary school students and recreationists. However, the public river access facilities are unlikely to be fully utilized except during the summer or on weekends, generally outside of peak commuter or school travel hours. Therefore, for this condition, the actual future roadway LOS impact would be less than represented by this evaluation. The results of the cumulative LOS analysis are shown in **Table 3.14-7**.

Table 3.14-7
Cumulative Condition Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B		
Cumulative Background Conditions	39.0	E	11.7	B	7.7	A
Cumulative Plus Proposed Project Traffic [b]	42.7	E	12.3	B	8.0	A
Cumulative Plus Proposed Project Traffic - Overall Hour [b]	18.4	C	n.a		n.a.	n.a.

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] "Worst Case" assumes all traffic trips occur concurrently including peak river access use and project operations trips in combination with commuter and school-related traffic arising from the future proposed subdivisions.

Cumulative conditions without the Proposed Project would result in increased delay and lower LOS ratings during the morning peak 15 minutes before school. LOS potentially would drop to a rating of E with an increase in average delay of 17.5 seconds. Future development projects within the city are required to pay traffic mitigation fees applied toward the implementation of traffic safety and control measures to minimize effects upon LOS. In fact, the city is planning to install a traffic signal at the intersection of Auburn-Folsom Road/Maidu Drive later this year. Operation of this signal potentially would result in a better LOS than estimated by this analysis for future conditions.

The addition of Proposed Project traffic to the cumulative background condition increases the average delay during the morning peak 15 minutes before school by up to 3.7 seconds, but does not cause the estimated LOS to worsen. Because it is unlikely for the cumulative trips to be concentrated solely within this 15-minute period, consideration of the cumulative "overall hour" LOS also is presented. The overall hour average delay increases by up to 3.6 seconds and the

LOS rating would change from the existing LOS B to LOS C. This overall rating would not be considered a significant impact, based on City of Auburn standards.

Additionally, because the river access area would not be open for vehicular access during this hour (7:15 a.m. to 8:15 a.m.), the potential contribution of the Proposed Project to the cumulative condition would be less than represented by these results. The Proposed Project's incremental contribution to these conditions would not be considered cumulatively considerable.

Afternoon and evening periods would not be adversely affected under the cumulative condition.

3.14.2.5 Environmental Protection and Mitigation Measures

The Mitigation Plan (Appendix D to the Final EIS/EIR) includes several measures designed to avoid and minimize potential traffic-related impacts of project construction and operation. These measures are presented below.

Develop and Implement a Construction Traffic Management Plan (Traffic Plan)

Commitment:	Prepare and implement a Traffic Plan to promote efficient and safe access to the Project site and reduce Project traffic impacts on local roadways. Ensure coordination with local emergency service providers to avoid impacts on emergency access.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area/adjacent roadways
Timing:	Prior to and throughout all phases of construction
Monitoring Type:	On-Site Monitor regularly determine compliance with plan
Reporting Requirements:	No specific reporting requirement

Description of Activities:
Reclamation will require the Construction Contractor to prepare a Traffic Plan. The Traffic Plan shall include the following elements:

- Identify the ability of access routes to accommodate anticipated level of construction vehicle and truck traffic. Factors would include road width, surface conditions, and vertical clearance.

- Require construction personnel and supply deliveries to limit use of Maidu Drive during the peak school-related travel times, including: morning school drop-off (approximately 7:15 a.m. to 8:15 a.m.) and afternoon school pick-up (2:30 p.m. to 3:30 p.m.) throughout the school year.

- Identify and secure easements necessary for roads and staging areas, including consideration of improvement and maintenance costs, construction traffic signs, restoration activities, and damage provisions, as applicable.

- Encourage Construction Contractor to have construction personnel carpool and/or provide vanpool or bus transport during peak work periods to minimize fuel consumption and reduce total number of vehicle trips.

- Ensure the safety of all people (local residents) potentially affected by construction traffic by making them aware of construction activities. Affected residents would be informed about the expected changes in traffic levels, and reasonable accommodations to help ensure safety (e.g., temporary fencing and slower construction speed limits may be appropriate).

- Coordinate with the City of Auburn to determine the location and timing of other construction activities. The coordination and planning will determine that sufficient public notice and roadway hazard warning systems (signage/detours) are in place for the entire construction period.

- Provide notification to local emergency service providers (police, sheriff, fire, ambulance services) on a regular basis regarding the timing, location, and duration of construction activities.

Success Criteria:
Traffic Plan implementation minimizes potential congestion or other safety concerns in study area.

Provide Information Regarding New Public River Access

Commitment:	Provide local residents and anticipated recreation user groups with information that will inform interested parties of changes in use at the Project area. Promote courteous use of Project area.
Responsible Parties:	Reclamation/CDPR
Location:	Project study area/City of Auburn – local neighborhood
Timing:	Prior to and during operation of public river access features
Monitoring:	No specific monitoring requirements
Reporting Requirements:	No specific reporting requirements

Description of Activities:
Reclamation will require CDPR to implement a Public Information Program prior to opening the river access sites for public use which will include distribution of materials that detail the location, access routes, capacity and hours of operation. Distribute to local residents and recreation organizations.

CDPR will limit the hours of operation of the public river access features. Generally, hours of operation will correspond to upstream river flow releases that provide suitable boating flow through the Project area. Vehicular access outside of these hours will not be permitted and will be prevented by the locked entrance gate. CDPR staff will ensure that the parking area and access roads are clear of vehicles prior to gate closure.

CDPR will not permit overnight parking or camping within the area. CDPR, if needed, will post signs along Auburn-Folsom Road on either side of the Maidu Drive intersection to indicate whether the river access parking lot is full as a means of minimizing unnecessary traffic travel along Maidu Drive.

PCWA will pay the City of Auburn a traffic impact mitigation fee commensurate with those collected from a residential development generating the same level of traffic. These fees will be applied to traffic control strategies deemed appropriate and necessary by the City of Auburn.

Success Criteria:
Through the management agreement for Auburn SRA, Reclamation will require CDPR to document completion of all activities. PCWA to record payment of mitigation fees to City of Auburn.

3.15 AIR QUALITY

3.15.1 AFFECTED ENVIRONMENT

3.15.1.1 Regional Setting

The project area is located in the Sacramento Valley Air Basin (SVAB) within the northern portion of the Central Valley. Weather patterns throughout the SVAB are affected by the topography of the area, which is characterized by the broad Central Valley floor with the Tehachapi Mountains in the south, the Cascade Range in the north, the Sierra Nevada Mountains in the east, and the Coast Range in the west. These mountains act as air current barriers, preventing dissipation of air pollutants outside of the valley and buffering the SVAB from marine weather systems originating over the Pacific Ocean. Nonetheless, the SVAB is noticeably affected by marine influences with moderate climate extremes (Sacramento County 1993).

Air Quality Regulating Agencies

Air quality within California is regulated by the California Air Resources Board (CARB) through local Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD). The project area is located primarily in Placer County, however, lands east of the American River lie within El Dorado County. The Placer County and El Dorado County APCDs are responsible for maintaining and improving air quality throughout Placer and El Dorado counties. They also work cooperatively with the Sacramento Metropolitan AQMD, and the Yolo-Solano APCD to alleviate air quality problems in the SVAB.

Air Pollutants of Concern

Sulfur dioxide, nitrogen dioxide, and carbon monoxide levels within the SVAB are within acceptable ranges, as defined by state and federal air quality standards. Ozone and particulate matter up to 10 microns in size (PM_{10}) are the focus of this analysis as the area is designated non-attainment for these pollutants.

Ozone is the most significant air quality problem in the SVAB (Sacramento County 1993). Ozone is produced in the atmosphere by a series of photochemical reactions involving its precursors, nitrogen oxides (NO_X) and reactive organic gases (ROG). High temperatures, low wind speed, shallow air mixing, wind patterns that fail to disperse ozone precursors, and little or no cloud cover contribute to the formation of ozone. Once formed, ozone can be dispersed and becomes a regional, rather than a local, air pollution problem. Because of wind patterns, regional ozone concentrations are highest in northern Sacramento County and southwestern Placer County. Ozone is a strong irritant that can constrict the airways, forcing the respiratory system to work harder to provide oxygen. When inhaled, ground-level ozone concentrations can potentially irritate the respiratory system, reduce lung function and aggravate asthma.

Particulate matter is produced by a variety of sources within the SVAB, including activities that result in the creation of fugitive dust (e.g., earth-moving during construction and the entrainment

of dust in the air by motor vehicles) and the burning of fossil fuels. Particulate matter can produce haze, reduce visibility, and result in respiratory irritation. A series of scientific studies has linked particulate matter, especially fine particles, with a variety of significant health problems such as: (1) aggravated asthma, heart, or lung disease; (2) acute respiratory symptoms, including severe chest pain, gasping, and aggravated coughing; (3) decreased lung function which can be experienced as shortness of breath.

The largest single source of air pollutants within the SVAB is automobile exhaust. However, agriculture and construction (especially for PM_{10}) also contribute to air pollution in the area (Sacramento County 1993).

3.15.1.2 Project Area Setting

Air Pollutants of Concern

Placer and El Dorado counties currently exceed the state and federal standards for ozone and state standards for PM_{10}. While there are no existing state standards for $PM_{2.5}$ emissions, monitoring has not been done within either county to ascertain whether the federal standard has been exceeded. The air pollutants of greatest concern in the project area and evaluated in the impact analysis include the ozone precursors NO_X and ROG, and PM_{10}.

Air Quality Monitoring

Ozone, particulate matter, and other air pollutants are monitored for compliance with state and federal standards at stations in the cities of Auburn and Rocklin in Placer County. Ozone levels also are monitored at a station in Cool in El Dorado County. The monitoring station in Auburn records gaseous data, the station in Rocklin monitors both gaseous and particulate pollutants, and the station in Cool monitors only ozone. The 1995 through 1999 reported air pollutant exceedances of state and federal standards for the Auburn, Rocklin and Cool stations are provided in **Table 3.15-1**.

Sensitive Receptors

The air quality impact analysis focuses on the potential effects of construction and operation upon sensitive receptors within the project study area. A sensitive receptor distance of one-half mile is used, although both the Placer County and El Dorado County APCDs suggest an approximately one-quarter mile distance for identification of sensitive receptors for air pollutant emissions. Several sensitive receptors exist within the one-half mile range within Placer County; however, none were identified within the El Dorado County portion of the study area. Therefore, the focus of the analysis is within Placer County.

Sensitive receptors in the project vicinity include residents, recreationists, and one school. Skyridge Elementary School is located on Perkins Way, approximately three-quarters of one mile from the project area. This school has an enrollment of approximately 730 children, ranging in age from 5 to 12 years. Residences on Maidu Drive, Pacific Avenue, Robie Drive,

Table 3.15-1
Air Pollutant Data Summary for Auburn, Cool and Rocklin
(1995 - 1999)

Pollutant	1995			1996			1997			1998			1999		
	Auburn	Cool	Rocklin	Auburn	Cool	Rocklin	Auburn	Cool	Rocklin	Auburn	Cool	Rocklin	Auburn	Cool	Rocklin
Ozone															
Highest 1-hour parts per million (ppm)	0.15	--	0.15	0.13	0.14	0.13	0.11	0.15	0.11	0.14	0.16	0.14	0.14	--	0.13
Number of days 1-hour concentration >0.09 ppm [a]	26	--	25	22	35	30	4	12	9	15	30	16	24	--	17
Number of days 1-hour concentration >0.12 ppm [b]	2	--	3	1	2	1	0	1	0	5	5	3	2	--	3
Number of days 1-hour concentration >0.15 ppm [c]	2	--	1	0	--	0	0	--	0	0	--	0	0	--	0
Particulate Matter															
Highest 24-hour ppm	50	--	55	--	--	34	54	--	43	--	--	70	--	--	75
Number of days 1-hour concentration >50 $\mu g/m^3$	0	--	0	--	--	0	0	--	0	--	--	0	--	--	0
Number of days 1-hour concentration >150 $\mu g/m^3$ [b]	0	--	0	--	--	0	0	--	0	--	--	0	--	--	0

[a] State Standard
[b] Federal Standard
[c] Defined as a Health Advisory Episode Level in the California Air Pollution Emergency Plan
Notes: > = greater than, ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter, -- = data not available
Source: CARB, Summary of Air Quality Data 1996 - 2000; D. Oda, pers. comm. 2000

Placerado Avenue, and Marina Avenue, as well as smaller roads branching off of those streets, are within a one-half mile radius of the project study area with the nearest home located less than one-half mile from the project site. Portions of the Western States Trail and Auburn-to-Cool Trail pass through the project area.

Seasonal Pump Station Construction and Operation

Current installation and removal of the seasonal pump station generates ROG, NOx, and PM_{10} through construction activities and use of construction equipment. Typically, the equipment used includes a backhoe, a loader, two cranes, and one truck. The equipment is used approximately 20 hours a week for a four to eight-week period for installation and a four-week period for removal. During installation and removal, approximately 17 pounds of ROG, 173 pounds of NO_X, and 19 pounds of PM_{10} are generated weekly. In one quarter (three months), pollutant generation could be approximately 136 pounds of ROG, 1,384 pounds of NO_X, and 153 pounds of PM_{10}.

In years with significant flood events (as in 1997), seasonal pump station installation requires additional construction activities such as rebuilding the pipeline bed, repairing the pump station pad, and re-stabilizing access roads. In these years the increased use of construction vehicles result in higher generation of air pollutants.

During the diversion season, one daily site inspection of the project site is made. In one quarter, 60 trips would occur resulting in the emission of 25 pounds of NO_X, 34 pounds of ROG, and 2 pounds of PM_{10}.

3.15.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.15.2.1 Methodology

Effects on air quality within the project area were evaluated by comparing expected changes in pollutant emissions that would result from each of the alternatives and considering whether these changes could violate state or federal ambient air quality standards. These efforts included contact with CARB, and the Placer and El Dorado county APCDs to identify key air quality issues associated with construction and operation of the Proposed Project and alternatives.

The construction emission assessments were conducted using the Placer County APCD construction estimation worksheets to determine the relationship of construction activities, including site grading, to the APCD's short-term construction significance criteria. The extent of construction activities was based on review of preliminary design documentation (MW et al. 1998). At the time of the assessment, El Dorado County APCD indicated that use of the Placer County worksheets would provide adequate evaluation of potential construction emissions. Potential construction-generated emissions of ozone precursors NO_x and ROG and PM_{10} were projected for each alternative.

The assessment of project operation-related air pollutant emissions was performed using the recently released El Dorado County APCD Guide to Air Quality Assessment. The Placer

County APCD indicated that use of this manual would satisfy their needs for the project assessment. The evaluation of potential air quality emission impacts uses peak operations trips for each alternative, and is therefore considered a conservative estimation.

3.15.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Air quality in California is subject to both federal and state clean air legislation. The federal Clean Air Act of 1977, as amended, authorizes the U.S. Environmental Protection Agency (EPA) to establish federal air quality standards to protect public health. The California Clean Air Act of 1989 establishes state air quality standards, which for the most part, are more stringent than federal standards. Federal and state ambient air quality standards for ozone and particulate matter are presented in **Table 3.15-2**.

Table 3.15-2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standards	State Standards
Ozone (O_3)[a]	1-hour 8-hour	0.12 ppm 150 µg/m	0.09 ppm 50 µg/m
Particulate Matter (PM_{10})[b]	1-hour annual	N/A 50 µg/m	0.25 ppm 30 µg/m
Particulate Matter ($PM_{2.5}$)	24-hour annual	65 µg/m 15 µg/m	No Separate State Standard

Notes: The national PM_{10} and $PM_{2.5}$ annual average standards are based upon the arithmetic mean fall measurements; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter;
Source: CARB 1995

[a] Federal ozone standards before 1997 mandated that the 3-year average of the fourth-highest daily maximum 8-hour average of continuous ambient air monitoring data over each year must not exceed 0.08 ppm. This standard has been revised (July 1997) and now requires that the daily maximum 1-hour average concentration measured by a continuous ambient air monitor must not exceed 0.12 ppm more than once per year, averaged over 3 consecutive years (EPA 2002).

[b] Federal standards for particulate matter up to 10 microns (PM_{10}) before 1997 mandated that the 99th percentile of the distribution of the 24-hour concentrations for a period of 1 year, averaged over 3 years, must not exceed 150 $\mu g/m^3$ at each monitor within an area. This standard has been revised (July 1997) and now requires that the concentration of samples taken for 24-hour periods at each monitor within an area must not exceed 150 $\mu g/m^3$ more than once per year, averaged over 3 years (EPA 2002).

Ambient air quality standards establish maximum allowable levels of air pollutants. For example, the state standards for ozone are: concentrations averaged over one hour cannot be greater than 0.09 ppm, and concentrations averaged over eight hours cannot exceed 50 $\mu g/m^3$.

Placer and El Dorado County Air Pollution Control Districts

Due to the location of the project site in both Placer and El Dorado counties, the project alternatives are subject to the Placer and El Dorado County APCD rules. These rules include:

- The Placer County APCD Short-Term Construction Significance Threshold which defines pollutant emission thresholds and describes measures to reduce pollutant emissions;

- The El Dorado County APCD Fugitive Dust Regulation which prohibits the transport, handling, or storage of fine matter without necessary precautions and identifies precautions to reduce particulate matter generation; and

- The El Dorado County APCD New Source Review Rule which defines thresholds of air pollutant emissions and implementation measures to reduce air pollutant emissions.

- The El Dorado County APCD Ordinance Number 4548, Naturally Occurring Asbestos and Dust Protection Ordinance

Additionally, the El Dorado County APCD requested consideration of the following CARB control measure:

- CARB Asbestos Air Toxics Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations

3.15.2.3 Impact Indicators and Significance Criteria

Table 3.15-3 presents the impact indicators and significance criteria used in the air quality impact analysis.

Table 3.15-3
Air Quality Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Pounds of ozone precursors (NO_x and ROG) generated by construction equipment and vehicles.	❑ Emit more than 7,500 pounds per quarter of ozone precursors (NO_x and ROG). [a]
❑ Pounds of PM_{10} generated by construction equipment and vehicles.	❑ Emit more than 7,500 pounds per quarter of PM_{10}. [a]
❑ Pounds of ozone precursors (NO_x and ROG) generated by project operation trips.	❑ Emit more than 82 lbs/day of ozone precursors (NO_x and ROG).[b]
❑ Pounds of PM_{10} generated by project operation trips.	❑ Emit more than 275 lbs/day of PM_{10}.
❑ Exposure of sensitive receptors to air pollutants.	❑ Expose sensitive receptors to significant amounts of air pollutants, as defined by the above thresholds.

[a] Placer County APCD Short-Term Construction Significance Threshold
[b] El Dorado County APCD Guide to Air Quality Assessment, February 2002

3.15.2.4 Impact Analysis

This section presents the analysis of potential facilities-related air quality impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Under the No Action/No Project Alternative, the ozone precursors and particulate matter generated during installation and removal and maintenance trips of the seasonal pump station would not be expected to change from the existing condition. Therefore, no air quality impacts would result from this alternative, relative to the existing condition.

Proposed Project

Impact 3.15-1: Increased ozone precursor concentrations associated with construction and operation of the Proposed Project.

Construction

Construction vehicles and equipment, and construction employee commute vehicles could emit exhaust at the construction site, thereby contributing to ozone precursor emissions in the region. These emissions vary depending on the equipment type, duration of use, and number of trips. Estimates of construction-generated ROG and NO_x were prepared to assess the potential for the project to exceed local APCD's quarterly emission thresholds. **Table 3.15-4** presents the construction equipment estimated to be used each quarter, the number of hours of operation, and estimated ozone precursor emissions for the Proposed Project.

Table 3.15-4
Estimated Quarterly ROG and NO_x Emissions During Construction of the Proposed Project

Equipment Type	Hours Operating Per Quarter	ROG Emission Factor (pounds/hour)	ROG Emitted Per Quarter (pounds)	NO_x Emission Factor (pounds/hour)	NO_x Emitted Per Quarter (pounds)
Scraper	2,495	0.282	703.59	3.840	9,580.80
Motor Grader (Diesel)	500	0.040	20.00	0.713	356.50
Wheeled Loader	320	0.250	80.00	1.890	604.80
Off-Highway Truck	2,740	0.192	526.08	4.166	11,414.84
Roller	240	0.067	16.08	0.862	206.88
Miscellaneous (Gas)	1,680	0.560	940.80	0.412	692.16
Miscellaneous (Diesel)*	2,280	0.152	346.56	1.691	3,855.48
Total Quarterly Emissions			**2,633.11**		**26,711.46**

* Includes pavers, excavators, compactors, and dozers.
Source: M. Matson, pers. comm. 1998

Based on the estimates presented in Table 3.15-4, up to approximately 2,633 pounds of ROG would be emitted quarterly over the course of project construction. This level is below the 7,500 pound per quarter emission threshold and is therefore considered a less-than-significant impact.

Emissions of NOx, estimated at up to approximately 26,711 pounds per quarter (Table 3.15-4), substantially would exceed the 7,500 pounds per quarter emission threshold. Project construction would therefore potentially result in a significant air quality impact. In instances such as this, the Placer County APCD requires that project proponents implement all feasible emission-control and reduction measures as is practicable. The emission-reduction measures, suggested by Placer County APCD, and incorporated into the Mitigation Plan for the Proposed Project (Appendix D to the Final EIS/EIR) are identified in Section 3.15.2.5, Environmental Protection and Mitigation Measures.

The construction activity management techniques identified in the Mitigation Plan would be implemented to help reduce ozone precursor emissions toward compliance with the 7,500 pounds per quarter-year emission threshold for NO_x. The construction contractor will coordinate weekly construction activities and the number and timing of construction equipment used within the 7,500 pounds per quarter-year emission threshold. Through the weekly emission monitoring, construction contractors could keep a running quarterly total of construction ozone precursor emissions and schedule construction equipment use as necessary to comply with the ozone precursor emission threshold. The lead agencies would coordinate with the Placer County and El Dorado County APCDs to develop a monitoring and reporting program determined suitable for the alternative selected.

In addition to the emission-reduction measures included in the Mitigation Plan, Best Available Control Technology (BACT) for diesel-fueled construction equipment would be implemented where feasible (D. Vintze, pers. comm. 1998). The strategies include injection timing retard of two degrees, installation of high-pressure injectors, and the use of reformulated diesel fuel, and would be implemented as a package on each piece of equipment needing to be modified to reduce construction emissions. (Contracts would specify this type of requirement or consideration would be given to firms that have already modified their equipment.)

Proper application of these measures significantly reduces emissions (approximately 50 percent NO_x reduction, 15 percent ROG reduction) while improving overall performance of the modified equipment. However, it requires moderate adjustments to the affected equipment by a knowledgeable diesel mechanic. Due to the nature and expense of these modifications, it is recommended that the number and type of equipment requiring this modification be based on the overall projected level of construction emissions (D. Vintze, pers. comm. 1998).

Implementation of all feasible emission-control and reduction measures would minimize construction emission impacts to less than significant for ROG. NOx emissions would be substantially reduced by implementation of all feasible emission-reduction and construction management techniques. However, due to uncertainties regarding the ability of these measures to reduce NOx emissions below the quarterly emissions threshold, there may be exceedances at some time during construction. Although temporary, this impact would be significant and unavoidable.

Operation

Operation of the Proposed Project includes public trips to the river access areas plus PCWA personnel's daily operations and maintenance visits to the site. The proposed public river access features would generate a relatively limited level of activity within the project area, when compared to other river access areas within the Auburn SRA. However, in response to public comments regarding river access feature design, the lead agencies and CDPR reduced the total number of parking spaces that would be provided in the project area (from 70 to 53) by reducing the riverside parking lot (formerly 20 spaces) to provide only a turnaround area and 3 handicap accessible spaces. Please see Master Response 3.1.6, Public River Access Features for additional description.

Additionally, project-related vehicular air emission estimates for pollutants of concern were re-evaluated using updated methodologies recommended and provided by the Placer County and El Dorado County APCDs. The assessment of project-related trips and air quality emissions is based on the combined total level of travel on a peak river access use day. On a peak day, the lead agencies and CDPR estimate that the 50-space parking lot would fill twice (3 handicap spaces once), resulting in a total of 206 trips (trip is one-way travel). Additionally, PCWA personnel would make up to 8 operations and maintenance trips (4 site visits) per day. The total peak day travel to the site would be 214 trips. This value was used to re-assess vehicular air emissions for a peak, or "worst-case" condition. The El Dorado County APCD threshold of significance for ROG and NO_x emissions is 82 pounds per day (lb/day); Placer County's threshold is 85 lb/day. El Dorado County APCD evaluates PM_{10} emissions on the likelihood such emissions would cause or contribute significantly to a violation of the applicable state or national ambient air quality standards. Placer County uses a threshold of 275 lb/day. The results for ROG, NO_x and PM_{10} emission assessment are displayed in **Table 3.15-5**.

Table 3.15-5
Estimated Daily Air Emissions for 2005, 2010 and 2015
Associated With Peak Public River Access Trips [a]
to the American River Near Auburn

	Air Pollutant (pounds per day)		
Analysis Year	**ROG**	**NOx**	**PM_{10}**
2005	5.5	4.13	0.25
2010	3.42	2.41	0.241
2015	2.2	1.43	0.254

Source: El Dorado County APCD - CEQA Guide, First Edition, February 2002
[a] The 214 trips are determined by adding the 8 daily project operations trips to the peak 206 river access trips.

As indicated by the results, ROG and NO_x emissions would be well below the more restrictive El Dorado County APCD 82 lbs/day significance threshold for all years evaluated. The estimated peak day or "worst-case" PM_{10} emission levels also would be quite low, well below the Placer County threshold, and would not result in or contribute significantly to a violation of applicable air quality standards. Generally, because peak travel conditions would only occur on a limited number of days of the year, the expected daily project-related air pollutant emissions would be less than indicated by these results.

PCWA personnel would make up to four daily trips to the site to conduct operations and maintenance activities. On a quarterly basis, these vehicle trips would generate approximately 135 pounds of ROG and 100 pounds of NO_x. Based on the emissions thresholds, these emissions would result in a less-than-significant air quality impact.

Impact 3.15-2: Increased PM_{10} emissions associated with construction and operation of the Proposed Project.

Construction

Construction of the Proposed Project would involve earth-moving activities, which would generate fugitive dust and increase PM_{10} concentrations. The extent of fugitive dust generation would depend on the type and duration of construction activities, as well as wind conditions. **Table 3.15-6** provides an estimate of PM_{10} that would be generated by construction equipment under the Mid-Channel Alternative.

As illustrated in Table 3.15-6, construction activities (not including blasting) would generate approximately 2,118 pounds of PM_{10} per quarter. Blasting activities and other earth-moving activities also would increase fugitive dust generation, but such emissions would be limited and intermittent based on specific construction activity. Most blasting would be necessary to fracture rock for pump station and pipeline construction. Blasting would occur up to three times daily over a four- to five-month period, depending on excavation conditions. Because blasting would occur on a limited basis, it would not be expected to contribute substantial amounts of PM_{10} or contribute significantly to a PM_{10} threshold violation (D. Vintze, pers. comm. 1998).

Table 3.15-6
Estimated Quarterly PM_{10} Emissions During Construction of the Proposed Project

Equipment Type	Hours Operating Per Quarter	PM_{10} Emission Factor (pounds/hour)	PM_{10} Emitted Per Quarter (pounds)
Scraper	2,495	0.406	1,012.97
Motor Grader (Diesel)	500	0.061	30.50
Wheeled Loader	320	0.172	55.04
Off-Highway Truck	2,740	0.256	701.44
Roller	240	0.050	12.00
Miscellaneous (Gas)	1,680	0.026	43.68
Miscellaneous (Diesel)*	2,280	0.139	316.92
Total Estimated Quarterly Emissions			**2,117.51**

* Includes pavers, excavators, compactors, and dozers.
Source: M. Matson, pers. comm. 1998

To further reduce PM_{10} emissions, measures, recommended by the Placer County APCD, have been incorporated into the Proposed Project construction management plan (see Section 3.15.2.5, Environmental Protection and Mitigation Measures).

Additional construction activity management techniques would be implemented to reduce emissions if monitoring indicates a need for additional emission suppression. Measures, to be coordinated with Placer County and El Dorado County APCDs, include: reducing the number of pieces used simultaneously; increasing distance between emission sources; reducing or changing hours of construction; and scheduling activities during off-peak hours, if needed.

The construction contractor would provide documentation of mitigation compliance with the air pollution control measures that the Placer County and/or El Dorado County APCDs determine appropriate to apply to the selected alternative. The specific construction management techniques selected to reduce the level of emissions would be determined based on specific construction activity, equipment, and through consultation with the APCDs. These measures would be sufficient to minimize PM_{10} emissions to levels considered less than significant.

Operation

Please refer to discussion of Proposed Project operations PM_{10} emissions under Impact 3.15-1.

Impact 3.15-3: Exposure of sensitive receptors to significant amounts of air pollutants.

With the exception of NOx emissions generated during construction, Proposed Project construction and operation air pollutant emissions would remain below the local APCD's significance thresholds. See discussion under Impacts 3.15-1 and 3.15-2.

The short-term but potentially significant NOx emissions due to project construction would be substantially reduced through implementation of environmental protection measures. Sensitive receptors in the study area would not be exposed to air pollutant emissions that exceed the significance thresholds. Therefore, this impact would be considered less than significant.

Upstream Diversion Alternative

Impact 3.15-4: Increased ozone precursor concentrations associated with construction and operation of the Upstream Diversion Alternative.

Construction

Table 3.15-7 presents the equipment anticipated to be used each quarter, the number of hours of operation, and the estimated ozone precursor emissions for construction of the Upstream Diversion Alternative.

Based on the calculations presented in Table 3.15-7, approximately 892 pounds of ROG and 6,122 pounds of NO_X would be generated quarterly during project construction. These anticipated ozone precursor emission levels do not exceed the 7,500 pounds per quarter emission standard of the Placer and El Dorado County APCDs. Therefore, construction-related ozone precursor generation would be a less-than-significant impact for the Upstream Diversion Alternative.

Table 3.15-7
Estimated Quarterly ROG and NO_x Emissions During Construction of the Upstream Diversion Alternative

Equipment Type	Hours Operating Per Quarter	ROG Emission Factor (pounds/ hour)	ROG Emitted Per Quarter (pounds)	NO_x Emission Factor (pounds/hour)	NO_x Emitted Per Quarter (pounds)
Scraper	840	0.282	236.88	3.840	3225.60
Motor Grader (Diesel)	240	0.040	9.60	0.713	171.12
Wheeled Loader	80	0.250	20.0	1.890	151.20
Off-Highway Truck	144	0.192	27.65	4.166	599.90
Roller	240	0.067	16.08	0.862	206.88
Miscellaneous (Gas)	808	0.560	452.48	0.412	332.90
Miscellaneous (Diesel)[a]	848	0.152	128.90	1.691	1433.97
Total Estimated Quarterly Emissions			**891.59**		**6,121.7**

[a] Includes pavers, excavators, compactors, and dozers.
Source: M. Matson, pers. comm. 1998

Operation

Upstream Diversion Alternative operations and maintenance activities would generate substantially fewer trips than the Proposed Project; therefore, impacts would be less than estimated for the Proposed Project. Overall, no potentially significant impacts to air quality would be expected to result during pump station project operation or maintenance under the Upstream Diversion Alternative.

Impact 3.15-5: Increased PM_{10} emissions associated with construction and operation of the Upstream Diversion Alternative.

Construction

Table 3.15-8 provides an estimate of PM_{10} that would be generated by construction equipment under the Upstream Diversion Alternative. As shown in the table, construction activities (not including blasting) would generate approximately 557 pounds of PM_{10} per quarter. Blasting associated with pump station and pipeline placement would be as described for the Proposed Project (see Impact 3.15-2).

Table 3.15-8
Estimated Quarterly PM_{10} Emissions During Construction of the Upstream Diversion Alternative

Equipment Type	Hours Operating Per Quarter	PM_{10} Emission Factor (pounds/hour)	PM_{10} Emitted Per Quarter (pounds)
Scraper	840	0.406	341.04
Motor Grader (Diesel)	240	0.061	14.64
Wheeled Loader	80	0.172	13.76
Off-Highway Truck	144	0.256	36.86
Roller	240	0.050	12.00
Miscellaneous (Gas)	808	0.026	21.01
Miscellaneous (Diesel)*	848	0.139	117.87
Total Estimated Quarterly Emissions			**557.18**

* Includes pavers, excavators, compactors, and dozers.
Source: M. Matson, pers. comm. 1998

Operation

As discussed under Impact 3.15-1, no potentially significant impacts to air quality would be expected to result during pump station operation or maintenance.

Impact 3.15-6: Exposure of sensitive receptors to significant amounts of air pollutants.

Emissions generated during construction and operation of the Upstream Diversion Alternative would not violate the APCD significance thresholds (see discussion under Impacts 3.15-4 and 3.15-5). Therefore, the alternative would not expose sensitive receptors in the project study area to significant amounts of air pollutants and the impact would be less than significant.

Cumulative Impacts

All local projects could affect air quality during the construction and/or operation phases (grading and excavation operations, use of gasoline and diesel-powered equipment, increase in traffic). Like the Proposed Project, local projects may exceed Placer County APCD's significance thresholds for PM_{10} and ozone precursors during the construction phase. Each project would be expected to incorporate all feasible mitigation measures recommended by Placer County APCD in proportion to the severity of the impact to reduce project-specific construction effects. Although the Proposed Project would implement all feasible measures for NO_x emissions, short-term exceedances of the quarterly emission threshold may occur and would be considered significant. In the event that other construction projects are unable to fully mitigate NO_x emissions, then significant cumulative impacts would result on air quality. The Proposed Project would result in a considerable contribution to this impact.

3.15.2.5 Environmental Protection and Mitigation Measures

Measures to reduce or minimize construction air quality effects have been incorporated into the Mitigation Plan (Appendix D to the Final EIS/EIR) and would be included in the selected alternative's construction plans and specifications. These measures include those to reduce ozone precursor and particulate matter impacts and are listed below.

Minimize Ozone Precursor Emissions During Project Construction

Commitment: Implement air emission control measures to reduce amount of ozone precursors, ROG and NO_x, emissions during construction.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004)
Monitoring: Inspect Project area construction activities and indicate compliance with Placer County and El Dorado County APCD requirements. APCD representatives may inspect Project site to ensure compliance with measures.
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will ensure that the Construction Contractor implements the following emission-reduction measures to minimize ozone precursor concentrations:

- Use low emission mobile construction equipment allowed for use in Placer and El Dorado counties.
- Maintain stationary and mobile construction equipment engines by keeping them tuned and in proper running order.
- Use only diesel fuel allowed for use by California State Fuel Standards.
- Use low emission on-site stationary equipment.
- Use only fuel allowed for use by California State Fuel Standards for stationary construction equipment.
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
- Actively coordinate with Placer County and El Dorado County APCDs during construction.

Additionally, where feasible, implement emission control strategies that are considered Best Available Control Technology for diesel-fueled construction equipment.

Success Criteria: Document compliance with requirements. Record APCD inspection dates and results.

Minimize PM_{10} Emissions During Project Construction

Commitment: Implement air emission control measures to reduce level of PM_{10} emissions during construction.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004)
Monitoring: Inspect Project area construction activities and indicate compliance with Placer County and El Dorado County APCD requirements.
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to implement the following measures to reduce PM_{10} emissions during construction:

- Water (sprinklers, water truck spray, other method) construction areas, haul roads, and disturbed soils as often as necessary to keep disturbed areas moist and control fugitive dust emissions.
- Cover any trucks hauling earth and debris to prevent dust emissions and spills onto paved roads, beyond the Project site.
- Sweep paved streets adjacent to the construction site to remove dust and dirt, as needed.
- Limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less.
- Minimize the total active construction area (clearing, earth-moving, or excavation) to the extent practicable.
- Stabilize exposed/disturbed areas as soon as possible following completion of construction.

Success Criteria: Document compliance with requirements. Record APCD inspection results.

3.16 NOISE

The Proposed Project or alternatives would have localized direct effects within the project study area. These effects are limited to facilities-related activities in the project area, including construction, operations and maintenance. The description of the affected environment and the evaluation of impacts, therefore, address only facilities-related effects within the project area.

3.16.1 AFFECTED ENVIRONMENT

3.16.1.1 Project Area Setting

The project study area for noise is defined as the immediate vicinity of the pump station project where construction, operation, and maintenance activities may increase noise levels above ambient conditions. This includes the project construction area as well as nearby residential and recreation areas.

Ambient Noise Levels

Noise levels in the project study area are assumed to be relatively low and the project area itself is relatively free of noise intrusions and constitutes a quiet environment. With the exception of the noise generated by installation and operation of the seasonal pump station and the PG&E substation operations, there are no other man-made noise sources within the immediate project area. Noise sources near the canyon include: the City of Auburn, including typical traffic noise and commercial and industrial sources; recreation noises associated with the local skateboard park; transportation noises, including Interstate 80, Highway 49, the Southern Pacific Railroad, and the Auburn Municipal Airport; and, logging and quarry operations east of Auburn and the truck traffic traveling to and from these operations.

Sensitive Receptors

Sensitive receptors, defined as land use types for which low ambient noise levels are integral to the use or value of the land, were identified by field survey and aerial photograph and topographic map surveys. The four sensitive receptors identified in the study area include: (1) residential areas on the western side of the canyon (Ridgetop Homes) near the Auburn Dam area; (2) residential areas on the western side of the canyon near Oregon Bar; (3) recreationists using the Auburn-to-Cool Trail; (4) recreationists using the Western States Trail that passes near the site (see Figure 3.9-1, Location of Sensitive Receptors); and (5) recreationists at the Auburn Recreation District Auburn Dam Overlook Campground. The trails are used frequently by hikers, equestrians, and mountain bikers. Refer to Section 3.8, Recreation, for more discussion of these trails.

Typical noise levels for residential settings are presented in **Table 3.16-1**. The homes in the study area would be considered quiet suburban residential areas because they are on large lots, and dead-end or looped streets which carry no through traffic. There are no commercial activities on these or adjacent streets. The sensitive receptors, at their closest points, are

approximately within one-half mile from the pump station or public river access construction areas, and have an elevation difference of between 500 and 700 feet msl.

Table 3.16-1
Typical Noise Levels for Urban Settings

Description	Typical L_{dn} Range (dBA)	Average L_{dn} (dBA)
Quiet suburban residential	48-52	50
Normal suburban residential	53-57	55
Urban residential	58-62	60
Noisy urban residential	63-67	65
Very noisy urban residential	68-72	70

Notes: L_{dn} = 24-hour average sound level (day and night); dBA = A-weighted decibels. Source: Canter 1977

3.16.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.16.2.1 Methodology

The occurrence of noise-generating activities and the levels of noise emitted by noise-generating equipment that would be used in construction, operation, and maintenance activities were identified and quantified for the Proposed Project and alternatives based on preliminary design information. Engineering texts (Vesilind et al. 1988) also were reviewed regarding noise quantification.

Potential impacts were evaluated considering the Proposed Project activities, site conditions, and impact issues identified during public scoping. Local noise ordinances and general plans for the City of Auburn, Placer and El Dorado counties, the California Code of Regulations (CCR), and CEQA Guidelines were reviewed and used to develop significance criteria. The noise levels expected to be emitted by construction and operation of the Proposed Project and alternatives were examined and compared with the significance criteria to identify potential noise-related impacts.

3.16.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The CDPR, the counties of Placer and El Dorado, and the City of Auburn have policies or standards applicable to noise levels in the project area (J. Dampier, pers. comm. 2000; Placer County 1994; El Dorado County 1994; City of Auburn 1993). Noise-related objectives and policies identified by CDPR and expressed in the respective city and county general plans, and in the City of Auburn's Noise Ordinance, are discussed below.

California Department of Parks and Recreation

The project study area where noise impacts would occur is located within the Auburn SRA, which is operated by the CDPR. The Auburn Interim Resource Management Plan (CDPR and Reclamation 1992) for the site does not have specific objectives with respect to noise, however, park activities are regulated under CCR Title 14. CCR 4320, Peace and Quiet, states the following:

To insure peace and adequate rest for visitors.

(a) No person shall disturb others in sleeping quarters or in campgrounds between the hours of 10:00 p.m. and 6:00 a.m.

(b) No person shall, at any time, use outside machinery or electronic equipment including electrical speakers, radios, phonographs, televisions, or other devices, at a volume which is, or is likely to be disturbing to others without specific permission of the Department.

(c) No person shall operate an engine driven electric generator which emits sound which is, or is likely to be, disturbing to others between the hours of 8:00 p.m. and 10:00 a.m. without permission of the Department (of Parks and Recreation).

Placer County General Plan

Placer County has established maximum noise levels by zone and at the property line versus interior spaces. Placer County's maximum noise level for residential communities not adjacent to industrial sites is 50 decibels (dB) at the property line (boundary) of the land use "receiving" the noise and 45 dB for interior spaces. Additional relevant Placer County General Plan policies include the following:

Policy 9.A.2. The County shall require that noise created by new non-transportation noise sources be mitigated so as not to exceed the [County noise level standards] as measured immediately within the property line of lands designated for noise-sensitive uses.

Policy 9.A.4. Impulsive noise produced by blasting should not be subject to [regular County noise level standards]. Single event impulsive noise levels produced by gunshots or blasting shall not exceed a peak linear overpressure of 122 dB, or a C-weighted Sound Exposure Level (SEL) of 98 dBC [(C-weighted decibels)]. The cumulative noise level from impulse sounds such as gunshots and blasting shall not exceed 60 dB L_{Cdn} [(C-weighted Day-Night Average Sound Level)] or $CNEL_C$ [(C-weighted Community Noise Equivalent Level)] on any given day. These standards shall be applied at the property line of a receiving land use.

El Dorado County General Plan

El Dorado County has specified maximum noise levels for its communities based on time of day, and on whether the noise is constant or irregular. El Dorado County's standards are presented in **Table 3.16-2**.

Additional relevant policies include the following:

Goal 6.5: Ensure that County residents are not subjected to noise beyond acceptable levels.

Objective 6.5.1: Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Table 3.16-2
El Dorado County Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources [a]

Noise Level Descriptor	Daytime (7:00 a.m. to 7:00 p.m.)		Evening (7:00 p.m. to 10:00 p.m.)		Nighttime (10:00 p.m. to 7:00 a.m.)	
	Community	Rural	Community	Rural	Community	Rural
Hourly Average Noise Level (L_{eq}) dB	55	50	50	45	45	40
Maximum Level (dB)	70	60	60	55	55	50

[a] Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The county can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

Source: El Dorado County 1995

City of Auburn General Plan

The City of Auburn has specified maximum noise levels for its community based on time of day, and on whether the noise is constant or irregular. The City of Auburn's standards are presented in **Table 3.16-3**.

Table 3.16-3
City of Auburn Noise Level Performance Standards for New Projects Affected By or Including Non-Transportation Sources [a]

Noise Level Descriptor	Daytime (7:00a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}, dB[b]	55	45
Maximum Level, dB	75	65

[a] Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

Source: City of Auburn 1993

Additional relevant general plan policies include the following:

Goal 1: Protect City residents from the harmful and annoying effects of exposure to excessive noise.

City of Auburn Noise Ordinance

Relevant information from the City's noise ordinance is presented below as a guideline for evaluating construction noise effects upon homes adjacent to the project site.

City of Auburn Noise Ordinance, Section 5-7.09. Unlawful Acts.

(j) *Construction or repair of buildings*.

(1) The performance of any construction, alteration or repair activities which require the issuance of any building, grading or other permit may occur only during the following hours:

(i) Monday through Friday: 7:00 a.m. to 6:00 p.m. For the period of June 1 through September 30 of each year the permissible hours for masonry and roofing work hereunder shall be from 6:00 a.m. to 6:00 p.m.;

(i) Saturdays: 9:00 a.m. to 5:00 p.m.;

(ii) Sundays and observed holidays: 10:00 a.m. to 6:00 p.m.

(2) Any noise from the above activities, including from any equipment used therewith, shall not produce noise levels in excess of the following:

(i) Saturdays: 80 dBA when measured at a distance of twenty-five (25') feet;

(ii) Sundays and observed holidays: 70 dBA when measured at a distance of twenty-five (25') feet.

(o) *Pile drivers, hammers, and the like*. The operation between the hours of 10:00 p.m. and 7:00 a.m. of any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other appliance the use of which is attended by loud or unusual noise.

3.16.2.3 Impact Indicators and Significance Criteria

The impact indicators and significance criteria developed for the evaluation of noise impacts are presented in **Table 3.16-4**.

Table 3.16-4
Noise Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Increase in noise levels associated with construction activity	❑ Construction outside of designated hours (as follows): ▪ Monday through Friday, 7:00 a.m. to 6:00 p.m.; ▪ Saturdays, 9:00 a.m. to 5:00 p.m. with restriction of 80 dBA at distance of 25 feet; ▪ Sundays and observed holidays, 10:00 a.m. to 6:00 p.m., with restriction of 70 dBA at distance of 25 feet (City of Auburn Noise Ordinance).
❑ Type of equipment	❑ Violate the restriction of the use of pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other appliance that results in loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m.

Table 3.16-4 (Continued)
Noise Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
❑ Noise levels due to blasting	❑ Placer County General Plan noise level threshold: single event blasting noise level shall not exceed a peak linear overpressure of 122 dB or C-SEL of 98dBC; cumulative level shall not exceed 60 dB LCdn on any given day (Policy 9.A.4).
❑ Time of noise-generating activity (operations)	❑ Generation of disturbing noise levels during the following restricted timeframe: 10:00 p.m. and 6:00 p.m.
❑ Increase in recreation-related noise activities	❑ Result in a violation of Time 14, CCR 4320, Peace and Quiet restrictions: no disturbing noise levels between hours of 10:00 p.m. and 6:00 a.m.; no use of machinery or electric equipment at a disturbing volume; no use of electric generators between 8:00 p.m. and 10:00 a.m.
❑ Increase in operational noise levels relative to sensitive receptor locations	❑ Result in a violation of applicable noise level performance standards: ▪ 50 dB at property line and 45 dB for interior spaces (Placer County); ▪ 60 dB maximum 7:00 a.m. to 7:00 p.m., 55 dB maximum 7:00 p.m. to 10:00 p.m., 50 dB maximum 10:00 p.m. to 7:00 a.m. (El Dorado County) ▪ 75 dB maximum 7:00 a.m. to 10:00 p.m., 65 dB maximum 10:00 to 7:00 a.m. (City of Auburn).

3.16.2.4 Impact Analysis

This section presents the analysis of potential facilities-related noise impacts. A summary of the impact issues, level of significance, and environmental protection and mitigation measures is provided in the Executive Summary to the Final EIS/EIR, Table S-5.

Facilities-Related Impacts

No Action/No Project Alternative

Impact 3.16-1: Increase in ambient noise levels during installation and removal of the seasonal pump station.

Annual installation and removal of the seasonal pump station facilities create temporary increases in noise levels for local residents and recreationists in the project vicinity. Specific

construction activities include: materials delivery, truck traffic, and other general construction noise associated with installing and removing the pump station facilities and pipeline.

Weekly, seasonal, and annual maintenance would continue to occur at the site and would generate periodic noise from vehicle traffic and site work. The frequency and duration of dredging built up in the sump pond where the diversion pipe is located is expected to be generally the same as current practices. Dredging of the sump pond takes a few days to a week. Re-grading pump station access roads and pipeline rehabilitation would continue to be required if damaged by landslides or flooding.

Seasonal pump station installation takes a minimum of four to six weeks. If significant pipeline and road rehabilitation is required, it can take up to three months. Pump station removal takes approximately two weeks in the late fall. Major pipeline and road rehabilitation has been required twice (1986 and 1997) since the seasonal pump station has been in use (MW et al. 1998). The pump station has been installed every year since 1990, but only a few years from 1967 to 1990 (W. Sanford, pers. comm. 1998).

Under the No Action/No Project Alternative, there would be no change in the type of construction activities necessary to install the seasonal pump station and intake structure; however, the months of high construction noise levels at the site would change due to the extended operations schedule. These activities are not known or expected to result in any violation of noise level standards. Therefore, the No Action/No Project Alternative would result in a less-than-significant impact.

Impact 3.16-2: Increase in the ambient noise levels during operation of the seasonal pump station.

The seasonal pump station is not enclosed in a building and over the four-month diversion period contributes continuous operational noise while water is being diverted. These conditions would generally remain the same under the No Action/No Project Alternative; however, operations would be extended by up to an additional two months in both the spring (April, May) and fall (October, November). Over the eight-month diversion period, four pumps would operate from May to September and two to three pumps would operate in April, October, and November. These changes in operations would result in an increase in (1) the length of time the pumps would be operated and (2) the duration of maximum pump operations. The maximum sound level generated by pump station operations, estimated at 96 dB at 10 feet, would not increase because the total number of pumps would remain the same.

The Ridgetop Homes and the Western States Trail are less than one-half mile from the seasonal pump station. Because the seasonal pump station is not in the line-of-sight of the homes closest to the ridgetop or to the Western States Trail, there would be some attenuation from vegetation and uneven terrain. Assuming a distance of one-fifth mile and 96 dB generated at 10 feet from the seasonal pump station, the attenuation due to distance would result in noise levels of between 44 and 54 dB at the closest Ridgetop Homes and trail sections (M. Matson, pers. comm. 1998).

The City of Auburn allows 55 dB during the day at the property line of a home and 45 dB at night (10:00 p.m. to 7:00 a.m.); Placer County permits a maximum of 50 dB at all times. If this community already experienced levels of 50 dB due to local traffic and other ambient noise (see Table 3.16-1), and if the range of 44 to 54 dB was received at the property line from operation of the pump station, the resulting noise level would be up to 55 dB. The resultant noise level would be up to 5 dB higher than the noise level allowed by Placer County and up to 10 dB higher than that allowed at night by the City of Auburn.

The Auburn-to-Cool Trail is one-tenth of a mile from the seasonal pump station. Because the seasonal pump station is in the line of sight of this trail at the section closest to the pump station, there would be no attenuation of sound other than by distance. Assuming a distance of one-tenth mile and 96 dB generated at 10 feet from the seasonal pump station, the attenuation due to distance would result in a change/increase of noise levels to approximately 60 dB at the trail. This noise level is generally between the range of conversational speech (at three feet) and average traffic noise (Vesilind et al. 1988). This noise level would be considerably higher than the ambient sound.

Overall, under the No Action/No Project Alternative, there would be a substantial increase in noise levels due to the increased length of time the pumps would be operating. These increases in noise levels would potentially result in violations of the City of Auburn and Placer County noise ordinances. Under the No Action/No Project Alternative, there are no feasible mitigation measures that could be applied (i.e., insulation panels) to further reduce noise levels. Therefore, the noise impact due to extended operation of the seasonal pump station under the No Action/No Project Alternative would be potentially significant and unavoidable.

Impact 3.16-3: Increase in ambient noise levels during maintenance of the seasonal pump station.

Weekly, seasonal, and annual maintenance would continue to occur at the site and would generate periodic noise from vehicle traffic and site work. The frequency and duration of dredging the sump pond is expected to be generally the same as current practices (a few days to a week). Re-grading pump station access of roads and pipeline rehabilitation would continue to be required as under existing conditions.

Overall, noise levels associated with maintenance activities would not be expected to increase and would be considered a less-than-significant impact.

Proposed Project

Impact 3.16-4: Increase in ambient noise levels during construction of the Proposed Project.

Construction of the Proposed Project would result in noise-generating activities such as blasting bedrock; materials delivery; truck traffic; and other general construction activities associated with building the permanent structures, road improvements, restoring the river channel and developing public access facilities. Construction would occur over approximately 22 months.

Blasting would take place over a three- to eight-month period. Blasting noise levels would depend on canyon acoustics, shot geometry (depth and placement of shot), and size of shots (amount of explosive material). Equipment and material deliveries to the site would average two to three trips per day over the duration of the construction period. Some of the activity would be concentrated during concrete and structure construction and equipment installation phases. During the height of concrete placement, up to 20 concrete truck deliveries and two or three rebar deliveries could be expected daily.

Noise-generating construction activities would be scheduled Monday through Friday (7:00 a.m. to 6:00 p.m.) and Saturday (9:00 a.m. to 5:00 p.m.). Saturday activities would be restricted, however, to comply with the City of Auburn Noise Ordinance, which limits Saturday noise levels to 80 dBA at 25 feet. Most of the construction equipment and activities (e.g., concrete mixers, dump trucks, backhoes) generate noise above this level.

Major construction equipment noise sources include heavy diesel equipment, such as backhoes, graders, pavers, and other earth-moving equipment. Stationary sources, such as compressors and generators, also will contribute to noise levels. Typical construction noise levels associated with the common practices of ground clearing, excavation, and foundation-laying range from 84 to 89 dBA (EPA 1971).

The Ridgetop Homes are approximately one-third of a mile from the proposed pump station site (the nearest project structure). Noise generated by construction activities at the site would be attenuated by distance, terrain, and to a lesser degree, vegetation. Some of the homes, however, are in the line-of-sight of the construction area and, therefore, attenuation will occur based on distance only.

A rock drill at the diversion structure would generate 98 dB at a distance of 50 feet. This sound would attenuate to levels between 63 and 70 dB for the Ridgetop Homes, with additional attenuation because of natural vegetation and terrain barriers. The sound of a rock drill at the pump station would potentially attenuate to 56 to 65 dB for the Ridgetop Homes. As a comparison, average traffic noise is 70 dB (Vesilind et al. 1988).

When necessary, the Auburn-to-Cool Trail would be closed during construction of the project. The Western States Trail is one-quarter mile from the diversion location and the proposed pump station site. Noise generated by a rock drill, as described above, would attenuate to between 65 and 72 dB on the Western States Trail.

Noise levels generated during the 22-month construction period for the Proposed Project would result in substantially higher noise levels at (1) the project site, (2) recreation trail locations, (3) Auburn Recreation District Auburn Dam Overlook Campground, and (4) the residential areas closest to construction compared to the existing condition or the No Action/No Project Alternative seasonal pump station activities. Measures to minimize the significance of the increased noise levels shall be included in the construction management plan for the project (see Section 3.16.2.5, Environmental Protection and Mitigation Measures). Implementation of these measures, including noise monitoring to ensure compliance, would result in an overall less-than-significant increase in noise levels.

Impact 3.16-5: Increase in ambient noise levels during operation of the Proposed Project.

The pumps would create continuous operational noise whenever being operated to divert water. Based on the maximum monthly diversion schedule, all pumps would be in operation from May to September. One to three pumps would be in operation from October to April. Each pump motor measures 90 dBA at a distance of 10 feet when not acoustically treated (M. Matson, pers. comm. 1998).

The pumps would be enclosed in a building that will be designed to reduce noise impacts to the surrounding area. The building would reduce noise to 45 dB at the canyon rim to comply with the City of Auburn and Placer County noise level performance standards for residential land uses.

Because the pumps would be enclosed, the operational noise would decrease noise levels for recreationists, and for the nearest residential area, relative to the existing condition. Overall, operational noise levels due to the Proposed Project would result in a less-than-significant change in ambient noise levels.

Impact 3.16-6: Increase in ambient noise levels during maintenance of the Proposed Project.

The maintenance activities and associated noise that would occur periodically in the project area include:

- Vehicle noise and miscellaneous low noise-generating activities during, on average, three maintenance visits per day;
- Miscellaneous low noise-generating activities, including the pump station and diversion structure inspections;
- Dredging of sediment build-up at the gradient structures approximately every fourth year; and
- Pump inspection and maintenance, which requires pulling the pumps vertically from their shafts using cranes mounted in the pump station roof during annual maintenance visits.

Weekly, seasonal, and annual maintenance activities occurring at the site would generate noise similar to existing maintenance activities for the seasonal pump station. Approximately every four years dredging of sediment at the gradient control structures is expected to be considerably more than that required for the seasonal pump station sump pond. The seasonal pump station dredging lasts less than one week per year. The year-round pump station could require dredging from several days to a few weeks. Project maintenance noise-generating activities would be noticeably increased over existing conditions, but not to an extent that would generate significant noise levels.

Impact 3.16-7: Increase in ambient noise levels associated with public river access at the Auburn Dam site and near Oregon Bar.

Incidental recreation activities anticipated to occur due to restoration of the dewatered river channel would result in increased noise levels compared to existing or No Action/No Project Alternative conditions associated with vehicular use of access roads and public use of the river. CDPR staff would be responsible for management of the public access areas and CDPR rangers, park aids, and volunteers would enforce the provisions of CCR 4320 which regulates the use of noisy devices (such as machinery or electronic equipment). Additionally, increased traffic-related noise from public river access related trips would less than double the traffic volume along Maidu Drive. A doubling of traffic levees could be expected to increase existing noise levels by less than 3 dB; this change in noise levels is generally not perceptible to the human ear (Federal Highway Administration).

Generally, due to (1) the distance and terrain between the river and sensitive receptors; (2) the seasonal and transient nature of the anticipated activity in the project area; (3) on-site CDPR enforcement of noise-related restrictions, and (4) the anticipated level of traffic-related noise; the potential increase in ambient noise levels would be expected to be less than significant.

Upstream Diversion Alternative

Impact 3.16-8: Increase in ambient noise levels during construction of the Upstream Diversion Alternative.

Construction of the Upstream Diversion Alternative pump station and diversion structure would generally be the same as described for the Proposed Project. These activities would result in short-term, temporary increases in ambient noise levels. Public notification and on-site measures to minimize the impact of increased noise levels would be implemented. Refer to Impact 3.16-4.

Overall, the increase in ambient noise levels would be considered less than significant.

Impact 3.16-9: Increase in ambient noise levels during operation of the Upstream Diversion Alternative.

Pump station operations under the Upstream Diversion Alternative would be the same as under the Proposed Project. Refer to Impact 3.16-5.

Impact 3.16-10: Increase in ambient noise levels during maintenance of the Upstream Diversion Alternative.

Maintenance activities under the Upstream Diversion Alternative would be the same as under the Proposed Project. Refer to Impact 3.16-6.

Cumulative Facilities-Related Impacts

In the future, ambient noise levels near the pump station site and in adjacent neighborhoods likely would increase as a result of increased recreation activity in the canyon and at the Auburn Overlook Campground, and from future residential developments in Auburn. Traffic noise levels also would be expected to increase along Maidu Drive. These anticipated changes in noise levels would be consistent with the character and land uses of the area, and would not be expected to result in a significant increase in noise levels. With regard to cumulative construction noise levels, potential impacts would be adequately mitigated as long as all projects implement standard noise control measures and adhere to applicable noise regulations.

3.16.2.5 Environmental Protection and Mitigation Measures

The Mitigation Plan (Appendix D to the Final EIS/EIR) that would be adopted for the selected action alternative, would include the measures described below to reduce noise-related impacts to levels considered less than significant.

Minimize Noise During Project Construction

Commitment:	Comply with local (El Dorado County, Placer County and City of Auburn) general plan noise ordinance requirements to minimize construction-related noise impacts.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area/City of Auburn (neighborhoods near site)
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Monitor noise levels during periods of peak and/or unusually noisy construction activity
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will enforce Reclamation's Safety and Health Standards regarding noise. Additionally, as specified in local noise ordinances, construction activity will be limited as follows:

Noise-generating construction activities will be scheduled Monday through Friday (7:00 a.m. to 6:00 p.m.) and Saturday (9:00 a.m. to 5:00 p.m.). Saturday activities will be restricted, however, to be consistent with the City of Auburn Noise Ordinance.

On-site construction practices will include the following:

Construction activities which generate noise levels above 95 dB at 50 feet (e.g., impact pile driving, rock drilling, and blasting) will be limited to the hours of 9:00 a.m. to 5:00 p.m., Monday through Friday, and will not be permitted on Saturday or Sunday.

All diesel construction equipment will be adequately muffled as recommended by the manufacturer.

Stationary construction equipment will be located as far as possible from resident boundaries.

Success Criteria: Construction noise levels remain within an acceptable range according to applicable standards and ordinances.

Minimize Operational Noise Levels by Enclosing Pumps

Commitment: Reduce the pump station operational noise levels by enclosing pumps in a structure that reduces noise levels to 45 dB at nearest residences.
Responsible Parties: Reclamation/Design Team
Location: Pump station/adjacent neighborhood
Timing: One-time design/construction
Monitoring: Following construction, monitor noise levels reached within adjacent neighborhoods to ensure compliance with local noise ordinances (i.e., 45 dB at nearest residence).
Reporting Requirements: Indicate noise level reduction achieved

Description of Activities:
Reclamation will require the Construction Contractor to enclose the pumps in a building designed to reduce noise impacts to the surrounding area. The building will reduce noise to 45 dB at the nearest residences to comply with the City of Auburn and Placer County noise level performance standards for residential land uses.

Success Criteria: Document achievement of noise level reduction and compliance with local noise ordinance standards.

Minimize Noise Levels Associated With Public Use of River Access Features

Commitment: Enforce CCR Title 14, CCR 4320, Peace and Quiet, within the Auburn SRA.
Responsible Parties: Reclamation/CDPR
Location: Public river access areas
Timing: Ongoing; when public river access facilities are open for use
Monitoring: Review records of neighborhood complaints and adjust enforcement level, as needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation, through its Auburn SRA management agreement with CDPR, will require CDPR to enforce hours of use and restrictions upon use of noisy equipment (e.g., radios) per CCR 4320, Peace and Quiet. Through this agreement, CDPR will be responsible for responding to and handling noise-related complaints associated with public use in the area.

Success Criteria: Minimal noise-related concerns or complaints.

3.17 PUBLIC HEALTH AND WORKER SAFETY

The Proposed Project or alternatives would have localized direct effects within the project study area. These effects are limited to facilities-related activities in the project area, including construction, operations and maintenance. The description of the affected environment and the evaluation of impacts, therefore, address only facilities-related effects within the project area.

3.17.1 AFFECTED ENVIRONMENT

3.17.1.1 Project Area Setting

The project study area for public health and worker safety issues includes areas where construction, operation, or maintenance activities would require the use of hazardous materials or activities. Areas upstream of the pump station construction area and downstream of Oregon Bar are therefore excluded from this evaluation.

Figure 3.17-1 identifies the project site, sensitive receptors, and the construction entrance to the site off of Maidu Drive. The non-motorized construction entrance is identified as a focal point because CALTRANS and California Highway Patrol (CHP) hazardous material permits do not apply on non-public roads, and because the construction road also serves as a recreation trail.

Public Health

Sensitive receptors include residences, schools, parks, playgrounds, hospitals, day care facilities, and health care facilities. Of the nearby land uses, only residences and one school are located close to the project site. Skyridge Elementary School is located on Perkins Way, approximately three-quarter mile from the project area (Figure 3.17-1). In February 2002, the school reported an enrollment of approximately 623 children, ranging in age from 5 to 12 years old (grades kindergarten through sixth). Residences on Maidu Drive, Gold Street, Robie Drive, Placerado Avenue, and Marina Avenue, as well as smaller roads branching off of those streets, are within the one-half mile radius of the project site or construction entrance, with the nearest home located approximately 0.2 mile from the project site.

Worker Safety

During construction, a maximum of 50 workers would be in the area in addition to any delivery personnel. The workers and delivery personnel would be sensitive receptors to any accidents involving hazardous materials at the project site. During operation, one worker would visit the project site at approximately eight-hour intervals for operation checks and maintenance of the pump station and associated facilities.

Project Site Hazardous Materials

The project site does not currently contain any hazardous materials, as fuels and other equipment maintenance-related materials are not stored at the seasonal pump station site. However, the area

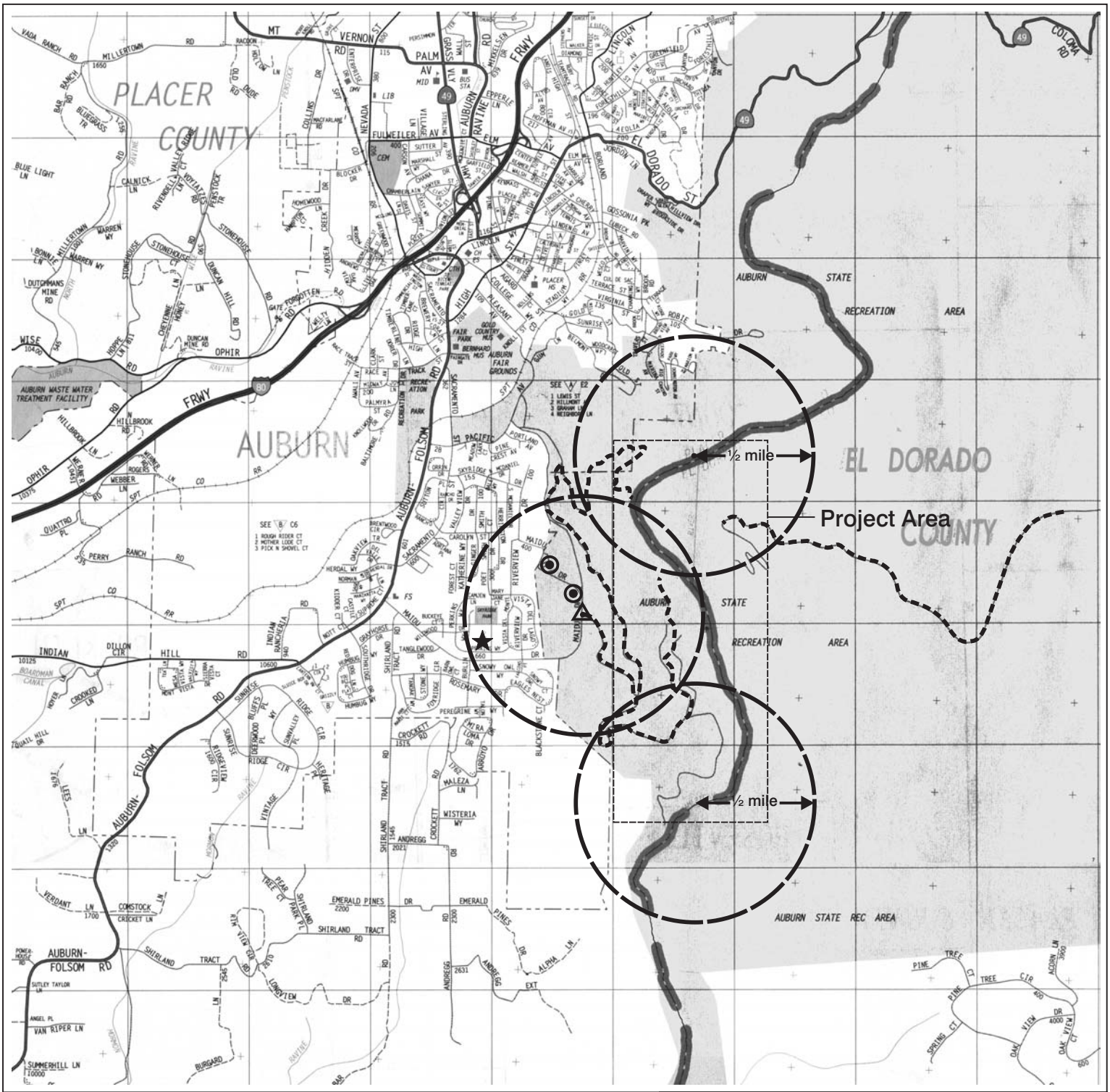


Figure 3.17-1 Project Site and Location of Sensitive Receptors

does contain naturally occurring asbestos. Reconnaissance mapping of the area during preliminary geotechnical investigations revealed serpentine rocks containing asbestos near the existing unimproved road to the seasonal pump station site (MARK 1997). Serpentine rocks are hard and dense, light greenish-gray to black, and some rocks may contain veinlets of chrysotile (asbestos) along joints (MARK 1997). Reclamation would determine the locations of asbestos-containing rocks and potential for project construction to disturb such areas based on the selected alternative final plans. While asbestos contained in rocks does not pose a threat to public or worker health, cracking or destruction of the rocks can release asbestos fibers which does present a health risk.

Construction activities under the Proposed Project or Upstream Diversion Alternative would require on-site use and storage of blasting equipment (i.e., explosives), diesel fuel, gasoline, paint, solvents, lubricating oils, and concrete curing compounds for use during construction and for maintenance of equipment and vehicles. Blasting equipment would include, but not be limited to, detonators, primers, and explosives. **Table 3.17-1** presents the types and amounts of hazardous materials that would be stored on-site.

Table 3.17-1
Hazardous Materials to be Stored On-Site During Construction of the Proposed Project and Upstream Diversion Alternative

Material	Application	Storage Location	Storage Quantity
Diesel Fuel	Fuel for construction vehicles, equipment, and generators	Refueling truck that visits the project site one to two times per day	5,000 gallons. Truck on-site temporarily, not stored throughout construction
Gasoline	Fuel for small construction equipment, vehicles, and generators	Storage tank on project site	Up to 1,000 gallons
Paint	Protective coating of ferrous and other surfaces	Within storage trailer on project site	Up to 500 gallons
Solvents	Miscellaneous uses	Within storage trailer on project site	Up to 100 gallons
Lubricant Oils	Vehicle and equipment lubrication	Within storage trailer on project site	Up to 50 gallons
Concrete Curing Compound	Concrete curing	Within storage trailer on project site	Up to 200 gallons

During project operation, the only hazardous materials to be stored on-site would be fuel and hydraulic oil for the emergency generator. The generator would hold a maximum of 50 gallons of fuel.

Fire Management

Through a Cooperative Agreement with Reclamation, the California Department of Forestry and Fire Protection (CDFFP) provides fire protection services for the Auburn Dam and Reservoir lands. These fire protection services include both fire prevention and suppression activities and include patrolling, maintenance of fuel breaks and signs, and fire suppression, among other things, within the Auburn SRA.

Reclamation, CDFFP, and CDPR are developing a comprehensive fire management plan for the Auburn Dam/Auburn SRA. This activity is being undertaken through coordination and consultation with the City of Auburn, American River Watershed Group, and other local organizations including appropriate Fire Safe Councils in the affected area. The project area, located within the Auburn Dam Project lands, is included in the comprehensive fire planning effort. As part of this effort, CDPR, CDFFP, and Reclamation have prepared an Auburn State Recreation Area Prefire Management Plan (January 2002). This Prefire Management Plan is included as Appendix A to the Final EIS/EIR. CDFFP records for the last 10 years show that approximately 60 percent of fires started within and around the Auburn SRA are a result of direct human activity, including arson, escaped campfires, smoking, debris burning, equipment use, playing with fire, and vehicles. Lightning, a natural cause, started two percent of the fires. Other causes noted were the railroad and power lines.

Emergency response in the project area is the responsibility of many agencies. While hazardous material spills and other emergencies would be reported to the Placer County Sheriff's dispatch through 9-1-1, a series of contacts with other agencies also would be made. Agencies involved in an emergency incident could include the U.S. Environmental Protection Agency National Response Center, CDFFP, Placer County Office of Emergency Services (OES), Placer County Department of Environmental Health (DEH), the Placer County Hazardous Materials Response Team (located in Auburn), CDPR, and CDFG.

3.17.2 ENVIRONMENTAL CONSEQUENCES/IMPACT ANALYSIS

3.17.2.1 Methodology

Preliminary impact analysis consisted of identifying the nearest population center and sensitive receptors located in the study area. Maps were reviewed to determine the sensitive receptors located within one-half mile of the project area, which included residences and Skyridge Elementary School. The one-half mile distance is considered the potential impact area due to blasting which would be the primary hazard associated with construction.

Hazardous materials that would be used and stored on-site during construction and operation were identified and evaluated to determine the potential risk to sensitive receptors resulting from exposure to these materials. Hazardous materials used and stored on-site would not be highly toxic or flammable. Additionally, applicable laws, ordinances, regulations, standards, and Placer County plans were reviewed, and Cal/OSHA, Placer County OES and DEH officials were consulted. Occupational, Safety, and Health Administration (OSHA) officials were consulted for information on asbestos requirements in an outdoor environment. OES and DEH were consulted for information on Placer County's hazardous material response plans and procedures.

For public health, potential impacts were considered in relation to the type and quantities of hazardous materials to be used and generated by construction, as well as the potential for the public to come in contact with such materials. This included consideration of the amount of hazardous materials as well as hazardous material storage handling and disposal procedures. The location of sensitive public receptors also was considered relative to the risk posed by project site

accidents and hazardous material wind dispersal. Materials that would be transported, stored, handled, and disposed of during construction and operation include:

- Commercially available chemicals, including fuels, oils, solvents, paints, and other substances
- Explosives
- Naturally occurring asbestos

Regional issues, specifically the transport of hazardous materials to the project site on Interstate 80, local highways, and City of Auburn roadways, have been eliminated from further consideration. These issues have been eliminated due to the numerous requirements pertaining to the transport of hazardous materials specified by the Department of Transportation under the National Transportation Act (CFR 49).

Potential impacts to worker safety were considered in relation to OSHA requirements. OSHA requirements considered included those that specify the storage, handling (including the use of blasting equipment), and disposal procedures for hazardous materials.

3.17.2.2 Applicable Laws, Ordinances, Regulations, and Standards

Federal and state regulations govern the use, transportation, storage, and disposal of hazardous materials and wastes. **Table 3.17-2** summarizes the applicable federal and state regulations that were reviewed as part of this analysis.

Table 3.17-2
Summary of Hazardous Materials Regulatory Authorities

Regulatory Agency	Authority
Federal Agencies	
Department of Transportation	National Transportation Act (CFR 49)
Environmental Protection Agency	Federal Water Pollution Control Act Clean Air Act Resource Conservation & Recovery Act (RCRA) Comprehensive Environmental Response, Compensation & Liability Act Superfund Amendments & Reauthorization Act (SARA)
Bureau of Alcohol, Tobacco and Firearms	Explosives Control Act
Occupational Safety and Health Administration	Occupational Safety and Health Act and CFR 29
State/Local Agencies	
Department of Toxic Substances Control	Hazardous Waste Control Law Hazardous Materials Release Response Plans/Inventory Law Acutely Hazardous Materials Law CCR Titles 17, 19, and 22
Department of Industrial Relations (Cal/OSHA)	California Occupational Safety and Health Act, CCR Title 8
Placer County Office of Emergency Services	Hazardous Materials Release Response Plans/Inventory Law

Hazardous Materials Public Health Regulatory Structure

Public health is safeguarded against harmful exposure to hazardous materials through several agencies. At the federal level, the principal agency regulating the generation, transportation, and disposal of hazardous materials is the EPA, under the authority of RCRA. CALTRANS governs the transport of hazardous materials.

Several state agencies also work to minimize public exposure to hazardous materials. The California Environmental Protection Agency (Cal-EPA) and the California OES establish rules governing the use of hazardous materials. The CHP and CALTRANS are the enforcement agencies for hazardous materials transportation regulations. The Bureau of Alcohol, Tobacco and Firearms (ATF) regulates the use and storage of explosives. ATF regulations define storage conditions, permit regulations, and security obligations, including storage and staging distances for explosives.

Within Cal-EPA, the Department of Toxic Substance Control (DTSC), formerly part of the Department of Health Services, has primary regulatory authority over the generation, transport, and disposal of hazardous materials under the Hazardous Waste Control Law (HWCL). The state has delegated enforcement of HWCL to the Placer County OES and DEH. State regulations applicable to hazardous materials are indexed in Title 26 of the CCR.

Placer County's emergency response plan for hazardous material incidents serves to minimize harmful public exposure to hazardous materials in the event of an incident. This plan specifies procedures for emergency notification response and public safety information. The county also requires a right-to-know reporting program for projects storing more than 55 gallons, 500 pounds, or 2,000 cubic feet of hazard materials to protect the public against hazardous materials. The report program requires contractors to develop a spill prevention and containment plan, identify storage locations and amounts, and comply with storage requirements (J. Miners, pers. comm. 1998).

Hazardous Materials Worker Safety Regulatory Structure

OSHA sets federal standards regulating worker handling, transport, storage, and disposal of hazardous materials to ensure safety of workers in contact with such substances. OSHA also requires worker training and sets exposure limits and safety procedures for the handling of hazardous substances (as well as other hazards).

Cal/OSHA assumes primary responsibility for developing and enforcing work place safety regulations within the state. Cal/OSHA regulations for hazardous materials include requirements for safety training, availability of safety equipment, hazardous materials exposure warnings and emergency action, and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, providing employees with Materials Safety Data Sheets (MSDS), describing the hazards of chemicals, and documenting employee training programs.

Cal/OSHA requirements (CCR Title 8) are more stringent than federal requirements and include establishing control areas, wetting asbestos-containing materials to preclude fiber release, wearing of personal protective equipment in the form of full-body protective suits and respiratory protection as necessary, and collecting air samples to test worker exposure, along with safety requirements regarding blasting equipment and commercially available hazardous materials.

3.17.2.3 Impact Indicators and Significance Criteria

Public health and worker safety impact indicators and significance criteria were developed based on the location of sensitive receptors and the types of hazardous materials that would be used and stored on site. **Table 3.17-3** presents the indicators and criteria used in the impact analysis.

Table 3.17-3
Public Health and Worker Safety Impact Indicators and Significance Criteria

Impact Indicators	Significance Criteria
Public Health	
❑ Hazardous material and blasting incidents in the project area of a large enough magnitude to pose a health risk to the nearest sensitive receptors.	❑ Result in a substantial increased risk of exposure to commercially available hazardous substances and explosives and the hazards associated with those materials such as explosions or fires.
❑ Sensitive receptor exposure to asbestos fibers through wind dispersion from the project site during construction only.	❑ Result in exposure to asbestos concentrations greater than the Cal/OSHA 0.1 fiber per cubic centimeter of air as an eight-hour time-weighted average, or greater than 1.0 fiber per cubic centimeter of air as averaged over a sampling period of 30 minutes, as measured by methods prescribed by Cal/OSHA regulations.
Worker Safety	
❑ Worker exposure to explosions and fires associated with commercially available chemicals (e.g., solvents, fuels, and oils).	❑ Result in a substantial increased risk of exposure to explosive and fire hazards associated with spills or incorrect handling, storage, or use of commercially available substances in relation to applicable worker safety regulations.
❑ Worker exposure to asbestos fibers during construction only.	❑ Result in an exposure to asbestos concentrations in violation of Cal/OSHA standards.
❑ Worker exposure to accidental explosions associated with blasting materials.	❑ Result in a substantial increased chance of injury due to blasting operations and presence of explosives in relation to applicable worker safety regulations.
Fire Safety	
❑ Public, resident, and worker exposure to fire dangers.	❑ Result in a substantial increase in potential for construction- or project-related fires.

3.17.2.4 Impact Analysis

Facilities-Related Impacts

No Action/No Project Alternative

There are no hazardous materials currently stored on-site and the No Action/No Project Alternative would not substantially change either public health or worker safety conditions. The No Action/No Project Alternative would not result in a substantial increase in the potential for wildfires or project-related fires relative to the existing condition.

Proposed Project

Public Health

Impact 3.17-1: Increased risk of public exposure to commercially available hazardous materials or explosives.

During construction, commercially available substances as identified in Table 3.17-1 will be used and stored on-site. These substances could be flammable, volatile, or possess other hazardous characteristics. The project area will be closed to the public during some construction activities; however, accidental explosions or fires associated with commercially available materials could pose a risk to sensitive receptors.

The nearest sensitive receptor to the project site is located approximately 0.2 mile from the seasonal pump station and 700 feet higher than at the top of the western side of the river canyon. The amount of hazardous materials stored on-site will not be sufficient to generate an accidental explosion of a large enough magnitude to pose a risk to this receptor.

As presented in Table 3.17-1, the largest amount of hazardous materials stored on-site will be 1,000 gallons of fuel. This amount exceeds the storage limit specified in the Placer County right-to-know reporting program, and as a result, a spill prevention and containment plan will be implemented and compliance with chemical storage and use requirements shall be followed. The lead agencies would ensure that the project construction contractor complies with relevant hazardous material regulations. In addition, Placer County has an emergency response plan. Based on the topography, distance to the nearest sensitive receptor, and the hazardous material storage, spill, containment, and emergency response conditions in place, the presence of the identified types and volumes of commercially available materials will not present a substantial increase in risk to public safety.

Construction of the Proposed Project could include up to three explosive events per day. Blasting will occur between the hours of 1:00 p.m. and 4:00 p.m. over a period of three to eight months. Cal/OSHA regulations (CCR Subchapter 4, Article 8) govern supervision of blasting operations and storage, transport, and handling of explosive materials. These regulations require that blasting operations are supervised by a blaster with a current, valid California "Blaster's License" (CCR §1550). Storage requirements specify conditions for the contents of explosive

storage magazines; for example, detonators are not to be stored in a magazine with any other explosive material (CCR §1561). Handling and use regulations include numerous measures to prevent accidental or unplanned explosions. These measures also specify distances to be maintained between explosives and power lines and between simultaneous blasting operations, prohibit unattended or abandoned blasting materials, and detail blast loading and detonation methods (CCR §1565 and 1567). ATF regulations also define storage conditions, security obligations, and storage requirements for explosives. These regulations specify site security actions that must be taken to prevent theft and misuse of explosive materials such as posting warning signs and controlling access to areas where explosives are stored and used.

Reclamation will be responsible for ensuring that the construction contractor complies with Cal/OSHA, ATF, and other blasting regulations. With blasting regulation compliance, potential impacts from risks associated with accidental explosions, fires, or theft and misuse will be less than significant.

Based on the procedures and restrictions that will be in place to control the use, transport, and handling of hazardous materials and explosives, it is unlikely that the nearest project area receptors will be exposed to accidental explosions or fires associated with the commercially available chemicals and explosives to be used by the project. Therefore, construction and operation of the Proposed Project will represent a less-than-significant impact.

Impact 3.17-2: Increased public exposure to asbestos.

Excavation and blasting activities in the project area could release asbestos fibers. While asbestos was not encountered in pump station or pipeline location borings, asbestos was identified in bedrock outcrops and rock debris on the slope above the existing unimproved road to the diversion site during preliminary geotechnical investigations (MARK 1997). Increased public exposure to asbestos fibers could be a potentially significant impact of project construction. Reclamation would include measures to reduce the risk of exposure to asbestos as part of the Mitigation Plan (see Section 3.17.2.5).

Implementation of the environmental protection measures will lessen the impact of excavation and blasting activities and resultant increased public exposure to asbestos, if present at the site, resulting in a less-than-significant impact.

Impact 3.17-3: Increased public exposure to fire hazards.

Increased public use of the Auburn Dam and Oregon Bar areas at the site and of the North Fork American River from the confluence and downstream past the project area introduces an increased fire risk associated with human activity in the canyon.

The Comprehensive Fire Management Plan will include all aspects of public and firefighter safety and prevention and fire suppression activities. Since the release of the Draft EIS/EIR, a major component of the Comprehensive Fire Management Plan, the Fuels Management Action Plan, has been completed and is included in the Prefire Management Plan. This element directly affects the interface lands (the areas where public lands adjoin private lands) and lays out a

process to implement fire management strategies for the Auburn SRA lands that are a priority interface with the Greater Auburn Area. As a major component of mitigation for the potential of increased fire danger on public lands within the interface areas directly affected by the American River Pump Station Project, ground implementation of the Fuels Management Action Plan is planned to be completed prior to opening the area for public use.

Through coordination and partnerships with local neighborhoods, citizen groups, and others, CDPR and Reclamation will work to implement appropriate fire management strategies as prescribed in this plan. The interface lands will be divided into priority areas with each having its own site-specific environmental review process.

Fuel modification within interface lands is critical for reducing the potential for a costly and damaging fire. The following prescriptions can be used for fuel management in three distinct geographic areas or zones within the interface areas: (1) Shaded Fuel Break, (2) Defensible Space, and (3) Defensible Landscape.

Shaded fuel breaks will be developed on public lands that interface private lands directly affected by the American River Pump Station Project. The width of the fuel break is usually 100 to 300 feet, depending on site conditions. Creating a shaded fuel break involves carefully planned thinning of dense vegetation, intended to inhibit fire from easily moving from ground into the overhead tree canopy. A shaded fuel break does not involve the removal of all vegetation in a given area.

Fire suppression ground and air resources can use the shaded fuel break area to suppress wildland fires. Any fuel break by itself will not stop a wildland fire. Shaded fuel breaks, to be most effective, must be accomplished in conjunction with the other prescriptions, such as defensible space and defensible landscapes, which would occur largely on adjacent private properties. The managing partners of the comprehensive fire plan are working with local entities and citizen groups to implement the Fuels Management Action Plan.

Construction-Related Fire Protection and Prevention

Reclamation would ensure that the construction contractor prepare and carry out an effective fire protection and prevention program covering all phases of construction under the contract for the selected alternative. The plan would be submitted to Reclamation, for approval prior to the start of construction operations. At the option of the construction contractor, the fire protection and prevention program may be incorporated into the safety program required in the project's construction specifications.

These requirements would be part of the Mitigation Plan (see Section 3.17.2.5) for fire protection and prevention.

All construction operations shall be in compliance with Reclamation Construction Safety Standards and applicable federal and state codes.

Fire Management and Prevention for Public River Access Features

Shaded fuel breaks would be constructed along the public river access roads and parking areas. These shaded fuel breaks would be 20 to 30 feet wide depending on the site conditions. Shaded fuel breaks are proposed along the main construction road that follows Maidu Drive to the batch plant, and from the batch plant to Oregon Bar and to the river-side turnaround and limited ADA-designated parking area. Shaded fuel breaks also would be constructed around the batch plant parking area and both turnarounds. Road improvements would meet emergency vehicle access needs. Moreover, the proposed prohibition on open fires within the project area would reduce the risk of wildfire potentially related to increased public use.

Additionally, distance or mile markers would be installed along the trails as appropriate to aid rescuers in emergency situations to locate hikers that may become disabled or lost.

Additional actions and activities may be identified as the comprehensive fire planning process continues to evolve. This plan would be in place prior to opening the project area for public use.

Worker Safety

Impact 3.17-4: Worker exposure to fire and explosive hazards associated with the handling and storage of commercially available hazardous materials.

Under the Proposed Project, various commercially available substances will be used in the project area, as well as explosives. Table 3.17-2 identifies the amount of each substance that will be stored on-site. As part of construction management, a right-to-know reporting program would be implemented and project contractors will be responsible for enforcing worker standards procedures for the correct handling and storage of these materials. PCWA and Reclamation also will ensure that the construction contractor complies with appropriate hazardous material and explosives regulations. A spill prevention and containment plan and worker briefings on correct handling and storage procedures also will be implemented. With these measures in place, the risk to workers from accidental fires and explosions related to commercially available hazardous materials and explosives will be less than significant.

Impact 3.17-5: Worker exposure to unacceptable levels of asbestos.

Construction activities could release asbestos fibers from rocks in the project area into the air, thereby increasing the health risk to workers. Environmental protection measures for the Proposed Project incorporate Cal/OSHA requirements to be implemented by the construction contractor and include: asbestos concentration monitoring, asbestos awareness training of construction workers, and implementation of a personal hygiene plan. Based on results of asbestos monitoring, respiratory requirements could be implemented, as necessary. Additionally, to prevent the dispersal of asbestos fibers, the construction contractor would water blast sites and other areas. These measures would reduce the risk of asbestos-related health effects to a less-than-significant level.

Impact 3.17-6: Increased risk of injury due to use of explosives.

Under the Proposed Project, explosives would be used during excavation activities. Hazards would be associated with accidental explosions during transport, storage, assembly, and detonation. Transport of detonators, fuses, dynamite, and other explosive materials could pose a threat to workers' safety; however, Cal/OSHA maintains a series of rules (CCR, Title 8) regarding blasting operations and storage, transport, and handling of explosives materials, as discussed under Impact 3.17-1. These safety measures would be part of the construction management of this project and the risk to worker safety from the use of explosives would be less than significant.

Blasting operations could pose seismic hazards to workers on-site (the public would not be exposed due to project site closure during blasting, nor would area residences be exposed due to the small magnitude of explosives). Specifically, blasting could result in falling rock or debris that could affect worker safety. Reclamation would be responsible for ensuring that the project blasting specialist designs timing, duration, and magnitude of blasts, so as not to trigger falling rock or debris. Therefore, this represents a less-than-significant impact.

Upstream Diversion Alternative

Public Health

Impact 3.17-7: Increased risk of public exposure to commercially available hazardous materials.

As with the Proposed Project, commercially available substances and explosives would be used and stored on-site during construction. These materials would be used and stored in compliance with all federal, state, and local requirements, thereby resulting in a less-than-significant impact. For discussion of this impact, refer to Impact 3.17-1.

Impact 3.17-8: Increased public exposure to asbestos.

As with the Proposed Project, construction activities potentially would expose and release asbestos into the surrounding environment. Environmental protection measures to prevent public exposure would be implemented and would reduce this impact to less than significant. For discussion of this impact, refer to Impact 3.17-2.

Worker Safety

Impact 3.17-9: Worker exposure to increased fire and explosive hazards associated with the handling and storage of commercially available hazardous materials.

Similar to the Proposed Project, activities related to the Upstream Diversion Alternative would involve the use and storage of various commercially available substances at the project site (see Table 3.17-2). Implementation of construction management measures would reduce this impact to less than significant. For discussion of this impact, refer to Impact 3.17-3.

Impact 3.17-10: Worker exposure to unacceptable levels of asbestos.

Construction activities under the Upstream Diversion Alternative could result in the release of asbestos fibers from project site rocks, thereby increasing the health risk to workers. As described for the Proposed Project, the construction management plan would employ protection measures to result in a less-than-significant impact. For further discussion of this impact, refer to Impact 3.17-4.

Impact 3.17-11: Increased risk of injury due to use of explosives.

Under the Upstream Diversion Alternative, explosives would be used during excavation, however, as with the Proposed Project, blasting operations would be carried out in compliance with Cal/OSHA regulations; therefore, impacts from the use of explosives would be less than significant. For further discussion of this impact, refer to Impact 3.17-5.

Cumulative Facilities-Related Impacts

Implementation of the selected alternative would require compliance with all local, state, and federal regulations governing the transport, delivery, use, storage, and accident response activities relative to the project to protect public health and worker safety. It is expected that regulatory agencies would require the same level of public health and worker safety protection of other planned/proposed projects in the study area, thereby minimizing the potential for cumulative public health or work safety effects.

The Comprehensive Fire Management Plan would serve to address cumulative fire prevention, protection, and management concerns within the Auburn SRA.

3.17.2.5 Environmental Protection and Mitigation Measures

Several mitigation measures have been incorporated into the Mitigation Plan to reduce potential public health and worker safety concerns.

Minimize the Potential for Increased Erosion and Slope Instability During Project Construction

Commitment:	Implement the best available engineering design standards and grading techniques to reduce the possibility of undue risks to members of the public and/or additional environmental degradation that could be caused by erosion, mass wasting or unstable slope conditions.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Regular on-site inspection of active construction areas
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to perform all grading and excavation operations such that the potential for creating unstable slopes or landslides would be minimized. Potential measures include terracing, reducing slope angles, and reducing the height of cut and fill slopes.

Reclamation will require the Construction Contractor to fence-off or identify with temporary markers, areas of substantial instability in order to prevent unauthorized access.

Success Criteria: Hazardous unstable slope conditions are avoided.

Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction

Fuel would be stored on-site in an amount that exceeds the storage limit specified in the Placer County right-to-know reporting program, and as a result, a spill prevention and containment plan will be implemented and compliance with chemical storage and use requirements will be followed.

Commitment:	Use potentially hazardous materials according to manufacturers instructions. Minimize potential for fire hazard due to construction activities.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect and record use of hazardous materials
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:

Hazardous Materials
Reclamation will require the Construction Contractor to ensure compliance with all applicable hazardous material regulations, including regulations for blasting operations.

Reclamation will require the Construction Contractor to provide evidence of worker training and education on the proper transport, storage, handling, and use of hazardous materials and explosives.

Reclamation will require the Construction Contractor to restrict public access in areas of hazardous material storage or use.

Fire Protection and Prevention
Reclamation will ensure that the Construction Contractor prepare and implement an effective fire protection and prevention program covering all phases of construction under the contract. This plan will be submitted to Reclamation's Construction Engineer for approval prior to construction

operations. Construction Contractor will provide and maintain a fire-tool cache and a sufficient number of employees familiar with this equipment will be available at all times when work is in progress.

In the event of a fire resulting from Project operations, the local fire-protection agency will be notified and the contractor shall take immediate control action with all available equipment and manpower.

In areas where a significant fire hazard exists as determined by the Contracting Officer, the contractor shall provide a fire patrol for one hour after the shutdown of construction operations each day during the fire season.

Contractor will establish a firebreak on the uphill side of the Project in areas where natural fuels are present and where existing roads or creek beds will not serve the purpose. The firebreak will be within the right-of-way acquired by Reclamation and will consist of a 10-foot wide strip with flammable material either cleared or covered with mineral soil.

Where normal fire protection services are interrupted by construction operations, the contractor will provide equivalent temporary services including water supplies and access for fire equipment through the Project area.
All construction operations will be in compliance with Reclamation Construction Safety Standards and all applicable state and federal codes.

Success Criteria: Document compliance with all activities.

Remove All Construction-related Materials From Project Site Prior to Opening for Public Use

Commitment: Ensure public safety within the Project area.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: Upon completion of construction/prior to opening site for public use
Monitoring: On-site Monitor to inspect site following clean-up efforts and demobilization.
Reporting Requirements: Final construction compliance report

Description of Activities:
Reclamation will require the Construction Contractor to remove all waste materials, rubbish and unused construction materials from the Project site after construction and before public access into the area is granted.

Success Criteria: Document site condition in final construction report.

Minimize the Risk of Public Exposure to Fire Hazards During Project Operations

Reclamation, CDFFP, and CDPR developed a comprehensive fire management plan for the Auburn Dam and Reservoir lands/Auburn SRA. This activity involved coordination and consultation with the City of Auburn, the American River Watershed Group, and other local organizations including Fire Safe Councils within the Auburn area.

Commitment: Provide fire protection services including fire prevention and suppression.
Responsible Parties: Reclamation/CDPR/CDFFP
Location: Project area/Auburn SRA
Timing: During construction/ongoing once public river access is granted.
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will be responsible for ensuring implementation of the Comprehensive Fire Management Plan. Agencies involved in coordination and implementation of the plan include Reclamation, CDPR, and CDFFP. Additionally, will CDPR enforce the provisions of CCR Title 14, Section 4311 restricting fires and smoking at the public river access locations.

The Fuels Management Plan element of the Comprehensive Fire Management Plan includes establishment and maintenance of shaded fuel breaks adjacent to all public access roads associated with the Project. This includes the main construction road from Maidu Drive to the batch plant, the road from the batch plant to Oregon Bar, and the road from the batch plant to the riverside turnaround and handicap-accessible parking lot (across the river from the existing tunnel outlet). Shaded fuel breaks also will be constructed around the batch plant parking area and both turnarounds.

Additional measures include:

- Implementation of standards set forth in Public Resources Code 4290 to ensure safe passage of fire suppression resources and egress of private vehicles should a wild fire occur in the canyon. These standards address road widths, turnouts, and dead-end turnarounds.

- Placement of distance/mile markers along Project area trails to aid rescuers in emergency situations to locate hikers that may become disabled or lost.

Additionally, a 300-foot wide shaded fuel break is being constructed between the houses adjacent to Auburn SRA and the Maidu Drive/Skyridge neighborhood. Construction of the shaded fuel breaks is being completed separately from the Project in cooperation between CDPR, CDFFP and Reclamation. However, although not part of the Project, this action will serve to benefit the Project area and further reduce potential risk of fire in the study area.

Success Criteria: Placement of shaded fuel breaks. Ongoing agency coordinated protection of area.

Prevent Vehicular Access in Undesignated Areas

Commitment: Restrict vehicular public access to permitted routes only.
Responsible Parties: Reclamation/Construction Contractor and CDPR
Location: Project area roads
Timing: Permanent barriers
Monitoring: Monitoring condition of barriers and provide replacement or repair, as needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to install large rocks, guard rail posts, or other barriers at all trail or road intersections or termination points where off-road public access is to be restricted.

Reclamation will require CDPR to monitor the condition of these barriers and provide maintenance, repair or replacement, as needed.

Success Criteria: Road barriers remain in place and prevent off-road vehicular use in Project area.

Minimize Inappropriate or Illegal Activities at Public River Access Locations

Commitment: Patrol and enforce state regulations regarding illegal or inappropriate activities.
Responsible Party: CDPR, through management agreement with Reclamation
Location: Project area - public river access features
Timing: Ongoing during use of public river access sites
Monitoring: Record incidents and how they were handled
Reporting Requirements: According to CDPR requirements

Description of Activities:
Reclamation, through the Auburn SRA management agreement, will require CDPR to post the rules and regulations applicable to use of the Project area at the entrance and at each of the parking areas and turnaround locations. The following restrictions are anticipated:

- No alcohol use.
- No open fires or smoking.

A new gate will be installed at the junction of Maidu Drive and the public access road into the canyon. An entrance station is to be constructed near the junction of Maidu Drive and the construction road into the dam site that will be used as the access road; the station will be manned during all hours of operation.

The gated entrance station will limit vehicle access to designated hours.

Limit Public Access to Water Supply Facilities and Structures

Commitment:	Protect PCWA's facilities and minimize public safety issues due to misuse of water supply facilities.
Responsible Party:	PCWA
Location:	Project area/river channel
Timing:	Post-construction
Monitoring:	Inspect fencing and signs on a regular basis and repair/replace as needed
Reporting Requirements:	Record condition of facilities in operations and maintenance log book

Description of Activities:
Prior to opening the site, PCWA's water supply facilities (on land) would be enclosed, to the extent feasible, in order to minimize public access or injury.

Signs indicating PCWA's ownership of the structures/facilities and warning of potential hazards would be posted in strategic locations to discourage unauthorized access.

CDPR's patrolling of the area will provide further management and reduction of potential unauthorized use.

Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction

Commitment:	Reclamation will determine the potential for asbestos-containing rock to be encountered at the Project site. Depending upon the likelihood of such, the Construction Contractor will be required to implement air emission control measures to reduce the level of asbestos emissions during construction; as determined appropriate for the Project site and specific earthwork activities.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect Project area and indicate compliance with Placer County APCD, El Dorado County APCD, and CARB requirements, as applicable.
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will determine the presence of and potential for construction to disturb asbestos-containing rock areas in the Project area. Should the likelihood be determined to be low, Reclamation will require the controls listed below as contingency measures in the construction contract, to be implemented in the event asbestos is encountered during earthwork.

As a precautionary measure, the construction specifications will require the contractor to obtain air samples periodically during earth moving and drilling operations to document whether an asbestos hazard exists.

Reclamation will require the Construction Contractor to meet all applicable requirements of the Placer County APCD, El Dorado County APCD (Ordinance 4548), and CARB for any grading, excavation or other construction that potentially could result in the disturbance of asbestos-containing rock. Provisions that may apply include the following:

- Apply chemical soil stabilizers to inactive construction areas.
- Regularly clean construction equipment.
- Suspend all grading operations when instantaneous wind speeds exceed 25 miles per hour.
- Stabilize exposed or disturbed areas as soon as possible after disturbance.

If required, implement additional measures required by CARB for Asbestos Control

If asbestos-containing rock areas are determined to occur on site, construction personnel exposure to asbestos will be reduced by the implementation of standard California Occupational, Safety, and Health Administration protective measures including monitoring, awareness training and personal hygiene. The construction management plan will include practices to reduce public exposure to asbestos fibers. Such practices will include:

- Geotechnical survey of excavation areas to map areas of serpentine rock.
- Public notification regarding blasting and earthwork prior to and throughout construction.
- Closure of site to public access with warning signs alerting the public to potential exposure to asbestos.
- Monitoring of residential and Project site asbestos levels during earthwork and blasting.
- Watering of active construction areas to minimize air dispersal of asbestos and dust.
- Worker education briefings regarding risks and ways to minimize health risks including personal hygiene practices. In addition, minimize worker exposure by implementing an asbestos mitigation plan and by requiring proper protective clothing and respiratory devices if deemed necessary after monitoring asbestos concentrations.

Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction

Commitment: Reclamation will determine the potential for asbestos-containing rock to be encountered at the Project site. Depending upon the likelihood of such, the Construction Contractor will be required to implement air emission control measures to reduce the level of

	asbestos emissions during construction; as determined appropriate for the Project site and specific earthwork activities.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect Project area and indicate compliance with Placer County APCD, El Dorado County APCD, and CARB requirements, as applicable.
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will determine the presence of and potential for construction to disturb asbestos-containing rock areas in the Project area. Should the likelihood be determined to be low, Reclamation will require the controls listed below as contingency measures in the construction contract, to be implemented in the event asbestos is encountered during earthwork.

As a precautionary measure, the construction specifications will require the contractor to obtain air samples periodically during earth moving and drilling operations to document whether an asbestos hazard exists.

Reclamation will require the Construction Contractor to meet all applicable requirements of the Placer County APCD, El Dorado County APCD (Ordinance 4548), and CARB for any grading, excavation or other construction that potentially could result in the disturbance of asbestos-containing rock. Provisions that may apply include the following:

- Apply chemical soil stabilizers to inactive construction areas.
- Regularly clean construction equipment.
- Suspend all grading operations when instantaneous wind speeds exceed 25 miles per hour.
- Stabilize exposed or disturbed areas as soon as possible after disturbance.

3.18 OTHER IMPACT CONSIDERATIONS

3.18.1 INDIAN TRUST ASSETS

Indian Trust Assets (ITAs) are legal interests in property and rights held in trust for Indian tribes or individuals by the United States. Although there is no concise legal definition of ITAs, courts have traditionally interpreted them as being tied to real property. Indian reservations, rancherias, and allotments are common ITAs. Types of actions that could affect ITAs include an interference with the exercise of a reserved water right, degradation of water quality where there is a water right, impacts to fish and wildlife where there is a hunting or fishing right, or noise near a land asset where it adversely impacts uses of reserved land. It is Reclamation's policy to protect ITAs from adverse impacts resulting from its programs and activities. There have been no ITAs identified within the project study area. The Proposed Project or alternatives would not result in adverse impacts to ITAs.

3.18.2 ESSENTIAL FISH HABITAT

The 1996 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) added a provision for federal agencies to consult with NMFS on impacts to EFH. EFH are specifically identified waters and substrate necessary for fish spawning, breeding, feeding, or growing to maturity. In the Mid-Pacific Region, the Pacific Fishery Management Council designates EFH and NMFS approves the designation.

EFH only applies to commercial fisheries. For the action addressed within this EIS/EIR, this means all chinook salmon habitat, but not steelhead habitat. EFH includes all anadromous streams (including some intermittent streams) up to impassable barriers. In the American River basin, EFH includes the lower American River up to Nimbus Dam. In the Central Valley, it also includes accessible waters of the Delta, Sacramento River, and tributaries up to impassable barriers. Keswick Dam represents the first impassable barrier on the Sacramento River, within the study area.

Federal agencies must consult with NMFS on all actions that may adversely affect EFH (Section 305 (b)(2) of the MSFCMA). The NEPA review process may be used to satisfy EFH consultation requirements. Thus, a separate EFH document is not needed. Information contained within the EIS/EIR regarding potential effects of implementation of the pump station project satisfy analytical requirements for EFH for Central Valley fall-run chinook salmon throughout the potentially affected area including Auburn Ravine and other tributaries of the Sacramento River. Specifically, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine within the limits of recent historical monthly maximums, thereby avoiding potential changes to the existing quantity, seasonal distribution, or source water composition. Hence, impact considerations in Auburn Ravine and other potentially affected tributaries of the Sacramento River focus on the issues of straying and "false attraction," which are thoroughly analyzed and discussed in the Auburn Ravine Master Response (see Appendix C, Volume 1, Responses to Comments, Master Response 3.1.13, Auburn Ravine, for further detail). Implementation of the Proposed Project or

alternatives would not be expected to adversely affect fall-run chinook salmon essential fish habitat.

3.18.3 ENVIRONMENTAL JUSTICE

Executive Order 12898, Environmental Justice, requires that review of proposed federal actions analyze any disproportionately high and adverse environmental or human health effects on minority and low-income communities. No disproportionately high or adverse environmental or human health impacts on minority or low-income communities have been identified for this project.

3.18.4 IRREVERSIBLE AND IRRETRIEVABLE USE OF RESOURCES

Irreversible commitments of resources would result from implementing either the Proposed Project or alternatives. These resources include:

- Construction materials
- Labor
- Land area devoted to project facilities; and
- Energy needed for construction, operation, and maintenance.

Up to 0.11 acre of wetlands would be permanently lost under the Upstream Diversion Alternative. This acreage would be replaced according to the terms of the Corps' consultation and permitting process.

3.18.5 SHORT-TERM USES OF THE ENVIRONMENT VERSUS LONG-TERM PRODUCTIVITY

CEQA Guidelines Section 15126(e) requires discussion of the "relationship between local short-term use of man's environment and the maintenance and enhancement of long-term productivity." This discussion addresses how the implementation of the proposed actions would affect the long-term productivity of the natural and human environment. Long-term refers to the time period that includes the operational life of the new facilities and beyond.

Installation of a year-round pump station would increase the reliability and availability of water supplies for PCWA. This increased reliability and availability would help PCWA meet current and projected demands, thus supporting the economic viability of the project service area. The project would have short-term impacts on air quality, habitat of wildlife species, recreation, and noise, but these impacts are not expected to alter the long-term productivity of the natural environment.

The Proposed Project includes restoration of the currently dewatered segment of the North Fork American River, resulting in increased habitat availability for fish and aquatic resources in the project vicinity. This habitat alteration represents a long-term beneficial effect on fish resources and aquatic habitat. Additionally, fish passage conditions through the project area would be

greatly improved through river restoration, providing a long-term benefit to fish species of the American River.

The Proposed Project would have long-term beneficial effects on water supply, fish and terrestrial resources and recreation. On balance, these long-term improvements or benefits outweigh the potentially significant short-term impacts to environmental resources in the project area.

3.18.6 CLIMATE CHANGE

Long-term climate change is a well-documented phenomenon. Based on predictions made by the Global Change Research Program, climate (air) temperatures in the United States are expected to rise between three to five degrees in the next 100 years. Some very likely consequences of climate change include an increase in precipitation and reduced snow pack. Locally, the American River may be expected to see alterations in the timing and amount of watershed flow patterns. The Global Research Program identified key issues in the West to be: (1) changes in water resources, (2) changes in natural ecosystems, (3) agricultural effects and shifts in tourism, and (4) recreation. A potentially important impact on water resources will be the potential change in amount and timing of peak flows. It also is likely that current reservoir systems eventually will be inadequate to control anticipated occurrences of earlier spring runoff and then maintain supplies for the summer. However, the Global Research Program states, "More research is necessary to identify which systems are most vulnerable."

Therefore, while it is considered inevitable that climate change will occur, the consequences of climate change are largely speculative and also will be likely to result in other unexpected consequences. The most foreseeable effect that climate change would have on the American River pump station is in regards to whether the pump station is positioned high enough to avoid damage from increased river flows. The Proposed Project's design specifications place the station at a 100-year flood elevation. This location is expected to be more than adequate to withstand anticipated high river flows. However, ongoing monitoring, operation and maintenance of the facility would identify incremental changes in seasonal river flow patterns that may affect the reliability of the system. Preventive measures to protect facilities would be taken as needed. No adverse impacts due to long-term climate change are anticipated.

Climate change impacts on resources (e.g. fisheries) are speculative. Unfortunately, based on the current research and documentation available, there is no scientifically sound way of predicting absolutes resulting from climate change. For example, water quality could either improve or degrade. In some areas, more precipitation would, very likely, increase contaminant levels (such as agricultural chemicals) and sediments in lakes and rivers. However, in other regions, higher flows would likely dilute pollutants and potentially improve water quality. Massive dislocations of species or pest outbreaks may/may not be a consequence of climate change. Many of the biological impacts are too complex for accurate impact analysis. Therefore, while the effects of climate change are extremely important to analyze, the level of scientific research needed in order to formulate an accurate response is outside the scope of the American River Pump Station Project. The construction design of the pump station utilizes all available data to ensure that it will be a safe and long-lived facility.

3.19 ENDANGERED SPECIES ACT COMPLIANCE

The Mid-Channel Diversion Alternative is the project or action under consideration and being evaluated by the resource agencies for ESA compliance. This alternative is referred to as the Proposed Project throughout the Draft EIS/EIR and in the following discussions. Because ESA and NEPA refer to the project as an "action," the terms Proposed Project and action may be used interchangeably in the following discussions.

3.19.1 INTRODUCTION

Section 3.5 (Fish Resources and Aquatic Habitat) and Section 3.6 (Terrestrial Resources) and the Cumulative Report provide much of the information and analysis requirements of a biological assessment for the Proposed Project. This information, along with that presented below, will help determine to what extent the Proposed Project may affect any of the endangered, threatened, proposed, or candidate species that may occur in the regional study area. Additional information needed to satisfy biological assessment requirements, but not already included in the EIS/EIR or Cumulative Report, is provided in this section. This information is prepared in accordance with legal requirements set forth under Section 7 of the ESA (16 USC 1536 (c)), and follows the standards established in the Reclamation NEPA guidelines and the NMFS and USFWS Endangered Species Consultation Handbook.

The Proposed Project area is within the Auburn, Colfax, Coloma, Greenwood, Gold Hill, Citrus Heights, Rio Linda, Roseville, Sheridan, Lincoln, Pleasant Grove, Camp Far West, Lake Combie, Wolf, Rocklin, and Pilot Hill USGS quadrangles. The regional study area includes Trinity and Shasta reservoirs, the upper and lower Sacramento River, the Yuba, Feather, and Cosumnes rivers, the Delta, and Folsom Reservoir and the lower American River.

3.19.1.1 Endangered, Threatened, or Proposed Species

Sacramento River Winter-run Chinook Salmon - Endangered

NMFS listed the Sacramento River winter-run chinook salmon as "endangered" on July 16, 1993 (59 *Federal Register* (FR) 440). The ESA defines the term "*endangered species" as "any species that is in danger of extinction throughout all or a significant portion of its range."* NMFS concludes that winter-run chinook salmon in the Sacramento River warrant listing as an endangered species due to several factors, including: (1) the continued decline and increased variability of run sizes since its first listing as a threatened species in 1989; (2) the expectation of weak returns in certain years as the result of two small year classes (1991 and 1993); and (3) continued threats to the population. On November 5, 1990, the NMFS section 4(d) rule prohibiting the "take" of Sacramento River winter-run chinook salmon (when winter-run-chinook salmon was listed threatened) went into effect (65 FR 42421).

Central Valley Steelhead Evolutionary Significant Unit - Threatened

NMFS listed the Central Valley ESU of steelhead as "threatened" on March 19, 1998 (63 FR 13347). Section 3 of the ESA defines the term "*threatened species" as "any species which is*

likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." NMFS concludes that steelhead in the Central Valley ESU warrant listing as a threatened species due to numerous factors, including: (1) naturally spawning steelhead in Central Valley streams occur in small numbers; (2) many populations are of non-native, mixed, or uncertain origin; (3) long-term declines in abundance; (4) high risk of interbreeding between hatchery and naturally spawned steelhead; (5) loss of historic habitat; (6) degradation of remaining habitat; (7) reduction in water quality and other factors; and (8) lack of monitoring data on abundance (65 FR 13368: March 19, 1998). On September 8, 2000, the NMFS section 4(d) rule prohibiting the "take" of Central Valley steelhead went into effect (65 FR 42421).

Central Valley Spring-run Chinook Salmon ESU - Threatened

NMFS listed the Central Valley ESU of spring-run chinook salmon as "threatened" on September 16, 1999 (64 FR 50393). NMFS concludes that spring-run chinook salmon in the Central Valley warrant listing as threatened due to varied human-induced factors, including: (1) habitat degradation; (2) water diversions; and (3) artificial propagation that serves to exacerbate the adverse effects of natural environmental vulnerability from such factors as drought, flood, and poor ocean conditions (64 FR 5049: September 16, 1999). NMFS has not yet adopted a section 4(d) rule for Central Valley spring-run chinook salmon. NMFS will propose such protective measures for spring-run chinook salmon in a forthcoming *Federal Register* document. However, under Section 7 of the ESA federal agencies must consult with NMFS if any activity they authorize, fund, or carry out may affect listed chinook salmon ESUs (55 FR 46515: September 16, 1999).

Sacramento Splittail - Threatened

USFWS listed Sacramento splittail as "threatened" on February 8, 1999 (64 FR 5963). USFWS concludes that Sacramento splittail warrant listing as threatened due to several factors, including: (1) changes in water flows and water quality resulting from the export of water from the Sacramento and San Joaquin rivers; (2) periodic prolonged drought; (3) loss of shallow-water habitat; (4) introduced aquatic species; and (5) agricultural and industrial pollutants (64 FR 5963: February 8, 1999). Critical habitat has not been designated for Sacramento splittail. USFWS has not yet adopted a 4(d) rule for the Sacramento River splittail. On August 17, 2001, USFWS announced re-opening of the comment period for the final rule on the Sacramento splittail to *"....invite comments and to obtain peer-review on the statistic analysis completed by the Service to re-analyze the available splittail abundance data."* USFWS also is inviting additional comments on the status of the species (66 FR 43145).

Delta Smelt - Threatened

USFWS listed delta smelt as "threatened" on March 5, 1993 (58 FR 12863). USFWS concludes that delta smelt warrant listing as threatened due to several factors, including: (1) large freshwater exports from the Sacramento River and San Joaquin River diversions for agricultural and urban use; (2) prolonged drought; (3) introduced nonindigenous aquatic species; (4)

reduction in abundance of key food organisms; and (5) agricultural and industrial chemicals (58 FR 12863: March 5, 1993). USFWS has not yet adopted a 4(d) rule for delta smelt.

Bald Eagle - Threatened

USFWS listed bald eagle as "threatened" on July 5, 1995 (64 FR 5963). USFWS also adopted a 4(d) rule for the bald eagle, further protecting the species. The bald eagle historically ranged throughout North America, except extreme northern Alaska and Canada and central and southern Mexico. Critical Habitat has not been designated for the bald eagle. On July 6, 1999, the USFWS proposed to remove the bald eagle from the list of endangered and threatened wildlife in the contiguous United States. USFWS concludes that the bald eagle warrant delisting as a threatened species because the species has recovered due to protection and management actions initiated under ESA and reduction in levels of persistent organochlorine pesticides occurring in the environment.

Valley Elderberry Longhorn Beetle - Threatened

USFWS listed VELB as "threatened" on August 8, 1980 (45 FR 52803). Several factors contribute to the listing of VELB as threatened, including: (1) degradation of undisturbed patches of riparian habitat; (2) extensive clearance of riparian forest for fuel and building material and agricultural, as well as urban and suburban development; (3) extensive use of pesticides; and (4) overgrazing.

The Proposed Project site was examined for the presence of VELB, as well as other listed species that have the potential to occur at the site. Elderberry shrubs, the sole habitat of VELB, have been reported upstream of the project area on the north side of Tamaroo Bar (MW and JSA 1995). No exit holes, which would indicate the presence of VELB, were found on the trunks of the elderberry cluster. Also, no elderberry shrubs were observed in or around the areas proposed for construction during the project site surveys. However, USFWS has designated the American River Parkway as Critical Habitat for this beetle (USFWS 1996). This species has been recorded in elderberry shrubs near backwater ponds along the lower American River.

California Red-Legged Frog - Threatened

The Proposed Project site was examined for the presence of the California red-legged frog. Surveys and research indicate that the California red-legged frog is not likely to occur at the project site (Carrier 1998; Carrier 2002). Wetlands suitable for the California red-legged frog are not present in the project area. In addition, suitable sites for the California red-legged frog in adjacent areas are inhabited by bullfrogs, thereby precluding occupancy by the red-legged frog in the Proposed Project area.

3.19.1.2 Candidate Species

For the Proposed Project, Central Valley fall-run and late fall-run chinook salmon are the only candidate species under the federal ESA.

Central Valley Fall-run and Late-fall-run Chinook Salmon Evolutionary Significant Unit - Candidate Species

NMFS concluded in its September 16, 1999 determination that, even though the Central Valley fall-run and late-fall-run chinook salmon ESU do not warrant listing, NMFS considers these species candidate species. NMFS will reevaluate the status of Central Valley fall-run and late-fall-run chinook salmon ESU as new information becomes available to determine whether listing may be warranted (64 FR 50412: September 16, 1999). Although federal candidate species are generally considered in federal environmental documents and may be included in Conservation Plans prepared as part of the application for a Section 10 incidental-take permit under the ESA, they are not provided protection, nor are take prohibitions required, under the ESA.

3.19.1.3 Critical Habitat

The Proposed Project addressed within this EIS/EIR falls within Critical Habitat for the Sacramento River winter-run chinook salmon, delta smelt and VELB. Sacramento River winter-run chinook salmon Critical Habitat was designated by NMFS on June 16, 1993 (58 FR 33212). Critical Habitat for delta smelt was designated by USFWS on December 19, 1994 (58 FR 12863). Final Critical Habitat for VELB was designated by the USFWS on August 8, 1980 (45 FR 52803).

Critical Habitat for Sacramento River winter-run chinook salmon is designated to include the Sacramento River from Keswick Dam, Shasta County to Chipps Island at the westward margin of the Delta, all waters from Chipps Island westward to Carquinez Bridge, and all waters of San Francisco Bay (north of the San Francisco/Oakland Bay Bridge) from San Pablo Bay to the Golden Gate Bridge (58 FR 33212: June 16, 1993).

Critical Habitat for Central Valley steelhead previously was designated but recently was withdrawn to include all river reaches accessible to listed steelhead in the Sacramento and San Joaquin rivers and their tributaries in California. Also included were river reaches and estuarine areas of the Delta, all waters from Chipps Island westward to the Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait, all waters of San Pablo Bay westward of the Carquinez Bridge, and all waters of San Francisco Bay (north of the San Francisco/Oakland Bay Bridge) from San Pablo Bay to the Golden Gate Bridge (65 FR 7779: February 16, 2000).

Critical Habitat for Central Valley spring-run chinook salmon previously was designated to include all river reaches accessible to listed chinook salmon in the Sacramento River and its tributaries in California but recently was withdrawn. Also included were river reaches and estuarine areas of the Delta, all waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait, all waters of San Pablo Bay westward of the Carquinez Bridge, and all waters of San Francisco Bay (north of the San Francisco/Oakland Bay Bridge) from San Pablo Bay to the Golden Gate Bridge (65 FR 7778: February 16, 2000).

Critical Habitat for delta smelt is designated in areas of all water and all submerged lands below the ordinary high water and the entire water column bounded by and contained in Suisun Bay (including the contiguous Grizzly and Honker Bays); and Montezuma sloughs; and the existing contiguous waters contained within the Delta, as defined in section 12220 of the California Water Code (58 FR 12863: December 19, 1994).

Critical Habitat for the VELB is designated in an area in the City of Sacramento enclosed on the north by the Route 160 Freeway, on the west and southwest by the Western Pacific Railroad Tracks, and on the east by Commerce Circle and extends southward to the railroad tracks (NSFR 52803: August 8, 1980). The USFWS has designated the American River Parkway as critical habitat for this beetle (USFWS 1996).

3.19.1.4 Essential Fish Habitat

The 1996 reauthorization of the MSFCMA added a provision for federal agencies to consult with NMFS on impacts to EFH. EFH only applies to commercial fisheries; therefore, for the Proposed Project, this means all chinook salmon habitat, but not steelhead habitat. EFH includes specifically identified waters and substrate necessary for fish spawning, breeding, feeding, or growing to maturity. In the Mid-Pacific Region, the Pacific Fishery Management Council designates EFH, and NMFS approves the designation.

EFH includes all anadromous streams (including some intermittent streams) up to impassable barriers. In the American River Basin, EFH includes the lower American River up to Nimbus Dam. In the Central Valley, it also includes accessible waters of the Delta, Sacramento River, and tributaries up to impassable barriers. Keswick Dam represents the first impassable barrier on the Sacramento River, within the regional study area.

Federal agencies must consult with NMFS on all actions that may adversely affect EFH (Section 305 (b)(2) of the MSFCMA). The NEPA review process may be used to satisfy EFH consultation requirements. Thus, a separate EFH document is not needed. Information contained within this Final EIS/EIR regarding potential effects of implementation of the pump station project satisfy analytical requirements for EFH for Central Valley fall-run chinook salmon.

3.19.2 CONSULTATION TO DATE

3.19.2.1 U.S. Fish and Wildlife Service

August 28, 1998 – PCWA submits a draft Biological Assessment to the USFWS for use in consultation on the Proposed Project.

February 3, 1999 – USFWS, Reclamation, and PCWA meet to discuss the scope of the consultation, including conditions or other conservation measures for the Proposed Project. USFWS agrees that the scope of the consultation for the project will not require assessment of the CVP contract issues. However, USFWS indicates that an evaluation of potential service area effects must still be included in the information provided to USFWS as part of this consultation.

The consultation and coordination with USFWS will require the evaluation of potential direct, indirect, and cumulative impacts at the Proposed Project site, within the affected portion of the service area, and upstream and downstream of the Proposed Project site, based on the hydrologic analysis.

March 15, 1999 – USFWS, Reclamation and PCWA meet to continue discussion of the scope of the consultation and terms and conditions for the Proposed Project. USFWS requests additional discussion in the environmental document of other species that may be affected by the Proposed Project's operation, and expresses the need to mitigate for the loss of habitat, particularly special habitat such as wetlands or riparian areas. Reclamation suggests a draft biological assessment be used to formulate a draft biological opinion, rather than preparing a final biological assessment.

March 30, 1999 – At a meeting, PCWA provides to USFWS an updated description of the Proposed Project and has available service area maps, aerial photographs, and photographs of the existing facilities in response to a USFWS information request. Reclamation's suggestion regarding preparing a draft biological assessment is discussed further, and it is decided that PCWA will prepare the draft EIS/EIR to satisfy ESA and FWCA coordination requirements.

May 3, 1999 – USFWS, Reclamation, and PCWA visit the Proposed Project site and continue discussions related to Proposed Project conditions and draft biological assessment preparation. Following the site visit, USFWS indicates that, primarily due to the extremely disturbed nature of the Proposed Project site, site-specific ESA considerations will not be an issue. However, it is decided to have a focused field survey of wetland area(s) for elderberry shrubs. All parties agree to proceed with a draft BO. It is also agreed that the BO will incorporate conservation measures specific to PCWA, and that the USFWS will pursue municipal measures separately.

November 1999 – USFWS sends a letter to Reclamation advising them that they will not be required to prepare a service area analysis for the Proposed Project. An assessment of service area impacts within the PCWA service area will be completed for the CVP water service contract amendment. This analysis is included in the Cumulative Report (Appendix D of the Draft EIS/EIR).

December 15, 1999 – USFWS, Reclamation and PCWA meet to discuss the Proposed Project. It is relayed that NMFS wants to consult on the Proposed Project.

December 21, 1999 – USFWS sends Draft PAM to Reclamation detailing the scope of the cumulative impact analysis.

December 28, 2000 – USFWS sends revised Draft PAM to Reclamation.

Since December 2000, USFWS, Reclamation and PCWA have participated in additional meetings to consider the potential effects of the Proposed Project on listed species. In May 2002, PCWA agreed to not supply retail treated water service to new developments within environmentally sensitive areas of western Placer County until USFWS has certified that the new development is consistent with the interim conservation strategies of the Placer County Habitat Conservation Plan, that is to be prepared at a later date. Environmentally sensitive areas within

western Placer County as used above refers to that area within Placer County west of Highway 65, south of the proposed Highway 65 Lincoln Bypass, and north of Pleasant Creek.

Reclamation, at USFWS request, retained a qualified biologist to perform an additional habitat assessment and site survey for California red-legged frogs, March 2002 and June 2002, respectively. The habitat assessment and site survey both concluded that it would be unlikely for California red-legged frogs to utilize the project area. These findings will be provided to USFWS for consideration during preparation of the Biological Opinion for the Proposed Project.

The Biological Opinion must be completed by USFWS and considered by Reclamation prior to issuance of the Record of Decision for the project.

3.19.2.2 National Marine Fisheries Service

June 16, 2000 – Reclamation meets with NMFS to obtain guidance regarding fish species prioritization in application of target temperature schedules for use in the Cumulative Report. NMFS directs Reclamation to prioritize management of the Folsom Reservoir coldwater pool for steelhead, because fall-run chinook salmon is a candidate species (versus the federally listed threatened species status of steelhead), and because of steelhead over-summer rearing.

October 30, 2000 – Reclamation sends a letter to NMFS requesting their concurrence in use of the multi-species balance temperature schedules in modeling for the Cumulative Report. This approach replaces the steelhead prioritization approach. Because both steelhead and fall-run chinook salmon require consultation, as species of primary management concern, a schedule of target temperatures is developed to address multi-species objectives.

November 30, 2000 – NMFS, Reclamation, and PCWA meet regarding: (1) Folsom Reservoir cold water pool management and temperature modeling for a multi-species approach; (2) consultation needs and procedures; and (3) the content, organization and completion timeline of the Project EIS/EIR and Cumulative Report.

December 15, 2000 – NMFS sends a letter to Reclamation to express their concurrence with the use of the multi-species temperature objective model for the Cumulative Report.

February 8, 2001 – Reclamation sends to NMFS the report outlines for the Project EIS/EIR and Cumulative Report.

Reclamation has continued its coordination effects with NMFS since issuing the Draft EIS/EIR in September 2001. In May 2002, Reclamation and PCWA met with and provided NMFS with updated information describing proposed “double-pump” procedure to minimize impacts to fish resources in Auburn Ravine.

The Biological Opinion must be completed by NMFS and considered by Reclamation prior to issuance of the Record of Decision for the project.

3.19.3 CURRENT MANAGEMENT DIRECTION

PCWA is a member of the Water Forum, a diverse group of water agencies, business groups, agricultural interests, environmentalists, citizen groups, and local governments (stakeholders) that have been working since the fall of 1993 evaluating future water needs and supplies in the Sacramento area. The Water Forum has formulated a Water Forum Proposal for the effective long-term management of the region's water resources. The Water Forum Proposal was formulated based on the two coequal objectives of the Water Forum: (1) provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. The Water Forum Proposal has seven linked elements, including *"Support for an improved pattern of fishery flow releases from Folsom Reservoir."*

The Water Forum Proposal was refined into a Water Forum Agreement (in the form of a Memorandum of Understanding among stakeholder agencies). The Water Forum Agreement contains PCWA's purveyor specific agreement that includes provisions for PCWA diversions in drier and driest years. Under this agreement, when projected March through November unimpaired inflow to Folsom Reservoir is less than 950,000 AF, PCWA will replace to the American River a portion of the water diverted at the pump station by reoperation of the MFP reservoirs (referred to as "replacement water"). This arrangement is contingent upon agreements with PG&E and a willing buyer downstream of the project site. The replacement would start when the unimpaired inflow is less than 950,000 AF and would reach a maximum of 27,000 AF when the unimpaired inflow is less than 400,000 AF. Replacement water operations were modeled as delivery to Folsom Reservoir from MFP reservoirs in equal monthly amounts during the months of March through September. The maximum replacement was 27,000 AF corresponding to a Folsom Reservoir unimpaired inflow of 400,000 AF. For a Folsom Reservoir unimpaired inflow between 950,000 AF and 400,000 AF, the replacement water is linearly interpolated between zero and 27,000 AF.

3.19.4 PURPOSE OF THE PROPOSED PROJECT

The purpose of the Proposed Project is threefold: (1) to provide facilities to allow PCWA to convey its MFP water entitlement to the Auburn Ravine Tunnel (also referred to locally as the Ophir Tunnel) to meet demands within its service area; (2) to eliminate the safety issue associated with the Auburn Dam bypass tunnel; and (3) to allow for beneficial uses of water in what is now the dewatered river channel, including recreation, navigation, and other instream beneficial uses.

3.19.5 DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Project evaluated in the EIS/EIR consists of increasing diversions from the American River from 50 cfs up to 100 cfs. This water would be delivered within PCWA Service Area Zones 1 and 5, and possibly the Citizens Utilities Placer County Franchise Area (see Figure 3.2-1) to serve as a back-up M&I and agricultural supply to the Drum-Spaulding Project. This water also would accommodate future planned urban development within the service area.

Because the water supply removes a potential obstacle to growth in Placer County, the project is considered growth-inducing.

Consistent with the project objectives, the design of the individual facilities would provide capacity for a future potential expansion diversion of up to 225 cfs. Sizing the facilities to accommodate the potential expanded diversion amount minimizes environmental effects and costs associated with meeting project objectives. The future expansion would involve installation of higher capacity pumps and increased diversion from the river, the details of which remain undetermined at this time. Expansion of the pump station and any increase of diversions above 100 cfs, including extension of infrastructure to GDPUD, would be subject to additional environmental review and resource agency approvals and permitting.

The major features and activities associated with construction of the Proposed Project include:

- Construction of a new pump station, placed above the 100-year flood level;
- Construction of a water diversion/intake structure;
- Installation of a CDFG-approved fish screen;
- Closure of the bypass tunnel;
- Restoration of flow to the American River channel;
- Installation of water conveyance pipelines;
- Improvement and development of all-weather access roads for project construction and operation;
- Extension of power supply lines; and
- Creation of public river access sites/safety features and related improvements at the Auburn Dam site and near Oregon Bar.

For further information on the description of the Proposed Project, please refer to Section 2.2.2 of the EIS/EIR.

3.19.5.1 Conservation Measures as Part of the Description of the Proposed Project

Conservation measures are actions to benefit or promote the recovery of listed species that are included by the federal agency as an integral part of the proposed action. These measures will be taken by the federal agency or applicant, and serve to minimize or compensate for, project effects on the species under review. These may include actions taken prior to the initiation of consultation, or actions which the federal agency or applicant have committed to complete in a biological assessment or similar document (USFWS, NMFS and AFS 2001).

PCWA is developing or implementing numerous conservation measures which were discussed by PCWA, Reclamation, and USFWS during internal consultations on the Proposed Project from February through May 1999. These conservation measures include: (1) participation in the western Placer County Natural Communities Conservation Plan (NCCP); (2) resource mapping (baseline habitat inventory); (3) access to PCWA lands (by USFWS); (4) expanded place of use (PCWA and USFWS agreed that if an expanded place of use for American River MFP/pump station water was pursued, then a subsequent (and separate) consultation would be conducted); (5) vernal pool preserves (PCWA would provide mapping of vernal pool resources and would encourage associated municipalities in cooperating with the USFWS on preservation of vernal pool resources); (6) programmatic CVP biological opinions (because of Reclamation involvement in the pump station project, PCWA's actions will be consistent with those identified in the USFWS biological opinion for this project); (7) reporting (PCWA agreed to cooperate in reporting of potential impacts to biological resources or potential take of listed species); it is assumed that these reporting responsibilities will also be assigned to participants as part of the Placer County NCCP; (8) planning and communication (PCWA agreed to participate in appropriate planning and communication with USFWS to ensure the receipt of environmental documents and other CEQA-related materials by the USFWS); and (9) general operations and maintenance (PCWA agreed to implement a system of operations and maintenance (O&M) procedures that would incorporate species protection measures).

As indicated earlier, PCWA also recently agreed to not supply retail treated water service to new developments within environmentally sensitive areas of western Placer County until USFWS has certified that the new development is consistent with the interim conservation strategies of the Placer County Habitat Conservation Plan, that is to be prepared at a later date. Environmentally sensitive areas within western Placer County as used above refers to that area within Placer County west of Highway 65, south of the proposed Highway 65 Lincoln Bypass, and north of Pleasant Creek.

Additionally, PCWA has proposed to undertake a flow and water temperature monitoring program for Auburn Ravine, despite the absence of any expected adverse significant impacts on the aquatic resources of Auburn Ravine from the Proposed Project. Flow and water temperature data will be collected to develop a database for future use in decision-making regarding Auburn Ravine resources. The objective of the flow monitoring is to enhance the ability of resource and water managers to determine water quantities of Auburn Ravine. The water temperature monitoring element objective is to collect data to enable assessment of the effects of watershed activities on Auburn Ravine water temperatures. The program includes installation of seven new flow gages and eight new temperature recorders at strategic locations along Auburn Ravine and near the American River pump station. The program is described in greater detail in the Mitigation Plan (Appendix D to the Final EIS/EIR).

The Water Forum, of which PCWA also is a member, is implementing and proposing to implement numerous additional protection, mitigation, and enhancement measures for threatened and endangered species in the lower American River. Many of these measures require, or will require, a significant commitment of resources, and could result in major enhancement of habitat, or reduction in potential effects on listed species.

Reclamation is involved in numerous conservation measures throughout the CVP. On the American River, Reclamation is providing several conservation measures associated with impact avoidance and mitigation measures for specific actions, including a TCD at Folsom Dam and a TCD at the EID intake in Folsom Reservoir. Reclamation also is directly involved in the implementation of other basin-wide efforts such as CALFED, the CVPIA, and the Central Valley Project Conservation Program. In addition, Reclamation continues to be an active participant in the Water Forum process and development of an updated lower American River flow release regime, and flow fluctuation criteria. Reclamation recently sponsored a Value Analysis workshop addressing temperature improvement for the Folsom-Nimbus complex, and continues to convene the Lower American River Operations Working Group. Reclamation also continues to be an active participant in the development of the Aquatic Resources Management and Restoration Plan for the lower American River, and the development of the River Corridor Management Plan for the lower American River.

Implementation of the Proposed Project would result in restoration of the North Fork American River channel in the Auburn Dam construction area. These efforts would include closure of the bypass tunnel and restoration of the currently dewatered channel. In addition, the river restoration design considerations include creation of natural river system features to provide and enhance fish and wildlife habitat of the area.

3.19.6 ACTION AREA

The action area is defined in 50 CFR 402.14(g)(3) as the immediate area involved in the action and the entire area where effects to listed species extend as a direct and indirect effect of the action. For purposes of the Proposed Project, the action area includes the direct effect study area defined as the upper American River from Ralston Afterbay on the Middle Fork American River to the Middle Fork confluence with the North Fork American River, downstream along the North Fork to downstream of Oregon Bar, north of Folsom Reservoir. The direct effect action area also includes the Auburn Dam construction area where the footprint of the Proposed Project facilities would be placed. The indirect effect, or regional study area, encompasses a broad geographic region addressing both diversion-related influences within the CVP system and secondary land-based resources within the water service study area. Due to the coordinated and integrated operations of CVP and SWP system components, the diversion-related regional study area encompasses the Trinity Reservoir/Shasta Reservoir components of the upper Sacramento River, the Sacramento River, the upper American River, Folsom Reservoir, the lower American River downstream to the confluence with the Sacramento River, the Delta, and the Feather, Yuba, and Cosumnes rivers.

3.19.6.1 Species Accounts and Status of the Species in the Action Area

Sacramento River Winter-run Chinook Salmon

Winter-run chinook salmon is a federally endangered species under the ESA. Winter-run chinook salmon Critical Habitat was designated by NMFS on June 16, 1993 (58 FR 33212). A status review of winter-run chinook salmon was conducted by NMFS prior its listing as endangered in 1993. The Winter-run Chinook Salmon Biological Opinion was completed in

February 1993. For further description and additional detail of the winter-run chinook salmon species account for the Proposed Project, please refer to the winter-run chinook salmon status review and biological opinion.

Recovery Plan Implementation

NMFS completed a proposed recovery plan for the federally endangered Sacramento River winter-run chinook salmon in August 1997. The goal of the recovery plan is "*to establish a framework for the recovery of the Sacramento River winter-run chinook salmon population through a logical program of improving the habitat and the species"* (NMFS 1997). According to NMFS, the recovery of the winter-run chinook salmon "*requires actions which increase their abundance and improve their habitat to the point that the probability of subsequent extinction will be very low.*" (NMFS 1997). For further description and additional detail of the recovery plan for winter-run chinook salmon in the Proposed Project regional study area, please refer to *NMFS Proposed Recovery Plan for the Sacramento River Winter-run Chinook Salmon* (1997).

Central Valley Steelhead

Central Valley steelhead is a federally threatened species under the ESA. Central Valley steelhead Critical Habitat was previously designated by NMFS on February 16, 2000 (65 FR 7778) but recently was withdrawn. For further description and additional detail of the steelhead species account for the Proposed Project, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Recovery Plan Implementation

NMFS will enter the process of developing a recovery plan for California Central Valley steelhead in the near future. The recovery plan will: (1) assess the factors affecting steelhead; (2) identify recovery (delisting) goals; (3) identify the entire suite of actions necessary to achieve these goals; and (4) estimate the cost and time required to carry out those actions (NMFS 1997).

Central Valley Spring-run Chinook Salmon

Spring-run chinook salmon is a federally threatened species under the ESA. Critical Habitat for this species previously was designated by NMFS on February 16, 2000 (65 FR 7778) but recently was withdrawn. A status review of spring-run chinook salmon was conducted by NMFS in February 1998. An update of the status review for Central Valley spring-run chinook salmon was conducted on July 16, 1999. For further description and additional detail of the spring-run chinook salmon species account for the Proposed Project, please refer to the spring-run chinook salmon status review, update to the status review, and final ruling for spring-run chinook salmon (64 FR 50393).

Recovery Plan Implementation

NMFS will enter the process of developing a recovery plan for California Central Valley spring-run chinook salmon in the near future. The recovery plan will: (1) assess the factors affecting

spring-run chinook salmon; (2) identify recovery (delisting) goals; (3) identify the entire suite of actions necessary to achieve these goals; and (4) estimate the cost and time required to carry out those actions (NMFS 1999).

Sacramento Splittail

Sacramento splittail is a federally threatened species under the ESA. Critical Habitat has not been designated for Sacramento splittail. A biological opinion for Sacramento splittail was completed by USFWS in 1995, when it was then proposed threatened. For further description and additional detail of the Sacramento splittail species account for the Proposed Project, please refer to the USFWS biological opinion for the Sacramento splittail, Section 3.5, and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Recovery Plan Implementation

The Sacramento splittail is not currently included in the USFWS list of federally threatened species with a final recovery plan.

Delta Smelt

Delta smelt is a federally threatened species under the ESA. Critical Habitat for delta smelt was designated by USFWS on December 19, 1994 (58 FR 12863). A status review for delta smelt was conducted by USFWS prior to its designation as threatened in 1993. A biological opinion discussing potential impacts of CVP operations on delta smelt was completed by the USFWS in 1995. For further description and additional detail of the delta smelt species account for the Proposed Project, please refer to the USFWS biological opinion for delta smelt, the status review, and final ruling for delta smelt (58 FR 12863).

Recovery Plan Implementation

USFWS completed a proposed recovery plan for the federally threatened delta smelt in August 1996. The objective of the recovery plan is "*to remove delta smelt from the Federal list of threatened species through restoration of its abundance and distribution."* (USFWS 1996). According to USFWS, the basic strategy to recover delta smelt is "*to manage the estuary in such a way that is better habitat for native fish in general and the delta smelt in particular.*" (USFWS 1996). For further description and additional detail of the recovery plan for delta smelt, please refer to *USFWS Recovery Plan for the Sacramento/San Joaquin Delta Native Fishes* (1996).

Central Valley Fall-run and Late Fall-run Chinook Salmon

Central Valley fall-run and late fall-run chinook salmon are federal candidate species under the ESA. The anadromous Central Valley fall-run and late-fall-run chinook salmon occur throughout the Central Valley, including the Sacramento River and its tributaries, up to impassable fish barriers. For further description and additional detail of the fall-run and late-fall-run chinook salmon species account for the Proposed Project, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Recovery Plan Implementation

Since at this time listed status has not been conferred to the Central Valley fall-run and late fall-run chinook salmon ESU (64 FR 50412), the implementation of recovery plans is not required.

Bald Eagle

Bald eagle is a federally threatened species under the ESA. Bald eagles typically are found near open water (e.g., reservoirs, lakes, and rivers). Large dead trees near open water are used for perching and are an important habitat component (USFWS 1986). Bald eagles have been observed at and around Folsom Reservoir during the winter season, although generally in low numbers (Manolis 1998). Bald eagles may occur in the action area during the winter (B. Williams, pers. comm. 1998). In addition to the ESA and CESA, bald eagles are protected under the Bald and Golden Eagle Protection Act. For further description and additional detail of the bald eagle species account for the Proposed Project, please refer to Section 3.6 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Recovery Plan Implementation

USFWS completed a proposed recovery plan for the Pacific region bald eagle in 1986. The goal of the recovery plan for the Pacific region is "*a minimum of 800 nesting pairs with an average reproductive rate of 1.0 fledged young per occupied area, and an average success rate for occupied areas of not less than 65% over a 5 year period necessary for recovery. Attainment of breeding population goal should be met in at least 80% of management zone. Wintering populations should be stable or increasing*." (USFWS 1986). According to USFWS, numeric delisting goals have been met since 1995. However, the plan goal for distribution among management zones is not fully achieved for all areas. Nonetheless, the USFWS is currently proposing the removal of bald eagle from the List of Endangered and Threatened wildlife in the lower 48 states of the United States (USFWS 1986). For further description and additional detail of the recovery plan for bald eagle in the action area, please refer to *Pacific Bald Eagle Recovery Plan* (USFWS 1986).

Valley Elderberry Longhorn Beetle

The VELB is a federally threatened species under the ESA. Critical Habitat for VELB was designated by USFWS on August 8, 1980 (45 FR 52803). A status review was conducted by USFWS prior to its listing as threatened in 1980. For further description and additional detail of

the VELB species account for the Proposed Project, please refer to the VELB status review and final ruling (45 FR 52803).

Recovery Plan Implementation

USFWS completed a recovery plan for the federally threatened VELB in 1984. The goals of the recovery plan for VELB are *"to protect the three known localities, survey riparian vegetation along certain Central Valley rivers for remaining VELB colonies and habitats, provide protection to remaining VELB habitat within its suspected historic ranges, and determine the number of sites and populations."* On July 9, 1999, the USFWS issued revised conservation guidelines for VELB. This most recently issued version of the guidelines should be used in developing all projects and habitat restoration plans. The survey and monitoring procedures described in these guidelines are designed to avoid any adverse effects to the VELB and obviates the need of a permit to survey for VELB or its habitat or to monitor conservation areas (USFWS 1999). For further description and additional detail of the recovery plan and the new conservation guidelines for VELB in the action area, please refer to *Recovery Plan for the Valley Elderberry Longhorn Beetle* (USFWS 1984) and to the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999), respectively.

3.19.7 PROPOSED PROJECT, INTERRELATED, INTERDEPENDENT AND CUMULATIVE EFFECTS

This section refers to the extensive impact analysis conducted in the Draft EIS/EIR for the Proposed Project and addresses the direct and indirect effects, interrelated effects, interdependent effects, and cumulative effects. For a full discussion of the impact considerations, please see Section 3.5 and Section 3.6 This section briefly summarizes the overall impact conclusions by species and is, therefore, consistent with the NEPA/CEQA language. However, NEPA/CEQA impact significance consideration terminology is not necessarily consistent with the language specified in the USFWS and NMFS Endangered Species Consultation Handbook. Therefore, although the impacts consideration and determination summaries provided in this section are consistent with the NEPA/CEQA language determination, the conclusion and determination section utilizes the language specified in the USFWS and NMFS Endangered Species Consultation Handbook.

3.19.7.1 Direct and Indirect Effects

Direct effects are those effects caused by the Proposed Project and that occur at the time of the action. Indirect effects are those that are caused by the Proposed Project and are later in time, but still are reasonably certain to occur (USFWS, NMFS and AFS 2001).

The Proposed Project would not result in substantial changes in storage, elevation, or temperature at Oroville Reservoir, or in flow or temperature in the Feather River, relative to the existing condition. Any small changes that might occur would be considered to represent less-than-significant impacts on fisheries resources. Integrated operations of the CVP, as simulated by currently available hydrologic modeling doe not directly affect the Yuba and Bear rivers. Therefore, the Proposed Project would not be expected to substantially effect fish resources and

aquatic habitat on the Yuba and Bear rivers. EID's continued use of Cosumnes River water from the Sly Park Unit at Jenkinson Lake and Camp Creek would not result in increased diversions or changes on system operations. The Proposed Project would therefore not have an affect on fish resources and aquatic habitat of the Cosumnes River. These components of the regional study area are not discussed further in this analysis.

Winter-run Chinook Salmon

Sacramento River and the Delta

Minimal potential differences in lower Sacramento River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to winter-run chinook salmon. Monthly mean flows below Keswick Dam in the upper Sacramento River would be essentially equivalent to the existing condition in most months. Modeling results indicate that monthly mean flows below Keswick Dam would not be reduced below the NMFS Biological Opinion (1993, as revised in 1995) 3,250 cfs threshold for the protection of winter-run chinook salmon rearing and downstream passage in any month of the October through March period. Long-term average water temperatures for the upper Sacramento River (i.e., Keswick Dam and Bend Bridge) would not change from the existing condition in any month of the year; in most years, individual monthly mean water temperatures would be essentially equivalent to or less than the existing condition. There potentially could be only two additional months when water temperatures could exceed 56°F or 60°F at either Keswick Dam or Bend Bridge, relative to the existing condition.

The long-term average flow at Freeport in the lower Sacramento River would be within 0.2 percent of the long-term average flow under the existing condition in all months of the year. During individual months, flow reductions of more than five percent would occur on only one occasion, relative to the existing condition, over the 70-year period of record. Based on these flow results, physical habitat availability and immigration of adult or emigration of juvenile anadromous fish would not be adversely affected relative to the existing condition. Long-term average water temperatures at Freeport would not change more than 0.1°F during any month of the year; monthly mean water temperatures would be essentially equivalent to the existing condition for all but one month of the simulation. The number of years in which water temperature would exceed index temperatures would be similar to the existing condition during the March through November period. Monthly mean water temperatures would be essentially equivalent to the existing condition for almost all months included in the analysis (827 out of 828 months).

The Proposed Project would have less-than-significant impacts to winter-run chinook salmon in the Delta. Reductions in the long-term average Delta outflow of up to only 0.3 percent for any given month of the February through May period could occur relative to the existing condition. Delta outflow reduction of more than three percent occurred during only seven individual months (out of 350 months) of the February to June period, relative to the existing condition. There would not be any shift in the long-term average position of X2, relative to the existing condition. The maximum upstream shift for any individual month (out of 350 months) of the

February through June period would be less than 1 km (i.e., 0.7 km). All simulations included conformance with SWRCB X2 and the Delta maximum export/inflow ratio requirements.

Early-Lifestage Survival

The long-term average winter-run chinook salmon early-lifestage survival would be 95.8 percent under the Proposed Project, relative to 96 percent under the existing condition. There would not be any substantial decrease in annual early-lifestage survival of winter-run chinook salmon in any individual year of the 69-year period of record, relative to the existing condition. Moreover, the long-term average percent change (i.e., relative change) in early-lifestage survival would decrease by only 0.2 percent. The relative change in early-lifestage survival ranges from a seven percent decrease to a 2.9 percent increase for all 69 years included in the simulation. For further description and additional detail of the effects of the Proposed Project on winter-run chinook salmon, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Central Valley Steelhead

Lower American River

Minimal potential differences in lower American River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to steelhead immigration, spawning and incubation, or juvenile rearing and emigration.

Sacramento River and the Delta

In the Sacramento River, potential differences in flows and water temperatures under the Proposed Project would be expected to have a less-than-significant impact to steelhead. The Proposed Project would have less-than-significant impacts to steelhead in the Delta. The effects on flows, water temperature, location of X2, and Delta outflow discussed for the Sacramento River and the Delta under the winter-run chinook salmon section also pertains to steelhead. For further description and additional detail of the effects of the Proposed Project to steelhead lifestages in the lower American River and steelhead in the Sacramento River and the Delta, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Central Valley Spring-run Chinook Salmon

Sacramento River and the Delta

Potential differences in lower Sacramento River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to spring-run chinook salmon. The Proposed Project would have less-than-significant impacts to spring-run chinook salmon in the Delta. The potential effects on flows, water temperature, location of X2 and Delta outflow, which are discussed for the Sacramento River and the Delta under the winter-run chinook salmon section, also pertain to spring-run chinook salmon.

Early-Lifestage Survival

The long-term average spring-run chinook salmon early-lifestage survival in the Sacramento River would be 87.7 percent under the Proposed Project, relative to 87.5 percent under the existing condition. There would not be any substantial decrease in annual early-lifestage survival of spring-run chinook salmon in any individual year of the 69-year period of record, relative to the existing condition. The long-term average percent change in early-lifestage survival would only decrease by one percent, relative to early-lifestage survival under the existing condition. The long-term average relative percent change of one percent is primarily due to one individual year of the 69-year period of record included in the simulation. For this individual year of the simulation (i.e., 1933), the estimated absolute survival under existing conditions is 1.8 percent and under the Proposed Project is 0.1 percent. Therefore, the absolute difference between the Proposed Project and the existing condition is only 1.7 percent. However, because early-lifestage survival would be low under the existing condition for this particular year, the relatively small absolute change in early life-stage survival translates into a very large relative change in early-lifestage survival. Excluding this one year, the long-term average relative percent change for the remaining 68 years included in the simulation would be a 0.4 percent decrease. Moreover, the largest increase in early-lifestage survival was an absolute value of 15.4 percent, which translates into an approximate 27 percent increase under the Proposed Project relative to the existing condition.

For further description and additional detail of the potential effects of the Proposed Project on spring-run chinook salmon, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Sacramento Splittail

Lower American River

Potential differences in lower American River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to Sacramento splittail spawning. The long-term average monthly flow at Watt Avenue during the February through May period would range between 0.5 to two percent less than under the existing condition. The long-term average acreage of usable riparian vegetation inundated during the February through May spawning period would not change substantially relative to the existing condition. Flow changes would have little, if any, effect on in-channel spawning habitat availability from the mouth up to RM 5. Long-term population trends of splittail would not be expected to be adversely affected, compared to the existing condition. No substantial change in the frequency of water temperature exceeding the reported preferred range for splittail spawning would occur, relative to the existing condition.

Sacramento River and the Delta

Minimal potential differences in lower Sacramento River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to Sacramento splittail. The Proposed Project would have less-than-significant impacts to Sacramento splittail in the Delta. The potential effects on flows, water temperature, location of X2 and Delta

outflow, which are discussed for the Sacramento River and the Delta under the winter-run chinook salmon section, also pertain to Sacramento splittail. For further description and additional detail of the potential effects of the Proposed Project on Sacramento splittail, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Delta Smelt

Minimal potential differences in Delta outflow and X2 position, relative to the existing condition, would be expected to have a less-than-significant impact to delta smelt. The potential effects on the location of X2 and Delta outflow, which are discussed for the Delta under the winter-run chinook salmon section, also pertain to delta smelt. For further description and additional detail of the potential effects of the Proposed Project on delta smelt, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Central Valley Fall-run and Late Fall-run Chinook Salmon

Lower American River

Potential differences in lower American River flows and water temperatures, relative to the existing condition, would be expected to have a less-than-significant impact to fall-run chinook salmon immigration, spawning and incubation, or juvenile rearing and emigration.

Sacramento River and the Delta

In the Sacramento River, potential differences in flows and water temperatures under the Proposed Project would be expected to have a less-than-significant impact to fall-run and late-fall-run chinook salmon. Also, the Proposed Project would have less-than-significant impacts to fall-run and late-fall-run chinook salmon in the Delta. The potential effects on flows, water temperature, location of X2, and Delta outflow discussed for the Sacramento River and the Delta under the winter-run chinook salmon section, also pertain to fall-run and late fall-run chinook salmon.

Early Lifestage Survival

Fall-run chinook salmon long-term early-lifestage average survival in the lower American River would slightly increase under the Proposed Project relative to the existing condition, from 84.9 to 85 percent. The relative long-term average change in early-lifestage survival also would slightly increase (i.e., 0.1 percent) under the Proposed Project. For all individual years included in the 69-year period of record simulations, the change in early-lifestage survival under the Proposed Project relative to the existing condition would range from a decrease of 0.9 percent to an increase of 1.2 percent.

Under the Proposed Project, the long-term early-lifestage average survival in the Sacramento River would result in a slight increase (i.e., 89.7 percent under the Proposed Project relative to 89.6 percent under the existing condition) and in no estimated change for fall-run and late-fall-run chinook salmon, respectively, relative to the existing condition. The relative long-term

average change in early-lifestage survival also would result in a slight increase (i.e., 0.1 percent) and no change under the Proposed Project relative to the existing condition, for fall-run and late-fall-run chinook salmon, respectively. For all individual years included in the 69-year period of record simulated, the change in relative early-lifestage survival under the Proposed Project relative to the existing condition would range from a decrease of 1.2 percent to an increase of 4.4 percent, and a decrease of 0.1 percent to an increase of 0.6 percent for fall-run and late-fall-run chinook salmon, respectively.

For further description and additional detail of the potential effects of the Proposed Project on fall-run chinook salmon lifestages in the lower American River, and fall and late-fall-run chinook salmon in the Sacramento River and the Delta, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Bald Eagle

Construction-related increases in noise and human activity at the Proposed Project site would not be expected to disturb the bald eagle because they are rarely seen and are not known to nest in the area. Individuals foraging in the area could easily use other similar or higher quality habitats in the canyon. Most of the construction activities would occur in a previously dewatered part of the river channel that contains no roosting habitat for the bald eagle. In addition, operation activities would likely disturb bald eagle at a level below existing conditions, because the annual installation and dismantling of seasonal facilities would not be necessary. Operation of the Proposed Project would result in reduced monthly mean flows during certain periods of the year. However, these small flow reductions would not be of sufficient magnitude and frequency to significantly alter existing riparian vegetation dependent on the lower American River. Because cottonwood forest and open-water habitats under the Proposed Project would not be adversely affected, bald eagle also is not expected to be adversely affected. For further description and additional detail of the potential effects of the Proposed Project on the bald eagle, please refer to Section 3.6 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

Valley Elderberry Longhorn Beetle

Backwater ponds/habitats would not be expected to be significantly altered under the Proposed Project, relative to the existing condition; therefore, elderberry shrub and critical habitat for VELB would not be expected to be adversely affected.

For further description and additional detail of the potential effects of the Proposed Project on the VELB, please refer to Section 3.6 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

3.19.7.2 Interrelated Effects

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification—i.e., this action would not occur "but for" a larger action (USFWS, NMFS and AFS 2001). The Proposed Project is not dependent upon a larger action for its implementation. Therefore, the Proposed Project does not directly result in interrelated effects

according to the definition provided above. However, the Proposed Project is consistent with the Water Forum Agreement, described above, and its coequal objectives of: (1) provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. For further description and detail regarding the Water Forum, please refer to the Water Forum Action Plan (Water Forum 2000).

3.19.7.3 Interdependent Effects

Interdependent actions are those that have no significant utility apart from the action that is under consideration—i.e., other actions would not occur "but for" this action (USFWS, NMFS and AFS 2001). Although other projects are proceeding in the action area, none of these actions or other actions depend on the Proposed Project. Therefore, the Proposed Project does not directly result in interdependent effects according to the definition provided above.

The GDPUD action will require a point of diversion and conveyance infrastructure to deliver that water. The Proposed Project is being designed to be able to be modified for the future conveyance infrastructure needs of GDPUD. This design accommodation represents engineering efficiency, although GDPUD may have alternative means to meet future demands. Nonetheless, extension of infrastructure to GDPUD would be subject to separate environmental review and resource agency approvals.

3.19.7.4 Cumulative Effects

Cumulative effects include the effects of future state, tribal, local or private actions that are reasonably certain to occur in the action area. Future federal actions that are unrelated to the Proposed Project are not considered in this section because they will be subject to separate consultation pursuant to section 7 of the ESA (USFWS, NMFS and AFS 2001).

As previously discussed, Reclamation is involved in more than two dozen actions in the American River Basin. These actions include new, amended and renewed CVP water service contracts, Warren Act contracts, flood control operations for Folsom Reservoir, an updated lower American River release pattern, construction of a permanent pump station for PCWA, and construction of a TCD for the EID Pumping Plant. Each of these projects is reasonably foreseeable and affects the hydrologic balance of the American River Basin. The cumulative analysis included in the Cumulative Report (Appendix D of the Draft EIS/EIR) has been conducted with the inclusion of all these reasonably foreseeable actions in the American River Basin. In addition, both this EIS/EIR and the Cumulative Report assess cumulative impacts for four comparisons: (1) Cumulative vs. No Action/No Project Alternative; (2) Cumulative vs. Existing Condition; (3) Cumulative vs. Future Base Condition; and (4) Cumulative vs. ESA Baseline. These comparisons have been assessed for all months of the year, over 70-year (i.e., flows) and 69-year (i.e., water temperature) periods of record throughout the regional study area. For this section of the Draft EIS/EIR, the appropriate focus is on the cumulative versus ESA baseline comparison. As discussed in the Cumulative Report, potentially significant impacts for this comparison include flow-related impacts on steelhead rearing in the lower American River and the effects of flow reductions on potential Sacramento splittail spawning habitat in the lower

American River. For the cumulative versus ESA baseline comparison, no potentially significant impacts were identified for Sacramento River, Feather River, Yuba River, Cosumnes River, or Delta aquatic or terrestrial, proposed, or candidate species. For further discussion and additional detail regarding the cumulative effects analysis for these comparisons, please refer to Section 3.5, Section 3.6, and the Cumulative Report.

3.19.8 CONCLUSION AND DETERMINATION

The USFWS and NMFS have defined the different conclusions and determinations that can be reached through consultation with these agencies. These different conclusions are *"it is likely to adversely affect," "it is likely to jeopardize proposed species/adversely modify proposed critical habitat" and "it is not likely to adversely affect"* (USFWS and NMFS 1998). *"It is likely to adversely affect"* is the appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action, or indirect result of the interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. In the event the overall effect of the proposed action is beneficial to the listed species, but also is likely to cause some adverse effects, then the proposed action *"is likely to adversely affect"* the listed species. If incidental take is anticipated to occur as a result of the proposed action, an *"is likely to adversely affect"* determination should be made (USFWS and NMFS 1998). *"It is likely to jeopardize proposed species/adversely modify proposed critical habitat"* is the appropriate conclusion when the action agency or USFWS and/or NMFS identify situations where the proposed action is likely to jeopardize the proposed species or adversely modify critical habitat. If this conclusion is reached, conference is required (USFWS and NMFS 1998). *"It is not likely to adversely affect"* is the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial (USFWS and NMFS 1998).

Based on analysis of the existing environment in the Proposed Project area, the habitat status in the Proposed Project site, the regional study area, and potential project effects, it is concluded that the Proposed Project is not likely to adversely affect federally listed fish species, nor is it expected to jeopardize the continued existence of any federally listed species.

Overall, in the Sacramento River and the Delta and according to the definitions described above, the Proposed Project relative to the existing condition is not likely to adversely affect the Central Valley ESUs of steelhead, spring-run chinook salmon, fall-run and late fall-run chinook salmon, Sacramento winter-run chinook salmon, delta smelt, and Sacramento splittail. Long-term water temperatures in the upper Sacramento River would not change relative to the existing condition, and monthly mean water temperatures would remain essentially equivalent under both scenarios. Long-term average flow in the lower Sacramento river (i.e., Freeport) would not change more than 0.2 percent during any month of the year, and monthly mean water temperatures would remain essentially equivalent in all but one year of the simulation. Long-term average water temperatures at Freeport would not change more than 0.1ºF during any month of the year. In the Delta, reductions in long-term average Delta outflow would be up to 0.3 percent and there would be no change in X2 position for any given month of the February through June period. Moreover, Sacramento winter-run chinook salmon, Central Valley spring-run chinook salmon, fall-run, and late fall-fun chinook salmon would not exhibit any substantial long-term increase in absolute early-lifestage survival, and reflect either slight increases or minor decreases in relative

early-lifestage survival. Therefore, based on these results, a conclusion of *"it is not likely to adversely affect"* is warranted. Also, impacts to Critical Habitat that includes the Sacramento River and the Delta are likely to be insignificant, and discountable. For further discussion and additional detail regarding the Proposed Project effects on water temperature, flows, early-lifestage salmon survival, Delta outflow, and X2 position, please refer to Section 3.5 and the Cumulative Report (Appendix D of the Draft EIS/EIR).

In the lower American River, the Proposed Project is not likely to adversely affect fall-run chinook salmon, steelhead or Sacramento splittail. Under the Proposed Project, there would be minor decreases in flow and increases in water temperature in some years, although these changes will be accompanied by minor flow increases and water temperature decreases in other years. Slight increases in long-term average absolute and relative early-lifestage fall-run chinook salmon survival would occur under the Proposed Project relative to the existing condition. Under the Proposed Project, potential differences in flow and water temperature are expected to have a less-than-significant impact on fall-run chinook salmon, steelhead, and Sacramento splittail. Of these species, Critical Habitat previously was designated only for steelhead, although the designation recently was withdrawn. Adverse modification of Critical Habitat is defined as "*...a direct or indirect alteration that appreciably diminishes the value of Critical Habitat for both the survival and recovery of a listed species* [50 CFR §402.02]." The phrase "*appreciably diminish the value*" is further defined as "*...to considerably reduce the capability of designated or proposed Critical Habitat to satisfy requirements essential to both the survival and recovery of listed species* (USFWS and NMFS 1998)." The minor changes in flow and water temperature in the lower American River do not "*appreciably diminish the value*" of steelhead habitat. Nonetheless, potentially significant flow-related impacts on steelhead rearing and potential Sacramento splittail spawning habitat in the lower American River were identified for the cumulative versus ESA baseline comparison. Therefore, for the lower American River, it is concluded that the Proposed Project is not likely to adversely affect the federal candidate or listed fish species, and the cumulative condition is not likely to affect fall-run chinook salmon but may adversely affect but not jeopardize the continued existence of the federally threatened steelhead and Sacramento splittail.

In the upper American River, construction, operation and maintenance of the Proposed Project is not likely to adversely affect the federally threatened bald eagle. As previously discussed, construction-related increases in noise and human activity at the Proposed Project site would not be expected to disturb the bald eagle because they are rarely seen and are not known to nest in the area. Individuals foraging in the area could easily use other similar or higher quality habitats in the canyon. Most of the construction activities would occur in a previously dewatered part of the river channel that contains no roosting habitat for the bald eagle. Moreover, operation activities would likely disturb bald eagle at a level below existing conditions, because the annual installation and dismantling of seasonal facilities would not be necessary. In addition, operation and maintenance of the Proposed Project is not likely to adversely affect the federally threatened VELB. Backwater ponds, open water habitats, and cottonwood forest in the lower American River would not be expected to be significantly altered under the Proposed Project, relative to the existing condition; therefore, elderberry shrub and Critical Habitat for VELB would not be expected to be adversely affected. For further discussion and additional detail regarding the

Proposed Project construction, operation, and maintenance effects on bald eagle and the VELB, please refer to Section 3.6.

Chapter 4.0
Consultation and Coordination

During preparation of this Environmental Impact Statement/Environmental Impact Report (EIS/EIR), the lead agencies, Placer County Water Agency (PCWA) and the U.S. Department of the Interior (Interior) Bureau of Reclamation (Reclamation), consulted with resource specialists, agencies with specific expertise in project issues, and members of the public. These consultations assisted the lead agencies in determining the scope of the EIS/EIR, identifying the range of alternatives and environmental protection and mitigation measures, and defining impact significance. Consultation included telephone calls, formal interagency meetings, and public meetings. The lead agencies provided the Draft EIS/EIR to the resource agencies for their review during the public comment period. Additionally, Reclamation sought formal consultation with both the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) pursuant to the federal Endangered Species Act (ESA). This chapter summarizes agency consultations and public involvement efforts conducted during the project planning and environmental review process.

4.1 CONSULTATION

4.1.1 FEDERAL ENDANGERED SPECIES ACT CONSULTATION

U.S. Fish and Wildlife Service

In compliance with the federal ESA, Reclamation entered into informal consultation with U.S. Fish and Wildlife Service in 1997. Reclamation, PCWA, and USFWS met several times between July 1998 and October 1999 to determine the scope, identify species of concern, and to develop an appropriate approach for assessing listed and proposed for listing species as part of the Section 7 consultations required by the federal ESA. In June 1999, USFWS and Reclamation initiated development of the analysis approach for the American River Basin Cumulative Report (Cumulative Report) (Appendix D of the Draft EIS/EIR). This approach was documented in a Planning Aid Memorandum (PAM) from USFWS to Reclamation on December 28, 2000. Formal consultation began with initiation of the public review period for the EIS/EIR. USFWS provided comments on the Draft EIS/EIR and Cumulative Report/PAM. Additional meetings were held to provide additional information relative to the Proposed Project and USFWS consultation requirements. USFWS will provide a biological opinion for Reclamation's consideration prior to completion of the NEPA process and preparation of the Record of Decision (ROD). The biological opinion will become part of the administrative record for the project. Terms and conditions for the protection of special status species will be incorporated into the contract specifications for the project. The biological opinion will indicate USFWS findings regarding impacts to the bald eagle, American peregrine falcon, California horned lizard, spotted bat, greater western mastif-bat, Townsend big-eared bat, foothill yellow-legged frog, California red-legged frog, valley elderberry longhorn beetle, Sacramento splittail, and delta smelt.

National Marine Fisheries Service

Reclamation also participated in informal consultations with NMFS during preparation of the Draft EIS/EIR for the project. Formal consultations began with the initiation of the public review period for the Draft EIS/EIR. Representatives from NMFS also were involved in the development of the PROSIM modeling assumptions and aquatic resources impact assessment approach for the Cumulative Report. NMFS will prepare a biological opinion on the Proposed Project (Mid-Channel Diversion Alternative) that will identify findings regarding project impacts upon chinook salmon and steelhead, to be provided to Reclamation and considered in the decision- making for the project prior to completion of the ROD. Terms and conditions for the protection of special status species will be incorporated into the contract specifications for the project. The consultation process with NMFS also includes consideration of potential direct or indirect effects on Essential Fish Habitat (EFH) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act.

4.1.2 FISH AND WILDLIFE COORDINATION ACT CONSULTATION

The Fish and Wildlife Coordination Act (FWCA) ensures that fish and wildlife receive equal consideration during planning and construction of federal water projects. The FWCA requires that the USFWS's views be considered when evaluating impacts and determining mitigation needs. Consultation with USFWS under the FWCA began in 1997 and has continued over the course of the environmental process for the project. USFWS representatives assisted in defining the scope of analysis for this Draft EIS/EIR and participated in its review. USFWS provided comments on the Draft EIS/EIR and prepared a draft Coordination Act Report (CAR). Reclamation and USFWS will review the recommendations of the draft CAR and finalize the CAR. The final CAR recommendations will be provided to Reclamation and considered in the decision-making for the project and incorporated into the ROD.

4.1.3 INDIAN TRUST ASSETS AND NATIVE AMERICAN CONSULTATION

Reclamation's Indian Trust Assets (ITAs) Coordinator has confirmed that no ITAs would be affected by the Proposed Project or alternatives. No further action is required (Section 3.18.1).

4.1.4 NATIONAL HISTORIC PRESERVATION ACT/STATE OFFICE OF HISTORIC PRESERVATION CONSULTATION

The National Historic Preservation Act of 1966 (as amended in 1992) requires federal agencies to consult with the Advisory Council on Historic Preservation concerning potential effects of federal actions on historic properties. Notices of public meetings for this project have been sent to the State Historic Preservation Officer (SHPO). A copy of this Draft EIS/EIR has been sent to SHPO requesting its review and soliciting input on the project. Reclamation will continue to coordinate with the Advisory Council on Historic Preservation and SHPO, consistent with Section 106 of the National Historic Preservation Act.

4.1.5 CALIFORNIA RESOURCES AGENCY DEPARTMENT OF PARKS AND RECREATION

In September 1999, the State Attorney General's office and Interior began correspondence regarding closure of the Auburn Dam construction area bypass tunnel and restoration of the North Fork American River to its natural channel. Correspondence and coordination continued into early 2001 with the result being a Memorandum of Agreement (MOA) (Appendix A of the Draft EIS/EIR) between the United States and the State of California regarding cost-sharing for the planning phase of the restoration of the North Fork American River.

The MOA, signed in January 2001, specifies project components including the provision of public river access facilities and safety features in response to the anticipated increased incidental recreation use of the restored river channel under the Proposed Project. The public river access sites are proposed to permit management of public health and safety/emergency purposes, as well as resource protection activities related to restoring the dewatered portion of the river channel.

In addition to the agreement between the two agencies, California Department of Parks and Recreation (CDPR) resource experts are actively involved in the development of the river channel restoration design concepts and planning efforts.

4.1.6 CALIFORNIA DEPARTMENT OF FISH AND GAME COORDINATION

Reclamation and PCWA are coordinating with representatives from California Department of Fish and Game (CDFG) regarding the design of fish screens for the proposed intake structure for the Mid-Channel Diversion and Upstream Diversion alternatives. The selected alternative final design will incorporate the most recent recommended fish screening design criteria appropriate for the species and lifestages present at the project site as agreed to by CDFG. The No Action/No Project Alternative would include use of CDFG-approved fish screening techniques identified in the Streambed Alteration Agreement for the seasonal pump station. CDFG resource experts are actively involved in the development of the river channel restoration design concepts and planning efforts. CDFG fish screen experts will remain actively involved in the design and approval of fish screens to be constructed for the selected alternative.

4.2 PUBLIC INVOLVEMENT

The following is a summary of the public involvement activities including public informational and environmental process scoping meetings for the project. Further discussion of these activities and the issues identified for evaluation in the EIS/EIR are presented in the Scoping Summary Report available through lead agency contacts (see Cover Page for information).

4.2.1 PUBLIC MEETINGS

Reclamation and PCWA have invited public and agency stakeholders to several meetings since initiation of project planning in July 1995. All meetings were held in the City of Auburn, at the offices of PCWA, and jointly hosted by PCWA and Reclamation.

Stakeholder meetings were held July 6, 1995 and April 11, 1997 to provide key resource agencies and local interest groups information regarding project objectives, design considerations, and the environmental process. The July 6, 1995 meeting provided for an introduction of the project and planning process and involved interested parties. The April 11, 1997 meeting included an informal question and answer workshop followed by a visit to the project site. Discussion of key issues included channel stabilization, power, fish screening, fish habitat, bypass tunnel concerns, riparian revegetation, pump station location, and recreation opportunities.

A public scoping meeting was held the evening of May 28, 1997 to inform the public of the project and solicit input on the scope of the Environmental Assessment/Initial Study (EA/IS) as to the project alternatives and the potentially significant design/environmental issues. A meeting notice was mailed to over 100 agency and interest group representatives. Lead agency representatives described the proposed project alternatives, including a brief history of the Auburn Dam site, project objectives, and issues associated with each of the project alternatives. Questions and comments were taken throughout the meeting and attendees were encouraged to provide written comments as well. Twenty-three people attended the meeting.

On May 14, 1998, the lead agencies held a public stakeholder status meeting to update interested parties concerning progress on the project studies since May 1997. The lead agencies reviewed preliminary design considerations and initial value planning results, and requested input to identify any additional issues that the public felt should be discussed in the environmental documentation. Twenty-six people attended the meeting.

On September 16, 1998, a public meeting was held as a follow-up to the May 1998 session, to update interested parties on the project, describe refinements to the design of the project, and discuss the anticipated schedule for completion of an EA/IS. One hundred meeting announcements were distributed to agency and interest group representatives, members of the public, and local media. Eighteen people attended the meeting.

In early 1999, prior to completing the Administrative Draft EA/IS, the lead agencies determined that an EIS/EIR should be prepared for the project. This decision was based on the evaluation of other proposed actions involving the Central Valley Project (CVP) and the anticipated cumulative effects upon resources within the lower American River and other portions of the CVP system. Scoping activities related to the Draft EIS/EIR are described below followed by a summary listing of public comments received since initiation of the public involvement activities for this project.

Following completion and circulation of the Draft EIS/EIR, Reclamation, PCWA, CDPR and CDFG representatives participated in several additional meetings with interested parties on the project. These meetings included stakeholder groups interested in project area trail issues, Auburn Ravine fish resources, and City of Auburn neighborhood groups. The Proposed Project and

Upstream Diversion Alternative descriptions and mitigation measures were modified to reflect these stakeholder concerns and to provide further clarification of environmental protection efforts of the lead agencies related to these topics.

4.2.2 ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT SCOPING

Reclamation published the Notice of Intent (NOI) to prepare an EIS and notice of a scoping meeting pursuant to the National Environmental Policy Act (NEPA) in the *Federal Register* on June 18, 1999. At the same time, PCWA distributed the Notice of Preparation (NOP) of an EIR pursuant to the California Environmental Quality Act (CEQA) to resource agencies and interested members of the public. Copies of the NOI and NOP are included in Appendix B of the Draft EIS/EIR.

A scoping session was held in Auburn on July 8, 1999 to provide the public with an update on the status of the project and to identify additional significant issues to be addressed in the Draft EIS/EIR. Both lead agencies published news releases announcing the time and place for the scoping session. The meeting was attended by about 50 people. Eighty-nine comment letters were received during the comment period (June 18, 1999 through July 30, 1999). The lead agencies and the Draft EIS/EIR project team reviewed each letter and determined how each issue raised by agencies and individuals would be addressed in the Draft EIS/EIR. A Scoping Summary Report was prepared to summarize the public comments received at the scoping session, as well as those received during previous public involvement efforts. The Scoping Summary Report is available through lead agency contacts (see Cover Page for information).

4.2.3 SUMMARY OF PUBLIC CONCERNS

The comments received during project scoping and public involvement activities are summarized below by major topic. Consultations with resource agencies and the professional judgment of the specialists involved in preparation of the Draft EIS/EIR further defined the impact issues that are addressed in Chapter 3.0, Affected Environment and Environmental Consequences.

Water Supply and Hydrology

- Commitment to Water Forum purveyor-specific agreement elements
- River channel stability – cofferdam debris movement
- Long-term stability of the diversion structure
- Backwater effect at Tamaroo Bar
- Flood event effects on project facilities
- Meet increased demand by conservation or water exchanges with other purveyors
- Instream flow/diversion effect
- Discuss possible use of pump station facilities by Georgetown Divide Public Utility District, identify any rate increase associated with facility construction
- Consistency of this project with the CVP Improvement Act PROSIM 99 model
- Groundwater supplies

Fish Resources and Aquatic Habitat

- Special-status species – chinook salmon, steelhead (flow, diversion structure)
- Instream flow requirements for fisheries
- Water chemistry changes – effects on special-status fish species migration (Auburn Ravine)
- Restoration of coho salmon to the north and middle forks of river (otters and eagles)
- Restore the river channel
- Restore fish runs upstream of Folsom Dam
- Protection of fish from injury at the pump station
- Auburn Ravine impacts from increased flows

Terrestrial Resources

- Wildlife migration corridors and flyways
- Riparian habitat protection/enhancement
- Restore the river channel to improve the ecosystem

Water Quality

- Sedimentation/turbidity
- Water temperature
- Auburn Ravine – when the water leaves the Auburn Ravine Tunnel – where does it go?
- Groundwater quality

Recreation

- Public access – hiking/equestrian/bicycle trails, access to the river for water-based activities
- Public use of roads constructed by the project
- Project consistency with the Auburn State Recreation Area Interim Resource Management Plan
- Cost-benefit comparison of recreation opportunities between alternatives
- Diversion tunnel safety hazard to recreation
- Restore the river channel for water-based activities
- Attract Olympic events

Visual Resources

- Pump station aesthetics

Land Use

- Growth-inducement aspects of increased diversion/water supply (traffic, loss of habitats, public service burden)
- Agriculture impacts
- Placer County General Plan – what does "build-out" look like; will the project serve build-out; will other facilities need to be constructed?
- Public utilities and services – energy consumption by pump station

Air Quality

- Short-term construction emissions
- Long-term operational emissions

Public Health and Worker Safety

- Diversion tunnel safety
- Structures as potential attractive nuisance (safety issue)

Alternatives Analysis

- Upstream location poor choice – silt settling basin requires frequent dredging or special effort to maintain
- Cost-benefit analysis between alternatives – particularly related to recreation opportunities

Other Issues

- Political support
- Funding/use of tax dollars
- Auburn Dam – future construction/waste of resources
- Future planned changes to Folsom Dam (height)
- Relationship of project to other local and regional projects (cumulative analysis)
- Public Trust Doctrine
- Unreasonable methods of diverting water prohibited by Article X, Section 2 of the California Constitution and Section 100 of the California Water Code

4.2.4 PUBLIC REVIEW OF DRAFT EIS/EIR

The Public Draft EIS/EIR was available for review and comment for 60 days following filing of the Notice of Availability (NOA) of the EIS with the Environmental Protection Agency and the Notice of Completion (NOC) of the EIR with the California State Clearinghouse.

The NOA and notice of public hearing on the EIS were published in the *Federal Register*. The NOC was filed with the California State Clearinghouse and posted at the Placer, El Dorado, and Sacramento county clerk offices.

The purpose of public review of the Draft EIS/EIR is to receive comments from interested parties on its completeness and adequacy in disclosing the environmental effects of the proposed project. Following the close of the Draft EIS/EIR public review period, a second document containing comments received on the Draft EIS/EIR and responses to the significant environmental points raised in those comments, will be prepared and published. Together, the Draft EIS/EIR and the responses to comments will constitute the Final EIS/EIR. Reclamation is responsible for adopting the EIS as adequate in compliance with NEPA, and PCWA is responsible for certifying the EIR as adequate in compliance with CEQA. After adoption and certification, the agencies will use the EIS/EIR in making their determinations whether to approve the project.

4.3 DISTRIBUTION LIST

The Draft EIS/EIR was available for public review at Reclamation and PCWA offices as well as several libraries, listed in **Table 4-1**. Additionally, copies of the Draft EIS/EIR were distributed to federal and state government officials and resource agencies; regional and local government offices; water districts, agencies, and utilities; other interest groups and organizations; and individuals as identified in **Table 4-2**.

The Final EIS/EIR was also made available for review at Reclamation and PCWA offices and local libraries throughout the study area. The distribution of the Final EIS/EIR is reflected in Tables 4-1 and 4-2.

Table 4-1
Locations Where the Draft EIS/EIR was made Available for Public Review

Auburn-Placer County Library 350 Nevada Street, Auburn, CA 95603	Placer County Water Agency 144 Ferguson Road, Auburn, CA 95604
Georgetown Divide Public Utility District 6425 Main Street, Georgetown, CA 95634	Rocklin Library 5460 5th Street, Rocklin, CA 95677
El Dorado County Main Library 345 Fair Lane, Placerville, CA 95667	Sacramento Public Library 828 I Street, Sacramento, CA 95814
Lincoln Library 590 Fifth Street, Lincoln, CA 95648	U.S. Bureau of Reclamation 7794 Folsom Dam Road, Folsom, CA 95630
Loomis Branch Library 6050 Library Drive, Loomis, CA 95650	U.S. Bureau of Reclamation 2800 Cottage Way, Sacramento, CA 95825
Penryn Library 2215 Rippey Road, Penryn, CA 95663	

Table 4-2 Agencies, Organizations, and Individuals Receiving Copies of the Draft and Final EIS/EIR
U.S. Government Officials
Barbara Boxer, U.S. Senate Dianne Feinstein, U.S. Senate John T. Doolittle, U.S. House of Representatives, District 4 Robert Matsui, U.S. House of Representatives, District 5 Doug Ose, U.S. House Representatives, District 3
Federal Government Agencies
El Dorado National Forest National Marine Fisheries Service National Park Service Native American Heritage Commission Tahoe National Forest U.S. Army Corps of Engineers U.S. Bureau of Land Management U.S. Bureau of Reclamation U.S. Department of Agriculture U.S. Department of Energy U.S. Environmental Protection Agency U.S. Fish and Wildlife Service U.S. Geological Survey, Water Resources Division
State Government Officials
Dave Cox, Assembly District 5 Bob Franzoia, State Senate Appropriations Staff Tim Leslie, Senate District 1 Mike Machado, Senate District 5 Thomas "Rico" Oller, Assembly District 1 Deborah Ortiz, Senate District 6 Anthony Pescetti, Assembly District 10 Jeff Shellito, State Senate Staff
State Government Agencies
California Air Resources Board California Department of Boating and Waterways California Department of Conservation California Department of Fish and Game California Department of Forestry and Fire Protection California Department of Health Services California Highway Patrol California Department of Parks and Recreation California Department of Water Resources California Environmental Protection Agency California Office of Historic Preservation California Regional Water Quality Control Board, Central Valley Region California Resources Agency California State Attorney General's Office California State Clearinghouse California State Lands Commission California State Reclamation Board California State Water Resources Control Board CALTRANS District 03

Table 4-2
Agencies, Organizations, and Individuals Receiving Copies of the Draft and Final EIS/EIR

Regional and Local Government Agencies
Auburn Recreation District
City of Auburn Chamber of Commerce
City of Auburn City Clerk/City Council
City of Colfax City Clerk/City Council
City of Folsom Chamber of Commerce
City of Folsom City Clerk/City Council
City of Folsom Planning Department
City of Lincoln City Clerk/City Council
City of Placerville Community Development Department
City of Rocklin Clerk/City Council
City of Rocklin Community Development Department
City of Roseville Clerk/City Council
City of Roseville Development Department
El Dorado County Air Pollution Control District
El Dorado County Board of Supervisors
El Dorado County Department of Community Development
El Dorado County Parks Department
Granite Bay Community Association
Placer County Air Pollution Control District
Placer County Board of Supervisors
Placer County Planning Agency
Placer County Sheriff's Office
Roseville Community Development Department
Sacramento County Department of Environmental Review
Sacramento County Sanitation District
Sacramento Metropolitan Air Quality Management District
Sacramento Metropolitan Chamber of Commerce
Shingle Springs/Cameron Park Chamber of Commerce
Town of Loomis
Water Districts, Agencies and Utilities
Association of California Water Agencies
California Urban Water Agencies
Central Valley Project Water Association
California American Water Works (Citizens Utilities of California)
City/County Office of Metropolitan Water Planning
East Bay Municipal Utility District
El Dorado County Water Agency
El Dorado Irrigation District
Foresthill Public Utility District
Fruitridge Vista Water Company
Georgetown Divide Public Utility District
Kirkwood Meadows Public Utility District
Northern California Water Association
Pacific Gas and Electric Company
Placer County Flood Control District
Placer County Water Agency
Sacramento Area Flood Control Agency
Sacramento County Water Agency
San Juan Water District

Table 4-2
Agencies, Organizations, and Individuals Receiving Copies of the Draft and Final EIS/EIR

Environmental Organizations
American River Parkway Foundation
American River Recreation Association
California Fly Fishers Unlimited
California Native Plant Society
California Sportfishing Protection Alliance
California Striped Bass Association
California Trout, Inc.
California Wilderness Coalition
Center for Sierra Nevada Conservation
Defenders of Wildlife
Environmental Council of Sacramento
Environmental Defense Fund
Folsom Auburn Trail Riders Association
Friends of the River
National Audubon Society
Natural Resources Defense Council
Nature Conservancy
Pacific Coast Federation of Fishermen
Planning and Conservation League
Protect American River Canyon
Save the American River Association
Sierra Club
Other Interests
A Whitewater Connection
Actium Development Corporation
American River Guides Association
American River Raft Rentals
Auburn Centennial
Auburn Journal
Bailey Environmental
Bookman-Edmonston Engineering
Building Industry Association
California Farm Bureau Federation
California Outdoors
California State University of Sacramento
CH2M Hill
Curly Media
Current Adventures
Earthtrek Expeditions
EDAW
EIP Associates
El Dorado Citizens for Water
El Dorado County Association of Realtors
El Dorado County Farm Bureau
El Dorado Gazette
ESRI California Region
Fruit Growers Supply
G.W. Consulting Engineers
Gold Rush White Water Rafting
Kronick, Moskovitz, Tiedemann and Girard
League of Women Voters

Table 4-2
Agencies, Organizations, and Individuals Receiving Copies of the Draft and Final EIS/EIR

Other Interests (Continued)
McKay and Somps Engineers
McLaughlin Water Engineers
Montgomery Watson
Mountain Democrat
Nolte Engineers
Parsons
Remy, Thomas and Moose
River Rat
Sierra Outdoor Center
Somach, Simmons and Dunn
Southwest Bedford Holdings
Taxpayer's Association of El Dorado County
The Sacramento Bee
Triple 7 Ranch
U.C. Davis
URS Corporation
Water Education Foundation
Western States Endurance Run
Western States Trail Foundation
Whitewater Expeditions and Tours
Individuals
James Alderink
Elaine Baden
Amy Bostone
Abigal Cartier
Emmet Cartier
Donna Cederland
Marcie Cedree
Eileen Crim
Nancy Dagle
Wesley Dill
Jean Dimanto
Kendra Douglas
Peggy Egli
Annie Embree
Gary Estes
Jared Ficker
Laurie Fowler
James Haagen-Smit
Dennis Hada
Sarah Jordan
Carolyn Kemmler
Melba Leal
Jay McCain
Bill Michel
John Milliken
Brian O'Brien
Ron Otto
Erin and Matt Perry
Richard Pompo
Steven Proe

Table 4-2
Agencies, Organizations, and Individuals Receiving Copies of the Draft and Final EIS/EIR

Individuals (Continued)
Jim Roberts
Lore Roberts
David Ruark
Laura Snow
Jim Strong
Jack Tolomei
Ben Troia
Charlie Walbridge

Chapter 5.0
List of Preparers

Table 5-1 identifies the names and area of participation of the lead and resource agency representatives who were primarily responsible for providing input to the Draft and Final Environmental Impact Statement/Environmental Impact Reports (EIS/EIR). **Table 5-2** includes the names, qualifications, and area of participation of the persons who were primarily responsible for preparing the EIS/EIR, including those persons who provided substantive supporting information or analyses.

Table 5-1
Resource Agency Participants and Preparers

Name	Area of Participation
U.S. Bureau of Reclamation – NEPA Lead Agency	
Tom Aiken	Project Oversight
Roderick Hall	Lead Agency Contact, Description of Alternatives, Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
Doug Kleinsmith	NEPA Coordination, Document Review and Processing
Cecil Lesley	Reclamation Contract Terms and Negotiations
Robert Meador	Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
William Sanford	Project Design and Description
Rob Schroeder	Liaison with Other Reclamation American River Basin Actions; Document Review; Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
Jim West	Cultural Resources Issues, Coordination with SHPO Regarding Section 106 Compliance and Programmatic Agreement for Mitigation of Potential Effects
Placer County Water Agency – CEQA Lead Agency	
Einar Maisch	Lead Agency Contact; Description of Alternatives; Document Review
Brent Smith	Document Review and Project Management Assistance
Mal Toy	Input Regarding Agency Policies and Operations
U.S. Fish and Wildlife Service	
Michael Thabualt	ESA Consultation
Jan Knight	ESA Consultation
Justin Ly	ESA Consultation
Bart Prose	FWCA Coordination
Arnold Roessler	ESA Consultation
Jill Wright	FWCA Coordination
National Marine Fisheries Service	
Mike Aceituno	ESA and EFH Consultations
Bruce Oppenheim	ESA and EFH Consultations
John Baker	ESA and EFH Consultations

Table 5-1 (Continued) Resource Agency Participants and Preparers	
Name	**Area of Participation**
California Department of Parks and Recreation	
Jill Dampier	Channel Restoration and Public River Access Information; Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
Jim Micheaels	Channel Restoration and Public River Access Information, Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
California Department of Fish and Game	
Kris Vyverberg	Channel Restoration and Fish Screen Design Consideration, Responses to Comments
Dan Odenweller	Fish Screen Design Considerations
Cindy Watanobee	Fish Screen Design Considerations

Table 5-2 List of Preparers		
Name	**Expertise and Education**	**Area of Participation**
Surface Water Resources, Inc.		
Paul Bratovich	Fisheries Biology, Endangered Species, Flow-Habitat Relationships M.S., Fishery Resources, 1985 B.S., Fisheries, 1977	Principal-In-Charge, Resource Agency Consultations, Fish Resources and Aquatic Habitat, ESA Compliance, Terrestrial Resources, Responses to Comments, Document Review
Tami Mihm	CEQA/NEPA Compliance, Water Resources and Land Use Planning, Permitting B.S., Environmental Policy Analysis and Planning, 1988	EIS/EIR Project Manager, Description of Project Alternatives, Affected Environment and Environmental Consequences, Consultation and Coordination, Public Scoping Report, Oversight of Document Preparation and Production, Technical Editing, and Agency Coordination, Responses to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
Carol Brown	Administrative Support and Document Management	Document Word Processing, Formatting, Technical Editing, Production, and Project Mailing List
Thomas Duster	Fisheries Biology B.S., Wildlife Biology, Aquatic Emphasis, 2001	Responses to Comments, Fish Resources and Aquatic Habitat
Allison Dvorak	Water Resources Systems and Hydrologic Modeling M.S., Hydrologic Sciences, 2000 B.S., Earth and Atmospheric Sciences, 1998	Modeling Output Template Development and Production

Table 5-2 (Continued) List of Preparers		
Name	**Expertise and Education**	**Area of Participation**
Surface Water Resources, Inc. (Continued)		
John Faux	Water Resources Systems and Hydrologic Modeling M.S., Agricultural and Resource Economics, 1996 M.S., Civil Engineering: Water Resources Planning and Management, 1983 B.S., Watershed Science, 1979	Power Supply, Fish Resources and Aquatic Habitat, Water Supply and Hydrology, Recreation, Visual Resources, and Cultural Resources
Inês Ferreira	Water Resources Systems and Hydrologic Modeling M.S., Civil Engineering, 1993 M.S., Applied Mathematics, 1992 B.S., Mathematics, 1985	Water Supply and Hydrology, Fish Resources and Aquatic Habitat, and Recreation
Shannon Gates	Biological Sciences B.S., Biology, Neurobiology, Physiology, and Behavior Emphasis, 2001	Responses to Comments (Air Quality); Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
Jeanie Hinds	Conservation Biology, NEPA/CEQA Compliance B.S., Evolution and Ecology, 2000	Responses to Comments (Terrestrial Resources)
Steve James	Conservation Biology, ESA Compliance, Terrestrial Ecology M.S., Biology/Botany, 1996 B.A., Aquatic Biology, 1984 B.A., Environmental Studies, 1979	Terrestrial Resources
Michael Jones	Water Resources Planning B.S., Chemistry, 1993 J.D., 1998	Cumulative Impacts
Carol Lazzarotto	Water Resources Planning P.P.A., Public Policy, 1984 B.A., Political Science, 1981	Water Supply and Hydrology, Water Quality, Visual Resources, and Noise
George "Buzz" Link	Water Resources Systems and Hydrologic Modeling B.S., Civil Engineer, 1975 Professional Engineer, California	Modeling, Water Supply and Hydrology, Recreation, Power Supply
Janice Pinero	Fisheries and Aquatic Habitat Resources B.A., Biology and Economics, 1999	Fish Resources and Aquatic Habitat and ESA Compliance
Jason Ramos	Water Resource Science and Land Use Planning B.S., Natural Resources Planning and Interpretation, 2000	Project Description, Terrestrial Resources, Geology and Soils, Public Health and Worker Safety, Transportation and Circulation
Karen Riggs	Environmental Planning B.S. Environmental Studies, Biology, 2001	Responses to Comments

Table 5-2 (Continued)
List of Preparers

Name	Expertise and Education	Area of Participation
Surface Water Resources, Inc. (Continued)		
Dianne Simodynes	Environmental and Biological Sciences M.S., Aquatic Resource Management, 2001 B.S., Biological Sciences, 1993	Responses to Comments, Environmental Mitigation and Monitoring Program/Environmental Commitments Plan; Document Preparation Assistance
Linda Standlee	Administrative Support	Responses to Comments Coordination and Document Preparation
Jeff Strawn	Technical Illustration, Cartography, Graphics, Geographic Information System B.S., Business Administration, 1989	Cartography, Maps, and Figures
John Anderson		
John Anderson	Whitewater Recreation B.S., Architecture, 1978	Whitewater Recreation Input for Restored River Channel and Diversion Structure
Montgomery Watson		
Wayne Dahl, P.E.	Civil and Environmental Engineering B.S., Civil Engineering, 1979	Project Design Considerations (Pump Station, Diversion, Intake, Pipelines); Facilities, Operation, Maintenance, and Construction Activities, Responses to Comments
Janet Atkinson, P.E.	Professional Engineer B.S., Civil Engineering	Project Design Considerations
Mark Hargrove	Civil Engineering B.S., Civil Engineering	Project Design Considerations, Graphics
Amy Wade	Civil and Environmental Engineering B.S., Civil and Environmental Engineering, 2001	Project Design Considerations, Permitting Conditions
McLaughlin Water Engineers, Ltd.		
Rick McLaughlin	Water Resources Engineering M.S., Water Resources Engineering, 1989 B.S., Civil Engineering, 1982	Channel Restoration Design, Responses to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
John T. Kaufman	Hydrogeology M.S., Geological Engineering, 1975 B.A., Geology, 1973	Channel Restoration Design
Kronick, Moskovitz, Tiedemann, and Girard		
Ed Tiedemann	Public Agency Water and Power, Natural Resource, and Construction Law J.D., 1961	Water Rights and Contracts, NEPA/CEQA Compliance, ESA Compliance, Document Review
Jan Goldsmith	Water, Natural Resources, and Related Litigation J.D., 1975	Water Rights and Contracts, NEPA/CEQA Compliance, ESA Compliance, Response to Comments, Mitigation Monitoring and Reporting Program/Environmental Commitments Plan, Document Review
Thomas, Remy and Moose		
Jim Moose	CEQA Compliance J.D., 1985; B.A., 1981	Review and Preparation of Responses to Comments; Mitigation Monitoring and Reporting Program/Environmental Commitments Plan

Table 5-2 (Continued)
List of Preparers

Name	Expertise and Education	Area of Participation
Lisa Stallings Associates		
Lisa Stallings	Agronomy, Soil Science, and Plant Ecology Ph.D., Soil Science M.S., Soil Science B.S., Soil Science	Preliminary Wetlands Delineation
ECM SERVICES		
Maureen Daggett, R.E.A., C.H.M.M.	Environmental, Health, and Safety Regulatory Analysis B.S., Manufacturing Engineering Technology, 1990 B.S., Chemistry, 1982	Public Health and Worker Safety (Support)
Dean Carrier and Associates		
Dean Carrier	Wildlife Biology, Endangered Species Act Compliance B.S., Wildlife Biology, 1963	California Red-legged Frog Habitat Survey
kD Anderson Transportation Engineers		
Ken Anderson	Transportation Engineering and Planning; Civil Engineer B.S., Transportation Engineering, 1978	Traffic Study

Chapter 6.0
References

This chapter of the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) includes reference materials, including literature, documents and personal communications cited in the following volumes of the American River Pump Station Project environmental documentation: Draft EIS/EIR, American River Basin Cumulative Report (Appendix D to the Draft EIS/EIR), Final EIS/EIR, and Responses to Comments on the Draft EIS/EIR (Appendix C, Volume 1, Master Responses and Volume 2, Individual Comment Letters and Responses to the Draft EIS/EIR).

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CARB. 1998. Summary of 1997 Air Quality Data Gaseous and Particulate Pollutants.

CARB. 1999. Summary of 1998 Air Quality Data Gaseous and Particulate Pollutants.

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Glossary

Acre-foot (AF): A quantity or volume of water covering one acre to a depth of one foot (43,560 cubic feet).

Anadromous: Fish that spend a part of their lifecycle in the sea and return to freshwater streams to spawn.

Backwater: Water turned back in its course by an obstruction, an opposing current, or the tide.

California Environmental Quality Act (CEQA): Act requiring California public agency decision-makers to document and consider the environmental impacts of their actions. Also requires an agency to identify ways to avoid or reduce environmental damage and to implement those measures where feasible, and provides a means to encourage public participation in the decision-making process.

Central Valley Project (CVP): The CVP is a multi-purpose project operated by Reclamation that stores and transfers water from the Sacramento, San Joaquin, and Trinity river basins to the Sacramento and San Joaquin valleys. The CVP was authorized by Congress in 1937 for water supply, hydropower generation, flood control, navigation, fish and wildlife, recreation, and water quality control purposes. The CVP service area extends about 430 miles through much of California's Central Valley, from Trinity and Shasta reservoirs in the north to Bakersfield in the south.

Cooperating Agency: Any federal agency other than the lead agency that has jurisdiction by law or special expertise with respect to the environmental impacts expected to result from a proposed project.

Cumulative Impacts: For National Environmental Policy Act (NEPA) purposes, cumulative impacts are defined in Council of Environmental Quality (CEQ) Regulations (40 CFR 1508.7) as follows: "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Under CEQA, the cumulative impact of several projects is the change in the environment that results from the incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable probable future projects.

Dewater: To remove water.

Diversion: The removing or turning of water from its natural channels.

Dredging: Widening or deepening of water channel by removing sand, mud, silt, or gravel. Dredging can be accomplished by using suction pumps or mechanical scrapers.

Effects: CEQA Guidelines Definition 15358 states: "Effects" and "impacts" are synonymous. Effects include: (1) Direct or primary effects which are caused by the project and occur at the same time and place. (2) Indirect or secondary effects which are caused by the project and are later in time or further removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. (3) Effects analyzed under CEQA must be related to a physical change.

Emigrate: To migrate or move from one habitat to another; in the case of anadromous fish such as salmon, to migrate or move in a downstream direction from freshwater riverine systems to estuarine and marine systems as juveniles.

Endangered Species Act (ESA): State and federal laws, which authorize and publish the process for the protection of habitats and populations of species threatened with extinction. The stated purposes of the ESAs are to provide conservation of the ecosystems upon which endangered and threatened species depend and to establish and implement a program to conserve these species.

Entrainment: Process by which fish are pulled through or around the fish screen face and carried into the intake channel.

Fish and Wildlife Coordination Act (FWCA): The FWCA and related acts express the policy of Congress to protect the quality of the environment as it affects the conservation, improvement, and enjoyment of fish and wildlife resources. Under the FWCA, any federal agency that proposes to control or modify any body of water, or to issue a permit allowing control or modification of a body of a body of water, must first consult with U.S. Fish and Wildlife Service and state fish and game officials.

Flow: The volume of water passing a given point per unit of time. Same as streamflow.

Fry: Lifestage of fish between the egg and fingerling stages.

Groundwater: Water contained beneath the land surface of the earth that can be collected with wells, or drainage galleries, or water that flows naturally to the earth's surface via seeps or springs.

Gully Erosion: Soil removed by water flows sufficient to cause the formation of defined channels.

Homing Cue: A chemical or physical environmental characteristic which salmonids use to find and recognize their natal streams.

Immigrate: To migrate or move from one habitat to another; in the case of anadromous fish such as salmon, to migrate or move in an upstream direction from estuarine and marine systems to freshwater riverine systems as adults.

Impact Indicators: Changes to the environment that point to a potential impact.

Impacts: Under CEQA Guidelines, "Impacts" and "Effects" are synonymous. See "Effects" for a complete description.

Imprinting: In the salmonids, the process of learning the odor of the natal stream as a juvenile.

Keyway: The specific section of canyon wall and floor where a structure is attached.

Lead Agency: CEQA Guidelines Definition 15367 states: "Lead Agency" means the public agency, which has the principal responsibility for carrying out or approving a project. For this project, Placer County Water Agency (PCWA) is the State (local) lead agency and the U.S. Bureau of Reclamation (Reclamation) is the Federal lead agency.

Mainstem: The principal channel of a river.

Mid-Channel Diversion Alternative: The major features that would be constructed for the Mid-Channel Diversion Alternative include the water diversion/intake structure, including a fish screen and debris rack; water transmission pipelines; a new pump station and wetwell, placed above the 100-year flood level; all-weather access roads; and power lines. This alternative would place the diversion/intake facility within the currently dewatered section of the river channel. Additionally, the bypass tunnel would be closed and the river redirected into the restored river channel.

Middle Fork Project (MFP): PCWA constructed and operates the MFP, a multi-purpose project providing water for irrigation, domestic, and commercial purposes, and for generation of electricity. The primary facilities of the MFP are located on the Middle Fork of the American River and its tributary, the Rubicon River. French Meadows and Hell Hole reservoirs are the primary storage facilities. The MFP also has five diversion dams, five power plants, diversion and water transmission facilities, five tunnels, and related facilities. Water is stored and released through a system of tunnels and power plants before being released into the Middle Fork of the American River.

Mortality: The rate or proportion of deaths.

National Environmental Policy Act (NEPA): Directs federal agencies to prepare an environmental impact statement for all major federal actions, which may have a significant effect on the human environment. States that it is the goal of the federal government to use all practicable means, consistent with other considerations of national policy, to protect and enhance the quality of the environment. Requires all federal agencies to consider the environmental impacts of their proposed actions during the planning and decision-making processes.

No Action/No Project Alternative: For purposes of this EIS/EIR, if the lead agencies do not construct a new year-round diversion and pump station facility for the American River diversion, the No Action/No Project Alternative would occur. Under this alternative, Reclamation would continue annual installation and removal of the seasonal pumps at the existing location and maintain responsibility for the operation and maintenance of the facilities.

Odorant: The chemical compounds in a stream, which produce a stream odor.

Olfactory Response: The process of "smelling" caused by the interaction between odorous chemical components of an environment and the odor receptors of an organism.

Redd: A depression dug by spawning salmon in gravel into which eggs are laid.

Responsible Agency: CEQA Guidelines 16381 states "Responsible Agency" means a public agency, which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an environmental impact report or negative declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency, which have discretionary approval of a project.

Rill Erosion: Soil removed by small amounts of flowing water.

Riparian: Vegetation located on the banks of a stream, river, lake, or pond.

Sedimentation: Soil or gravel transported by water from other streams and bodies of water that settle out of the water and are deposited.

Sheet Erosion: Wearing away of a thin layer of land surface.

Significance Criteria: Qualitative or quantitative criteria used to determine the significance of an impact.

Silt: Loose sedimentary material with rock particles.

Spawning: To produce/deposit eggs.

Special-Status Species: Any species listed or proposed for listing under the ESA.

State Water Project (SWP): The SWP supplies water to the San Francisco Bay Area, San Joaquin Valley, and southern California. Initial SWP facilities were completed in 1973; however, certain project facilities have been in operation since 1962. They include 18 reservoirs, 17 pumping plants, 8 hydroelectric power plants, and 550 miles of aqueducts and pipelines. Oroville Reservoir on the Feather River is the principal reservoir of the SWP and has a capacity of 3.5 million AF. From Oroville Reservoir, water flows through three hydroelectric power plants before continuing down the Feather and Sacramento rivers to the Delta.

Turbidity: Suspended matter in water that causes the scattering or absorption of light rays and a cloudy appearance.

Upstream Diversion Alternative: The major features that would be constructed for the Upstream Diversion Alternative include the water diversion/intake structures, including fish screen and debris rack; water transmission pipelines, a new pump station, placed above the 100-year flood level; all-weather access roads; power lines; and safety features. The Upstream Diversion Alternative would site the diversion intake structure upstream of the bypass tunnel inlet. Locating the diversion upstream of the bypass tunnel would not require channel restoration or tunnel closure.

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American River Pump Station Project

Final
Environmental Impact Statement/
Environmental Impact Report

Appendix A

Auburn State Recreation Area
Prefire Management Plan

U.S. Bureau of Reclamation

Placer County Water Agency

Placer County
Water Agency

June 2002

STATE OF CALIFORNIA - THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
Nevada-Yuba-Placer Ranger Unit
13760 Lincoln Way Auburn Ca. 95603
(530) 823-4904

January 30, 2002

Dear Recipient:

Enclosed are the first components of the Auburn State Recreation Area Prefire Management Plan. This document was created to address a specific Wildland/Urban Interface problem adjacent to the City of Auburn. This document at the time of distribution is in the early stages of completion and is an evolving plan, which will serve as a guide for future fire prevention activities in the Auburn State Recreation Area. The California Department of Forestry and Fire Protection, California Department of Parks and Recreation, and the United States Bureau of Reclamation will be moving forward with the plan therefore, early release of this document is approved.

Tony Clarabut
Unit Chief
Nevada-Yuba-Placer Unit

By:

Fred Lopez
Fire Captain Specialist
Nevada Yuba Placer Ranger Unit

Auburn State Recreation Area
Prefire Management Plan

(1-29-02)

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DEFINITIONS

Wildland Urban Interface or Interface = The geographical meeting point of two diverse system, wildland and structures. At this interface, structures and vegetation are sufficiently close that a wildland fire could spread to structures or a structure fire ignite vegetation.

Intermix or Wildland Intermix = Interspersing of developed land with wildland, where there are no easily discernible boundaries between the two systems. An example would be what a real estate brochures describe as "ranchettes" or "weekend farmers" homes. Poses more problems in wildland fire management than interface.

Defensible Space = Adequate space (free from flammable vegetation) between structures and flammable vegetation, which allows firefighters a safe working area within which to attack an oncoming fire.

Fuel Break = A divide of expanses of fuels into smaller units. Native vegetation is modified so that fire burning into them can be more readily and safely controlled. The fuel type is changed to another that offers less resistance to control efforts.

Fire Break = An area cleared of flammable fuels to mineral soil, which is used as a wildfire control line, where a fire's progress is stopped.

ABREVIATIONS

BOR or Reclamation = United States Bureau of Reclamation

DPR or CSP = California Department of Parks and Recreation

CDFFP or CDF = California Department of Forestry and Fire Protection

BLM = Unites States Bureau of Land Management

USFS = Unites States Forest Service

ASRA = Auburn State Recreation Area

WUI = Wildland/Urban Interface

AUBURN DAM AND STATE RECREATION AREA
FIRE MANAGEMENT PLAN

Introduction

This paper introduces the purpose and the need for a Comprehensive Fire Management plan for The Auburn Dam and Reservoir Project lands. It also discusses a Fire Management Planning Strategy that has been developed by representatives of the California Departments of Forestry and Fire Protection (CDF), California Department of Parks and Recreation (DPR), and The United States, Bureau of Reclamation (Reclamation). The development of certain elements of the fire planning strategy have been closely coordinated with the City of Auburn Fire Department and with a representative of The United States, Bureau of Land Management (BLM).

Background

Reclamation is responsible for the management of The Auburn Dam and Reservoir Project lands, a project originally authorized by Congress in 1965. The total acreage within the project boundary is 42,000 acres. Of this, Reclamation has ownership for approximately 26,000 acres. The remaining acreage is owned by BLM, the United States Forest Service, and private parties. DPR and CDF have management authority over all Project lands through cooperative agreements with Reclamation. The total lands are known as the Auburn State Recreation Area and are operated by the State of California as a state recreation area.

Project lands within the American River watershed are largely comprised of two large river drainages, the North and Middle Forks of the American River that have carved over fifty miles of canyons within both Placer and El Dorado counties. Much of this area runs adjacent to the communities of Auburn and Foresthill, along with other residential developments. The oak-chaparral environment within this area can be highly combustible under certain dry conditions and the risk of wildland fires is a major concern as residential and visitor use activity continues to increase.

Because of these concerns, Reclamation is working with CDF and DPR to develop a Comprehensive Fire Management Plan for the Project Area. The development of this plan and its implementation is being greatly enhanced through appropriate coordination with local counties, communities, fire safe councils and other interest groups and jurisdictions. It may be appropriate to include both BLM and USFS lands within the Comprehensive Fire Plan. Funding mechanisms for the development of the Comprehensive Fire Management Plan have been identified as critical and needs further investigation.

The managing partners initiated the fire planning process for the ASRA lands in the summer of 2000. However, with the advent of a dry year in 2001, and the resulting high fire danger, concerns of local community leadership have reached high levels. In response, the managing partners are moving quickly to identify and implement appropriate actions. These actions are focusing on Reclamation Lands that interface with private property where certain priority conditions may exist.

A priority condition of great concern for the managing partners is residential density associated with these interface lands, such as the canyon rim adjoining the City of Auburn. It has been in response to this concern that the managing partners have focused on the Fuels Management Element of the Comprehensive Fire Plan for those interface lands.

A Fuels Management Action Plan has been developed, to not only be responsive to fire management concerns of the local interface areas, but also to be consistent with the broader goals and objectives of a comprehensive fire management plan for the ASRA. This plan will work to preserve and restore the natural resources and protect the cultural resources of the area. It is the intent of this strategy to implement the Fuels Management Action Plan for the priority interface lands, as soon as possible, consistent with the broader goals and objectives of the Comprehensive Plan. A major component for implementation is the selection of appropriate Demonstration projects to help ensure the viability of any fuels management activities.

It is vital to identify appropriate goals and objectives as a first step in the development of a comprehensive fire plan. The following is the product of much discussion, as the agencies integrated the needs for both fire protection and resource management.

FIRE PLAN
GOALS AND OBJECTIVES

Goal:

To protect human life and both public and private resources by reducing the risk and hazard of wildland fire within the American River Canyon by practicing management strategies that promote the preservation and restoration of natural resources and protection of cultural resources.

Objective:

Mitigate fire danger in order to:

- Enhance public safety
- Protect natural and cultural resources
- Provide for recreational opportunities
- Conduct cost effective maintenance of features and facilities

PLAN IMPLEMENTATION STRATEGIES FOR RECLAMATION LANDS

To insure the effectiveness of this fire management program, a planning strategy has been developed that compliments and augments fire planning and management activities of local communities, jurisdictions and Fire Safe Councils.

I. **Fire Prevention:** Almost all fires that start on the Reclamation lands in the American River Canyon are directly caused by human activity. As public use and other activities increase on Reclamation lands, the probability of fire ignitions also increases. Fire prevention activities on Reclamation lands include:

A. Education.

B. Public information.

C. Visitor and Resource Management actions:

1. Placement of structures and facilities.

2. Area closures to vehicle and/or visitor access.

3. Other uses as appropriate.

D. Area patrols and other law enforcement activities.

II. **Fire Safe Practices for Urban/Wildland Interface Lands:** The single most effective practice to reduce the spread of wildland fire and help prevent damage to structures is to create areas of reduced and/or modified fuels. This strategy includes practices utilized by local communities and landowners adjacent to Reclamation land using the following components:

A. Defensible Space: The area extending from a structure out to between 30 and 100 feet creating an area where fuels that allow fire to spread from the wildland to a structure or a structure to the wildland to be more easily controlled.

B. Education: Through local fire departments, local Fire Safe Councils, and other activities.

C. Inspections: Coordinate with State and local government to encourage defensible space regulations, and appropriate regulations for new construction.

D. Assistance Programs: Help to identify and support fuel modification activities that encourage and assist landowners in the creation and maintenance of defensible space, (i.e. Chipper Program, mulching, composting).

III. **Fuel Management:** Reduction of wildland fuels in strategic locations will enhance fire suppression activities and provide increased firefighter safety. Fuels management activities will occur on (1) Reclamation lands adjacent to other properties that enhance defensible space activities, (2) on Reclamation lands adjacent to public access roads and trails, and (3) on Reclamation core lands to increase wildlife habitat benefits and increase water values.

* Fuel reduction techniques include: hand tools and mechanical equipment, prescribed burns, biological controls and chemical application will be available for use to reduce or modify fuels as appropriate.

FUELS MANAGEMENT PRESCRIPTIONS FOR INTERFACE LANDS

Fuel modification within interface lands is critical for reducing the potential for a costly and damaging fire. The following prescriptions can be utilized for fuel management in three distinct geographic areas, or zones, within the interface.

The three zones are as follows:

1. Defensible Space: This is the area closest to structures and is defined as being within 30 to 100 feet of existing buildings or improvements. To be Fire Safe, this area should be considered to be the leanest in terms of flammable vegetation. In addition to the Shaded Fuel Break prescription treatments described below, all annual grasses are to be maintained to below 4 inches in height. Branches overhanging structures are to be removed along with any portion of vegetation within 10 feet of the outlet of any chimney or stovepipe. Dead wood and branches within the zone and leaves and needles on roofs are also to be removed.

2. Defensible Landscape: This is the area outside the Defensible Space zone (>30 to 100 feet from structures) where the land manager has decided to implement fuel management. This will increase the effectiveness of fuel management activities implemented within the Defensible Space Zone. The Shaded Fuel Break prescription treatments described below can be used as the guideline for fuel management within this zone.

3. Shaded Fuel Break: This is a strategic location along a ridge, access road, or other location where fuels have been modified. The width of the shaded fuel break is usually 100 to 300 feet depending on the site. This is a carefully planned thinning of dense vegetation, so fire does not easily move from the ground into the overhead tree canopy. A shaded fuel break is not the removal of all vegetation in a given area. Fire suppression ground and air resources can utilize this location to suppress wildland fires. Any fuel break by itself will not stop a wildland fire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack. Air resources may use the location for fire retardant drops. The Shaded Fuel Break prescription treatments described in this document is the guideline for fuel management within this zone.

FUELS MANAGEMENT ACTION PLAN
Greater Auburn Interface Area

This action plan lays out a process for implementing fire management strategies for Reclamation lands that interface with the Greater Auburn Area. The urban/wild land interface area identified as a priority starts at or about Shirland Tract, running east along the north canyon rim of the American River along Reclamation property lines up stream to approximately the Foresthill Bridge within Placer County.

This interface area will be divided into manageable sections based generally on geographical and location characteristics. Project Priority Selection Criteria will then be applied to these sections and a priority list will be developed. Each section will then be evaluated and a Fuel Break Prescription will be tailored to meet specific resource and fire management needs for the selected section. Appropriate National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documentation will be completed prior to fuels management. Implementation will be accomplished through coordination and in partnership with local entities.

On-going or long-term maintenance of these project sites is a significant issue that needs to be addressed as part of this fire management strategy. Local partnerships will need to play an important roll in this regard.

As an initial step, a demonstration project or projects will be planned to demonstrate the effectiveness of these implementation strategies and the Priority Selection Criteria. The selection of demonstration projects will be done in close coordination and partnership with local entities. A similar process as to the one mentioned above will be used to evaluate and select appropriate fuel management program for any demonstration sites on Reclamation lands before project implementation will occur.

Project Selection Criteria

- **Residential density**: Higher numbers of people living within the interface project area receive a high priority. Density of existing private property development is a high priority.

- **Defensible Space Activities:** An action or commitment by private property owners to reduce or modify the type or amount of vegetative fuel that will help prevent fire to move from a structure to the wildland, or the wildland to a structure.

- **Project Costs and Funding:** Project costs should include labor and equipment, management and administration for the planning, implementation, and on-going maintenance and oversight of a proposed project. Funding of a proposed project must cover the cost of the whole project and must be identified prior to initiating

the planning phase of the project. Project funding may come from grants, in-kind labor, matching funds, etc. A project will not be pursued until funding sources have been identified.

- **Local Partnerships:** Partnerships with local communities, counties and other local organizations are extremely important to the success of fuels management activities. Partnerships can be in the form of cost sharing or in-kind services and other local support. Partnerships will receive a higher priority.

- **Topography:** Topography has a direct relationship to the speed of wildland fire spread. The steeper the slope the faster the fire spread and the higher the priority. The ideal location to create a fuel break is at the break-over point from the canyon wall to the ridge top.

- **Fuel Characteristics:** Wildland fuel density and arrangement has a particular effect on the spread of wildland fire. By the removal of light flashy fuels, thick dead and/or live fuels, and ladder fuels from the landscape reduces the risk of catastrophic fire. High fuel density areas will receive a high priority.

- **Strategic Location and Accessibility:** Modifying fuel density from areas next to access roads and structures allow firefighting personnel to gain access and to more safely and efficiently control the advance of a wildland fire. Project areas that provide for strategic locations and accessibility will receive a higher priority.

- **Complexity of Environmental Review:** Generally, the environmental review and compliance process should be without unresolved conflicts or highly controversial environmental effects. Project actions not having adverse effects on unique or sensitive geographical, cultural or biological resources such as wetlands, historical features or endangered species, etc., will have a higher priority.

- **Project Maintenance and Administration:** To ensure the success of a project, an on-going maintenance program for the project site must be identified. Maintenance of a project site includes regular monitoring, and sustaining the integrity of the site through use of various vegetation management techniques. Administration of project maintenance includes coordinating and implementing the defined maintenance program, distribution of the funds to support the program, and monitoring on-going defensible space activity. Projects with an identified maintenance and administrative component will receive a higher priority.

- Other factors may be considered for project site selection as they are identified.

The decision-making processes will be accomplished by the representatives of the managing partners, (the Technical Team). Members of the Technical Team are responsible for coordinating with appropriate agency personnel, as needed, in order to ensure representation of their agency's position given a particular issue. Project decisions will be made by a consensus of the Technical Team. Should a Technical

Team member have a dissenting opinion for any action, no further project action will be taken until the issue can be resolved. Decisions may be elevated if appropriate.

Project Administration will continue as it currently exists. The CDF remains responsible for fire prevention and suppression activities on Reclamation lands as stated in the Cooperative Agreement. The California State Parks and Recreation maintains responsibilities for recreation and resource management on Reclamation lands as identified in its cooperative agreement. Funding and appropriate staff time to coordinate and administer this action plan should be made available from existing resources under these cooperative agreements.

Desired Project Benefits

Fuel break land treatments in wildland / urban interface areas include many benefits, some of which, tend to be intangible in nature. The true test of success resulting from fuel breaks on interface lands occurs after a wildfire has occurred. What life, property and natural resources were saved? What tactical advantage did firefighting resources encounter during the extinguishing of the fire? These questions are futuristic and may only be projected prior to wildfire.

The subsequent results are desired during and after interface fire protection projects are completed.

A. Public Safety:

Reduced fuel loading on fuel break lands produces a less intense fire behavior which allows firefighting crews to make a stand, either offensively or defensively, on fuel break lands. The result is a more effective effort to protect the lives of citizens living in the fire's path along with residential and commercial structures. The fuel loading on fuel break lands will change from fuel models of 4 and 6, which have approximately 13 tons per acre and 6 tons per acre respectively, to fuel models of 1,2, and 3, which have approximately .74 tons/ac, 4 tons/ac and 3 tons/ac. On an "average day" in the summer, the flame lengths from fuel model 4 on the fuel break lands, as they are now (without treatment), would support flame lengths of approximately 26 feet and a fireline intensity of 6784 Btu/ft/s. On fuel break lands without treatment the current fuel model 6 flame lengths would be approximately 8 feet with a fireline intensity of 415 Btu/ft/s. The resulting fuel models of 1,2 and 3 after treatment will support flame lengths of 6, 9 and 15 feet with fireline intensities of 327 Btu/ft/s, 797 Btu/ft/s and 2278 Btu/ft/s.

B. Education:

Fire protection projects, such as fuel breaks, most often involves the need to create the fuel break on private lands which, creates a situation where communities become directly involved with public agency sponsored projects. During the cooperative process between agency and community an education process occurs. There

becomes an awareness of the need for private landowners to participate in wildfire protection projects. Landowners are in direct contact with agency representatives who explain first hand, the why and how projects, such as fire defense projects are implemented. Landowners will become informed regarding wildfire behavior, land use planning concerns, and environmental protection issues. The education will occur resulting from public presentations and participation solicitation. Brochures, interpretive demonstration sites, newsletters and other activities will be a part of the education process which, will result in a better understanding of fuel break projects.

C. Protection of Natural Resources:

Fuel break lands create habitat edge effects which, benefit species that rely on edge and open canopy habitats. The fuel break will allow firefighting resources to quickly extinguish fires spreading from structural improvements to the wildlands, thus protecting the balance of ASRA lands from devastating fire. When fire does burn fuel break areas, the fuels consumed involve ground fuels such as grass, low lying brush and duff. In turn, the tree species remain with a very low mortality. Without fuels reduction, all of the vegetation on site becomes available to burn, in short, all vegetation on site is destroyed. With the resulting fuel load reduction, water yields on fuel break lands will increase by 35% assuming an average annual rainfall of 35" (USFS, Faust 1979). Plant species diversity and recruitment of new growth will be promoted by fuel break development.

D. Protection of Cultural Resources:

During fuel break establishment, cultural resources will be identified and recorded. On fuel break lands cultural resources can be protected as a result of less severe fire intensity. Fuel break lands encounter lower burn duration, resulting in cultural resources encountering less fire. Additionally, if circumstances permit, cultural resources can be protected by retaining vegetation as barriers.

E. Conduct Cost Effective Maintenance of Features and Facilities:

Once fuel loads are reduced on fuel break lands, the maintenance of those lands becomes less costly than the initial establishment. Costs may average $400.00 per acre to treat whereas costs may involve approximately $200.00 per acre to maintain (Handcrew estimates). Additionally, the improvements within the area will be protected thus resulting in maintenance costs rather that replacement costs in event of wildfire impingement. Existing parking areas, roads, canals, trails and other such features will be incorporated into the fuel break planning process in order to reduce costs and be more efficient.

SHADED FUEL BREAK PRESCRIPTION FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

This is a defensible location to be used by fire suppression resources to reduce the hazard of wildland fires. Any fuel break by itself will **NOT** stop a wildland fire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack. Air resources may use the location for fire retardant drops.

Prescription

The intent of the fuel break is to create a fuel model or vegetative arrangement where wildfire reduces intensity as it burns into the fuel break. A ground fire, burning grass and leaf duff is the desired fire behavior. An arrangement which, provides the desired fire behavior effects, involves an area where ladder fuels are removed and tree or brush canopies will not sustain fire, and where the contiguous fuels arrangement is interrupted.

This general arrangement allows fire and resource managers to retain a species diversity of individual younger, middle aged and older plants, which allows the opportunity for an uneven aged vegetative type, without compromising the project objectives. For example, young saplings of individual oaks or conifers may be retained, although, they may be under the desired diameter, they may not contribute to undesired fire behavior effects. Additionally, it may be necessary to cull a few trees in a thick stand of conifers over the desired diameter in order to improve forest health. It is important to remember that this prescription is a guide, not an absolute. Site specific prescriptions may be developed later for individual projects which, all will be in accordance with the project objectives.

Implementation consists of removing or pruning trees, shrubs, brush, and other vegetative growth on the project area as prescribed. All work will be accomplished by use of hand crews, biological treatment or mechanical equipment; supported by chippers and/or burning as determined appropriate on a case-by-case basis. The preferred width of a shaded fuel break along a ridge top or adjacent to one is approximately 300 feet

Trees up to the 6-inch diameter at breast height (dbh) class are eligible for removal under this prescription. However, larger hazardous snags may be removed. Due to operational needs, it may be necessary to remove an occasional tree with a dbh larger than 6 inches based on forest health and project objectives. Individual trees under 6-inch bdh may be retained for diversity and if they do not disrupt project objectives. This will only be done on a case-by-case basis after proper review by all agencies.

Threatened and endangered plant and animal species, such as elderberry and other sensitive species, shall not be removed or treated, or otherwise adversely affected, within any shaded fuel break.

Cultural resources are a major resource and will be protected.

1. Understory fuels:

Understory fuels over 1 foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

2. Mid-story fuels:

Trees up to the 6-inch dbh may be removed. Exception to this size limit shall be trees that have significant defect and/or which do not have a minimum of a 16-foot saw log or trees, such as saplings, that do not present an undesirable effect. Live but defective trees larger than the 6-inch dbh providing cavities for obvious wildlife use will be retained.

Trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines. Larger overstory trees (> 6-inches dbh) do count as residual trees and, in order to reduce ladder fuels, shall have vegetation within their drip lines removed. *Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.*

Criteria for residual trees (up to < 6-inch dbh):

Conifers: Leave trees that have single leaders and thrifty crowns with at least 1/3 live crown ratio.

Conifer leave tree species in descending order:

Sugar pine
Ponderosa pine
Douglas fir
Knob-cone Pine
Gray Pine
White fir
Incense cedar

Intolerant to shade species have a higher preference as leave trees because their seed will be less likely to germinate in the understory.

3. Snags:

Snags are a conduit for fire during a wildland fire. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

18-inch diameter class or larger and not more than 30 feet in height which are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

Hardwood trees: Leave trees that have vertical leaders and thrifty crowns with at least 1/3 live crown ratio.

Hardwood leave tree species in descending order:

Valley Oak
Big Leaf Maple
Blue Oak
Black Oak
Madrone
Live Oaks

Brush: It is desirable to remove as much brush as possible within the shaded fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more that 5 feet wide.

From a fuels management perspective the following are brush leave species in descending order:

Category 1
Dogwood
Redbud

Category 2
Toyon
Buckeye
Coffeeberry
Lemmon Ceanothus
Buck brush (Wedge leaf ceanothus)

Category 3
Whitethorn
Deer brush
Manzanita
Chamise
Yerba Santa
Poison Oak
Scrub Oak

Non-native species (such as olive, fig, etc.) will be considered on a case- by- case basis.

4. Wetlands:

Wetlands and riparian areas will not be adversely affected for treatment and ground operations.

5. Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

WLPZ widths and operational limitations shall be in conformance and consistent with Title 14, California Code of Regulations, 936.5, Procedures for Determining Watercourse and Lake Protection zone Widths, as approved by the California Board of Forestry.

916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

TABLE I

Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures[1]								
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite includes habitat to sustain fish migration and spawning.		1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.		No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.		Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.	
Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
>50	150[2]	ADG	100[3]	BEI	See CFH		See CFI	

1 – See Section 916.5(e) for letter designations application to this table.
2 – Subtract 50 feet width for cable yarding operations.
3 – Subtract 25 feet width for cable yarding operations.

Class I watercourse (Fish bearing):

Exclude from equipment operations (except on existing roads) and remove one thousand hour and smaller sized dead fuels (≤ 5 inches in diameter).

Class II watercourse (Aquatic habitat for non-fish aquatic species):

No treatment of overstory and the treatment of understory will not reduce vegetative cover below 50%. One thousand-hour and smaller sized dead fuels (≤ 5 inches in diameter) will be removed. Ground based equipment will not operate within the zone except on existing roads. Prune residual trees.

Class III watercourse (No aquatic life present):

Full shaded fuel break prescription will be implemented but no ground-based equipment will operate within exclusion zones except on existing roads.

BRUSH FIELD PRESCRIPTION FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

Implementation consists of removing or pruning brush, and other vegetative growth on the project area. All work will be accomplished by use of heavy equipment, masticator and/or hand crews supported by chippers and/or burning.

Due to operational needs tree canopies may need to be thinned, pruned or modified as part of the brush field fuel break prescription. This will only be done on a case by case basis after proper review by all involved agencies.

Threatened and endangered plant and animal species, such as elderberry and other sensitive species, shall not be removed or treated, or otherwise adversely affected.

Cultural resources are of a major concern in any area where they may exist. These resources will be protected.

Prescription:

Brush: It is desirable to remove as much brush as possible within the brush field fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more that 5 feet wide. The distance between residual plants shall be 3 to 5 times the height of the residual plants. Three (3) times the height distance for slopes less than 30%, five (5) times for slopes equal to or greater than 30%.

The width of the brush field fuel break shall normally be 300 feet.

From a fuels hazard perspective the following are brush leave species in descending order:

Category 1
Dogwood
Redbud

Category 2
Toyon
Buckeye
Coffeeberry
Lemmon Ceanothus
Buck brush (Wedge leaf ceanothus)

Category 3
Whitethorn
Deer brush
Manzanita

Chamise
Yerba Santa
Poison Oak
Scrub Oak

Non-native species (such as olive, fig, etc.) will be considered on a case by case basis.

Wetlands:

Wetlands and riparian areas will not be adversely affected for treatment and ground operations.

Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

WLPZ widths and operational limitations shall be in conformance and consistent with Title 14, California Code of Regulations, 936.5, Procedures for Determining Watercourse and Lake Protection zone Widths, as approved by the California Board of Forestry.

916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

TABLE I

Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures[1]								
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite includes habitat to sustain fish migration and spawning.		1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.		No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.		Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.	
Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
>50	150[2]	ADG	100[3]	BEI	See CFH		See CFI	

1 – See Section 916.5(e) for letter designations application to this table.
2 – Subtract 50 feet width for cable yarding operations.
3 – Subtract 25 feet width for cable yarding operations.

Class I watercourse (Fish bearing):

Exclude from equipment operations (except on existing roads) and remove one thousand hour and smaller sized dead fuels (≤ 5 inches in diameter).

Class II watercourse (Aquatic habitat for non-fish aquatic species):

No treatment of overstory and the treatment of understory will not reduce vegetative cover below 50%. One thousand-hour and smaller sized dead fuels (≤ 5 inches in diameter) will be removed. Ground based equipment will not operate within the zone except on existing roads. Prune residual trees.

Class III watercourse (No aquatic life present):

Brush field prescription will be implemented but no ground-based equipment will operate within exclusion zones except on existing roads.

GRASS FIELD PRESCRIPTION FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

Implementation consists of mowing and possibly re-establishing native grass species on the project area. All work will be accomplished by use of heavy equipment, and/or hand crews.

Threatened and endangered plant and animal species, such as elderberry and other sensitive species, shall not be removed or treated, or otherwise adversely affected.

Cultural resources are of a major concern in any area where they may exist. These resources will be protected.

Prescription:

Grass: Grass fuel breaks shall be a minimum of 300 feet wide. All grasses are to be maintained below four (4) inches in height just after the grasses cure cut in early summer.

Wetlands:

Wetlands and riparian areas will not be adversely affected for treatment and ground operations.

Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

WLPZ widths and operational limitations shall be in conformance and consistent with Title 14, California Code of Regulations, 936.5, Procedures for Determining Watercourse and Lake Protection zone Widths, as approved by the California Board of Forestry.

916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

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Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
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1 – See Section 916.5(e) for letter designations application to this table.
2 – Subtract 50 feet width for cable yarding operations.
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Class I watercourse (Fish bearing):

Exclude from equipment operations (except on existing roads) and remove one thousand hour and smaller sized dead fuels (≤ 5 inches in diameter).

Class II watercourse (Aquatic habitat for non-fish aquatic species):

No treatment of overstory and the treatment of understory will not reduce vegetative cover below 50%. One thousand-hour and smaller sized dead fuels (≤ 5 inches in diameter) will be removed. Ground based equipment will not operate within the zone except on existing roads. Prune residual trees.

Class III watercourse (No aquatic life present):

Grass field prescription will be implemented but no ground-based equipment will operate within exclusion zones except on existing roads.

MAINTENANCE PRESCRIPTIONS FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

Once fuels have been modified within an area, maintenance activities should be planned and implemented on a regular basis to keep the effectiveness of the original treatment. If no maintenance activities occur, the effectiveness of the original treatment will diminish every year, potentially yielding no net effect within 5 years. The necessary maintenance activities will be minimal if implemented on an annual basis.

The original prescription treatment should be followed for maintenance. Possible fuel reduction techniques to be utilized for maintenance include the following:

Hand Work: Use of hand tools by crews or individuals. This technique is labor intensive and potentially expensive (>$1000 per acre). Impacts to soils are negligible.

Mechanical Work: Use of heavy equipment such as masticators and/or bulldozers. This technique is moderately expensive (as low as $400 per acre) but limited by topography (to slopes less than 50%) and not appropriate for most watercourse and lake-protection zones and excessively wet soils.

Chemical Controls: Use of California registered herbicides. This is the most cost-effective technique. Implementation usually requires one or two individuals for ground application. This technique has negligible soil effects but may not be appropriate for certain areas such as riparian zones, watercourses, and areas of listed plants.

Prescribed Browsing: Use of goats in a controlled setting to browse within appropriate areas to reduce fuel levels. Browsing goats can be an effective tool to control grasses and low growing vegetation, when controlled properly, can have little impact to the environment. Costs may vary.

Prescribed Burning: The use of planned and controlled burning operations to reduce fuel levels. Control lines are established prior to burning. Burning and Air Pollution permits are required to conduct these operations. This technique varies in cost per acre depending on complexity of project. Burning is becoming more difficult to complete due to air regulations.

American River Pump Station Project

Final
Environmental Impact Statement/
Environmental Impact Report

Appendix B

Contract Between the United States and Placer County Water Agency Related to American River Pumping Plant and Associated Facilities

U.S. Bureau of Reclamation

Placer County Water Agency

Placer County
Water Agency

June 2002

Contract No. 02-LC-20-7790

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

CONTRACT BETWEEN THE UNITED STATES
AND
PLACER COUNTY WATER AGENCY
RELATED TO
AMERICAN RIVER PUMPING PLANT AND ASSOCIATED FACILITIES

THIS CONTRACT, made this ___ day of _____ 2002, in pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or supplementary thereto, including, but not limited to, the acts of August 26, 1937 (50 Stat. 844), as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented, all collectively hereinafter referred to as the Federal Reclamation law, between THE UNITED STATES OF AMERICA, hereinafter referred to as the UNITED STATES, and Placer County Water Agency, hereinafter referred to as the AGENCY, a political subdivision of the State of California, duly organized, existing and acting pursuant to the laws thereof, including, but not limited to, the Placer County Water Agency Act; with its principal place of business in Auburn, California;

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the UNITED STATES has constructed and is operating the Central Valley Project, California for diversion, storage, carriage, distribution and beneficial use, for flood control, irrigation, municipal, domestic, industrial, fish and wildlife mitigation, protection and restoration, generation and distribution of electric energy, salinity control, navigation and

other beneficial uses, of waters of the Sacramento River, the American River, the Trinity River, and the San Joaquin River and their tributaries; and

WHEREAS, in 1963, the AGENCY obtained the right to divert certain flows of the American River pursuant to water right permits for the AGENCY=s Middle Fork Project, which permits were issued by the California State Water Rights Board, which has been succeeded by the State Water Resources Control Board; and

WHEREAS, pursuant to those rights, the AGENCY secured land and constructed diversion, year-round pumping and conveyance facilities in the American River canyon near Auburn, California for the purposes of diverting water under its permits and conveying it to and through the Auburn Ravine Tunnel, also known as the Auburn Tunnel or Ophir Tunnel, for use within the AGENCY=s Service Area; and

WHEREAS, in 1965, the UNITED STATES authorized a water project known as the Auburn-Folsom South Unit (AAuburn Dam@), and, in furtherance of said project, desired to acquire the land upon which the AGENCY=s pumps and conveyance facilities were located; and

WHEREAS, the UNITED STATES has modified the American River canyon to construct the Auburn-Folsom South Unit (AAuburn Dam@), and some of those modifications have created unstable land features; and

WHEREAS, under threat of condemnation by the UNITED STATES, the AGENCY entered into a Land Purchase Contract (14-06-859-308) with the UNITED STATES, transferring the AGENCY=s land and facilities in the American River canyon to the UNITED STATES, and as partial consideration for the taking of this property, the UNITED STATES agreed to provide a water supply to the AGENCY until the Auburn Dam was completed; and

WHEREAS, at the time the Land Purchase Contract was negotiated and executed, the Auburn Dam Project, as then designed, was expected to enable the AGENCY to obtain water from the American River by gravity flow through the Auburn Ravine Tunnel, without the necessity of pumping; and

WHEREAS, pursuant to the Land Purchase Contract (14-06-859-308A), the UNITED STATES has, for many years, annually installed a seasonal pumping station and conveyance facilities to enable the AGENCY to pump water from the American River into the Auburn Ravine Tunnel during summer months, and

WHEREAS, the AGENCY has determined that it now requires year-round pumping to meet its water supply obligations to its customers; and

WHEREAS, the parties have recognized that yearly installation of seasonal pumps and facilities no longer satisfies the UNITED STATES= obligation under the Land Purchase Contract; and

WHEREAS, the parties have recognized that yearly installation of seasonal pumps and facilities is inefficient and costly to the UNITED STATES; and

WHEREAS, the parties now propose to construct a year-round pumping facility which fully satisfies the UNITED STATES= obligations under the Land Purchase Agreement, to replace the AGENCY=s original pumping facility; and

WHEREAS, the parties now desire to enter into a new contract, which will supersede the Land Purchase Agreement regarding issues of cost-sharing, operations and maintenance of the new pump station to deliver 50 cfs which is the obligation of The UNITED STATES, and up to a total of 100 cfs, the remainder of which would be the responsibility of the

AGENCY.

NOW, THEREFORE, in consideration of the mutual and dependent covenants herein contained, it is hereby mutually agreed by the parties hereto as follows:

Definitions

1. When used herein, unless otherwise distinctly expressed or manifestly incompatible with the intent hereof, the term:

(a) AAuburn Ravine Tunnel@ shall mean that existing 12-foot diameter tunnel through the ridge separating Auburn, California from the American River and used to convey water from the American River to the tunnel=s outlet in Auburn Ravine. The Auburn Ravine Tunnel is also referred to from time to time as the Ophir Tunnel or Auburn Tunnel.

(b) ACalendar Year" shall mean the period January 1 through December 31, both dates inclusive;

(c) ALand Purchase Contract@ shall mean the agreement entered into between the UNITED STATES and the AGENCY, identified as Contract No. 14-06-859-308 and dated July 25, 1972, as amended, modified and supplemented by the Supplemental Agreement to Land Purchase Contract, identified as Contract No. 14-06-859-308a and dated May 25, 1979;

(d) AProject@ shall mean the installation of a permanent diversion intake, pumping station, electric facilities, electric transmission lines, water conveyance facilities, access roads, and all ancillary facilities necessary to allow the AGENCY to divert the water of the American River to the Auburn Ravine Tunnel, on a year-round basis, until the Auburn Dam is completed;

(e) AService Area@ shall mean the area to which the AGENCY is entitled to

deliver its water rights water from the American River for beneficial use;

(f) ASecretary@ or AContracting Officer@ shall mean the Secretary of the UNITED STATES Department of the Interior or her duly authorized representative;

(g) AYear@ shall mean the period from and including March 1 of each Calendar Year through the last day of February of the following Calendar Year.

Organization of Contract

2. Upon execution of this Contract by both parties, and until the AGENCY approves a Notice of Completion of Construction of the Project facilities, Articles 1 and 2 and Sections A and D shall apply. Upon approval by the Agency of a Notice of Completion of Construction issued by the UNITED STATES and until the AGENCY accepts title to the Project facilities and the related real property interests, Section A shall on longer be applicable; instead, Articles 1 and 2 and Sections B and D shall apply. Upon transfer of title to the Project facilities and the related real property interests to the AGENCY and thereafter, Section B shall no longer apply: instead, Articles 1 and 2 and Sections C and D shall apply for the remaining life of this contract.

SECTION A.

CONSTRUCTION OF PROJECT FACILITIES

Upon execution of this contract by both parties and until such time as the AGENCY has approved a Notice of Completion of Construction of the Project facilities, the following provisions shall apply:

Project Facilities to be Constructed

3. (a) Project facilities to be constructed pursuant to this Contract shall enable the AGENCY to divert water from the American River near Auburn, California into its Auburn

Ravine Tunnel on a year-round basis. Project facilities shall be defined by the drawings and technical specifications for the construction of the Placer County Water Agency American River Pump Station (APump Station@), once they are approved by the parties, and shall include, but not be limited to:

(1) A screened intake structure of sufficient size to allow diversion of not less than 225 cubic feet per second (Acfs@) of water from the American River;

(2) A year-round pipeline of sufficient capacity to convey to the Pump Station such water as is diverted from the intake;

(3) A pumping station of sufficient capacity to allow future increase of diversions to an instantaneous rate of 225 cfs;

(4) Pumps of sufficient capacity to allow instantaneous diversion of 100 cfs of water from the American River, with adequate backup electrical power and pumping facilities as may be dictated by prudent design guidelines.

(5) A discharge pipe capable of delivering up to 100 cfs from the Pump Station into the Auburn Ravine Tunnel;

(6) All-weather roads sufficient to enable the AGENCY to conduct all necessary operation, maintenance**,** repair and reconstruction of the Project and the Auburn Ravine Tunnel. Such roads, adjacent slopes and associated surface water runoff control facilities shall be designed and constructed so that the roads remain unobstructed and last indefinitely.

(b) All Project facilities shall be designed to meet both parties' specifications, at a minimum.

(c) (1) The UNITED STATES shall be responsible for construction of all

Project facilities and their proposed locations.

(2) The AGENCY shall review and approve the proposed locations of all Project facilities and shall approve the configuration and designs of any Project facilities; and any submissions, change orders and the Notice of Completion of Construction issued by the United States for the Project facilities.

Project Costs

4. (a) Except where costs are made the responsibility of the AGENCY under the express terms of this contract, the UNITED STATES shall be responsible for the reasonable and necessary costs associated with the Project, including:

(1) The design of the Project facilities;

(2) The preparation of all necessary environmental documentation and implementation and monitoring of any necessary mitigation measures;

(3) All required construction, management, construction inspection and construction engineering services;

(4) All on site grading, road construction, stabilization work, runoff control, restoration and revegetation work;

(5) Required river gradient control structures;

(6) All safety facilities; and

(7) The cost of the diversion structure, conveyance pipeline to the Pump Station, the Pumps, the Pump Station and the discharge pipeline to the Auburn Ravine Tunnel, all sized for 100 cfs capacity. The AGENCY shall pay the incremental costs of materials and construction necessary to enable the facilities to deliver water at rates in excess of 100 cfs.

Such payments by the AGENCY shall be made in advance of construction of any such facilities by The UNITED STATES.

(8) The cost of parallel facilities as detailed in Article 5, herein.

UNITED STATES= Obligation to Continue Water Deliveries

5.. Reclamation shall sequence construction of Project facilities and/or construct parallel temporary facilities as required to continue American River water deliveries during the period from June 15 through September 15 and during scheduled PG&E maintenance outage periods.

Notice of Completion

6. Upon substantial completion of construction of all Project facilities, the UNITED STATES shall issue a Notice of Completion of Construction. Upon the AGENCY's approval of said Notice, which approval shall not be unreasonably withheld, Section A of this contract shall no longer apply.

End of Section A.

SECTION B.

OPERATIONS AND MAINTENANCE OF PROJECT FACILITIES

Upon approval by the AGENCY of a Notice of Completion of Construction of Project facilities issued by the UNITED STATES, and until the transfer of Project facilities and related property interests to the AGENCY, the provisions in Section A, AConstruction of Project Facilities,@ shall no longer be applicable. Instead, provisions of Articles 1 and 2 and Sections B and D shall apply:

Operations and Maintenance

7. (a) Upon approval by the AGENCY of the Notice of Completion of Construction issued by the UNITED STATES, the AGENCY, without expense to the UNITED STATES, shall care for, operate, and maintain the Project facilities in full compliance with the terms of this contract and regulations and instructions furnished by the Contracting Officer, and in such manner that said Project facilities will remain in good and efficient conditions.

(b) The AGENCY shall promptly make any and all repairs to the Project facilities being operated by the AGENCY which are necessary for proper care, operation, and maintenance. In case of neglect or failure of the AGENCY to make such repairs within 60 days following written notification, the Contracting Officer may cause the repairs to be made, and the cost thereof shall be paid by the AGENCY as prescribed by the Contracting Officer.

(c) No substantial change shall be made by the AGENCY in any of the Project facilities without first obtaining the written consent of the Contracting Officer.

(d) (i) The AGENCY agrees to indemnify the UNITED STATES for, and hold the UNITED STATES and all of its representatives harmless from, all damages resulting from suits, actions, or claims of any character brought on account of any injury to any person or property arising out of any act, omission, neglect, or misconduct in the manner or method of performing any construction, care, operation, maintenance, supervision, examination, inspection, or other duties of the AGENCY required under this Article 5 regardless of who performs those duties. (ii) Within thirty (30) days of receipt by either party of any claim for liability arising from actions within the scope of this contract, the party receiving the claim shall notify the other party of such claim and provide a copy of the claim to the other party, if it is in written form. Nothing

in this article shall be construed to limit the right of either party to assert such affirmative defenses and file such cross complaints as may be appropriate in relation to any claim affecting the liability of such party.

(e) In the event the AGENCY is found to be operating the Project facilities in violation of this contract, then upon the election of the Contracting Officer, the UNITED STATES may take over from the AGENCY, the care, operation, and maintenance of the transferred facilities by giving written notice to the AGENCY of such election and of the effective date thereof. Thereafter, during the period of operation by the UNITED STATES, the AGENCY shall pay to the UNITED STATES annually, in advance, the cost of operation and maintenance of such facilities as prescribed in notices from the Contracting Officer to the AGENCY. Such facilities may be retransferred to the AGENCY in the manner originally transferred.

Grant of Real Property Interest

8. Within 12 months of the AGENCY's approval of the UNITED STATES Notice of Completion of Construction of the Project facilities, or as soon thereafter as practicable, the UNITED STATES shall grant to AGENCY title to the Project facilities, and a recordable indefeasible easement, easements, or other interest in lands, in a form acceptable to the County of Placer, sufficient to provide AGENCY with permanent, year-round access to all Project facilities and to the Auburn Ravine Tunnel, for maintenance, operation, enlargement, repair, reconstruction, and, if necessary for continued reliable operation, for relocation of Project facilities, and for electrical power lines necessary to operate and maintain the Project. Said real property interests shall include sufficient rights to allow the AGENCY access to the river for

future construction and operation of facilities to divert water pursuant to its appropriative rights under its Middle Fork Project, and also to allow diversion and conveyance of a total of 25 cfs of American River flows to Georgetown Divide Public Utility District, pursuant to PL 101-514, from the Project intake, diversion, conveyance and pumping facilities if and when such conveyance is necessary.

End of Section B.

SECTION C.

TRANSFER OF PROJECT FACILITIES

Upon acceptance by the AGENCY of Title to the Project facilities , the provisions in Section A. AConstruction of Project Facilities@ and Section B. AOperations and Maintenance of Project Facilities,@ shall no longer be applicable. Instead, the provisions of Articles 1 and 2 and Sections C and D will be effective throughout the remaining life of this Contract.

Obligations of the Parties Following Transfer of Project Facilities

9. (a) Upon acceptance of title to Project facilities and easements by the AGENCY, the AGENCY shall have sole responsibility for operation, maintenance, repair and reconstruction of such Project facilities, including any damage caused by any previous disturbance to the American River canyon related to construction of Auburn Dam. The UNITED STATES shall be relieved of its obligation to provide pumping of water to the AGENCY as set forth in the Land Purchase Contract.

(b) The UNITED STATES shall cooperate and assist the AGENCY in the AGENCY's efforts to fully access, divert and utilize its water entitlements under its water rights.

(c) The UNITED STATES shall retain, beyond the date on which AGENCY accepts title to Project facilities, all responsibility for ensuring public safety associated with public access to or use of the water within the American River canyon and the land surrounding the Project, including those areas within and upstream of the Project facilities site that have been affected by the UNITED STATES' Auburn Dam project.

Future Projects

10. (a) In the event that the UNITED STATES makes or permits changes to the course or channel of the American River or to the American River canyon slopes, features or improvements other than as provided for in Article 9 above, which change or impair the AGENCY=s ability to divert or pump water from the American River, UNITED STATES shall assist AGENCY in AGENCY=s efforts to modify, construct or adjust, as necessary and to AGENCY=s satisfaction, the Project facilities constructed pursuant to this Agreement so that the AGENCY shall continue to have access to American River water in the same amount, and at the same rate, as it had prior to such changes. Such assistance shall include any necessary modification to AGENCY=s real property rights granted pursuant to Article 8 herein above, expeditious design review of proposed facilities, and assistance in obtaining prompt environmental review and permits as may be needed to avoid or minimize disruption in AGENCY=s water supply.

(b) The UNITED STATES= obligations under this Agreement shall continue, notwithstanding any transfer of title or possession to its lands within the American River canyon,

unless and until the AGENCY agrees in writing to delegation of such obligations to a third party or release of such obligations.

(c) Notwithstanding the provisions of Article 9 (a), in the event that the UNITED STATES constructs a dam and reservoir in the American River canyon that inundates or otherwise impairs the operation of the Project facilities, the UNITED STATES shall have the obligation, without cost to the AGENCY, to relocate, replace or modify the Project facilities to assure their continued enjoyment and use by the AGENCY. If a dam is constructed, the AGENCY may salvage any structures or equipment from Project Facilities without payment to the UNITED STATES. The UNITED STATES shall cooperate and assist the AGENCY in AGENCY=s efforts to fully access, divert and utilize its water entitlements under its water rights,

SECTION D.

GENERAL PROVISIONS

Hazardous Material

11. (a) The AGENCY shall comply with all applicable Federal, State, and local laws and regulations, and Reclamation policies and instructions, existing or hereafter enacted or promulgated, concerning any hazardous material that will be used, produced, transported, stored, or disposed of on or in lands, waters, or facilities owned by the UNITED STATES or administered by Reclamation.

(b) "Hazardous material" means any substance, pollutant or contaminant listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 43 U.S.C. § 1901, et seq., and the regulations promulgated pursuant to that Act.

(c) To the extent provided by law, the AGENCY may not allow contamination of lands, waters or facilities owned by the UNITED STATES or administered by Reclamation by hazardous materials, thermal pollution, refuse, garbage, sewage effluent, industrial waste, petroleum products, mine tailings, mineral salts, pesticides (including but not limited to, the misuse of pesticides), pesticide containers, or any other pollutants.

(d) The AGENCY shall report to Reclamation, within 24 hours of becoming aware of its occurrence, any event which may or does result in pollution or contamination adversely affecting lands, water or facilities owned by the UNITED STATES or administered by Reclamation.

(e) Any intentional violation of any of the provisions of this Article shall constitute grounds for initiation of the procedure for immediate termination of this contract and shall make the AGENCY liable for the cost of full and complete remediation and/or restoration of any Federal resources or facilities that are adversely affected as a result of the violation.

(f) The AGENCY agrees to include the provision contained in paragraphs (a) through (e) of this Article in any subcontract or third party contract it may enter into pursuant to this contract.

(g) The UNITED STATES agrees to provide information necessary for the AGENCY, using reasonable diligence, to comply with this Article.

Notices

12. Any notice, demand, or request authorized or required by this contract shall be deemed to have been given, on behalf of the AGENCY, when mailed, postage prepaid, or delivered to the Area Manager, Central California Area Office, Bureau of Reclamation, 7794 Folsom Dam Road, Folsom, California 95630-1799, and on behalf of the UNITED STATES, when mailed, postage prepaid, or delivered to the Board of Directors of the Placer County Water Agency, P.O. Box 6570, Auburn, California 95604. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this Article for other notices.

Contingent on Appropriation or Allotment of Funds

13. The expenditure or advance of any money or the performance of any obligation of the UNITED STATES under this contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the AGENCY from any obligations under this contract. No liability shall accrue to the UNITED STATES in case funds are not appropriated or allotted.

Officials not to Benefit

14. No Member of Congress or official of the AGENCY shall benefit from this contract other than as a water user or landowner in the same manner as other water users or landowners.

Assignment Limited - Successors and Assigns Obligated

15. The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

Books, Records, and Reports

16. The AGENCY shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this contract, including the AGENCY's financial transactions and other matters that the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this contract.

Clean Air and Water

17. (a) The AGENCY agrees as follows:

(1) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq.,as amended by Public Law 91-604) and Section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., as amended by Public Law 92-500), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the execution of this contract.

(2) That no portion of the work required by this contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this contract was executed unless and until the EPA eliminates the name of such facility or facilities from such listing.

(3) To use its best efforts to comply with clean air standards and clean water standards at the facility where the contract work is being performed.

(4) To insert the substance of the provisions of this article into any nonexempt subcontract, including this paragraph (a)(4).

(b) The terms used in this article have the following meanings:

(1) The term "Air Act" means the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Public Law 91-604).

(2) The term "Water Act" means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Public Law 92-500).

(3) The term "clean air standards" means any enforceable rules,

regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110(d) of the Clean Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under Section 111(c) or Section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under Section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).

(4) The term "clean water standards" means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by Section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).

(5) The term "comply" means compliance with clean air or water standards. Comply shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

(6) The term "facility" means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor or subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

Equal Employment Opportunity

18. During the performance of this contract, the AGENCY agrees as follows:

(a) The AGENCY will not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, or national origin. The AGENCY will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, disability, or national

origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The AGENCY agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The AGENCY will, in all solicitations or advertisements for employees placed by or on behalf of the AGENCY, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, disability, or national origin.

(c) The AGENCY will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contracting Officer, advising the said labor union or worker's representative of the AGENCY's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The AGENCY will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The AGENCY will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the AGENCY's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the AGENCY may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The AGENCY will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The AGENCY will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the AGENCY becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the AGENCY may request

the UNITED STATES to enter into such litigation to protect the interests of the UNITED STATES.

Compliance with Civil Rights Laws and Regulations

19. (a) The AGENCY shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.), Title II of the Americans with Disabilities Act of 1990 if the entity is a State or local government entity [Title III if the entity is a non-government entity], and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the UNITED STATES shall, on the grounds of race, color, national origin, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation. By executing this contract, the AGENCY agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the UNITED STATES to inspect premises, programs, and documents.

(c) The AGENCY makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the AGENCY by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The AGENCY recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this article and that the UNITED STATES reserves the right to seek judicial enforcement thereof.

(d) Complaints of discrimination against the AGENCY shall be investigated by the Contracting Officer=s Office of Civil Rights.

Certification of Nonsegregated Facilities

20. The AGENCY hereby certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not permit its employees to perform their services at any location under its control, where segregated facilities are maintained. It certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained. The AGENCY agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas,

parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, disability, or otherwise. The AGENCY further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Employment Opportunity clause; that it will retain such certifications in its files; and that it will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually). Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written.

THE UNITED STATES OF AMERICA

By: _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

(SEAL)

PLACER COUNTY WATER AGENCY

By: _____
Chair

Attest:
_____
Secretary



American River Pump Station Project

Final Environmental Impact Statement/
Environmental Impact Report

Appendix C - Volume 1
Responses to Comments on the Draft Environmental Impact Statement/Environmental Impact Report

Master Responses

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

June 2002

SCH# 1999062089

Appendix C

Responses to Comments on the Draft EIS/EIR

Volume 1 - List of Commenters and Master Responses

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Appendix C
Responses to Comments on the Draft EIS/EIR
Volume 1 - List of Commenters and Master Responses

1.0 INTRODUCTION

Appendix C, Responses to Comments on the Draft Environmental Impact Statement/ Environmental Impact Report (EIS/EIR), consists of two volumes:

Volume 1 includes (1) an index list of commenters and page numbers where the responses to substantive comments on significant environmental issues are provided and (2) comprehensive or "Master Responses" for certain issues or topics that were raised in several of the comment letters.

Volume 2 includes copies of the written comment letters and the transcript of oral comments received at the October 11, 2002 public meeting. Attachments or supplemental material included with individual comment letters are not reprinted in the responses to comments. These materials may be viewed at one of the lead agency offices. Individuals wishing to review the comment letter attachment materials may contact one of the individuals listed below.

U.S. Bureau of Reclamation, Mr. Rod Hall	(916) 988-1707
Placer County Water Agency, Mr. Brent Smith	(530) 823-4886

As specified in the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), the focus of the response to comments is on the disposition of significant environmental issues. Detailed responses are not required for comments regarding the merits of a proposed project or alternatives. Comments on the merits of a project are forwarded to lead agency decision-makers for their consideration prior to making a determination regarding whether to approve the proposed project or one of the alternatives.

2.0 LIST OF COMMENTS RECEIVED ON THE DRAFT EIS/EIR

Over 600 comment letters were received on the American River Pump Station Project Draft EIS/EIR, including 341 individual comment letters and 5 form letters. The five form letters highlighted the following topics: (1) Auburn-to-Cool Trail (168 letters); (2) Maidu Drive Neighborhood Topics (3 letters); (3) Auburn-to-Cool Trail (11 letters); (4) Project Support (19 letters); and (5) Maidu Drive Neighborhood Topics (94 signatures). In addition, 29 oral comments were recorded at the public meeting held on October 11, 2001. The following is an alphabetized commenter index providing the commenter, the page number where individual comment responses are located, and the Master Response section number (if applicable). The page numbering reflects the report volume; C1 refers to Appendix C, Volume 1, and C2 refers to Appendix C, Volume 2. The Master Responses are all included in Section 3.0 of Appendix C, Volume 1 and are listed in the table of contents.

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L-102	Abbott, Mary	C2-153; 3.1.1
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F1-107	Abruzzini, Linda	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-154	Ackart, Tom	C2-572; 3.1.1, 3.1.3, 3.1.6
L-285	Adrien, Marie and Elster, Nick	C2-484, 3.1.1
F1-74	Albrecht, Jon	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-84	Albright, Laura	C2-578; 3.1.6, 3.1.10
F5-86	Albright, Randy	C2-578; 3.1.6, 3.1.10
F1-66	Alderink, Jim	C2-572; 3.1.1, 3.1.3, 3.1.6
L-333	Allegro, Kimberly and Alyson, Sinamon, Sharon, Unknown, Unknown	C2-499; 3.1.1
L-164	Allison, Cyla; Nassau-Suffolk Horsemen's Association, Inc.	C2-257; 3.1.1
L-230	Amara, Dirk	C2-348; 3.1.6, 3.1.10
L-229	Amara, Sandy	C2-347; 3.1.10
F1-156	Andersen, Vicki	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-32	Anderson, Joanne	C2-578; 3.1.6, 3.1.10
L-295	Anderson, Lorraine	C2-487; 3.1.1
L-241	Anderson, Mark	C2-359; 3.1.6, 3.1.9, 3.1.10
F = Form Letter, L = Individual Comment Letter; T = Public Meeting Transcript		

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L-200	Andrade, Dawn	C2-304; 3.1.6
F1-45	Ariosta, Cynthia	C2-572; 3.1.1, 3.1.3, 3.1.6
L-324	Armstrong, Sean	C2-495; 3.1.1
L-46	Arnold, Joanne	C2-68; 3.1.1, 3.1.6
F1-62	Arnold, Kathy	C2-572; 3.1.1, 3.1.3, 3.1.6
L-233	Aronowitz, Paul	C2-351; 3.1.10
L-70	Arons, Eric	C2-98
F5-74	Ashlock, Betty	C2-578; 3.1.6, 3.1.10
F5-75	Ashlock, E.L.	C2-578; 3.1.6, 3.1.10
F1-159	Ashmead, Suzanne	C2-572; 3.1.1, 3.1.3, 3.1.6
L-252	Atkins, Gayle	C2-411; 3.1.1
F1-153	Avery, Penny	C2-572; 3.1.1, 3.1.3, 3.1.6
L-35	Badenhoop, Lucy	C2-56; 3.1.1
L-112	Bailey, Randy	C2-170; 3.1.13
L-281	Bailey, Randy; Bailey Environmental	C2-462; 3.1.3
F1-38	Bailey, Ray	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-160	Bain, Susan G.	C2-572; 3.1.1, 3.1.3, 3.1.6
L-264	Baiocchi, Bob	C2-424; 3.1.8, 3.1.13
L-27	Baldwin, Bruce and Dana	C2-41; 3.1.1
L-94	Ball, Jacqueline; California Department of Parks and Recreation	C2-127; 3.1.1, 3.1.6, 3.1.9, 3.1.10
L-42	Barney, Terri	C2-63; 3.1.1
F3-9	Barton, Jerry	C2-576; 3.1.1
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L-261	Beitler, Aaron	C2-421
L-249	Bennett, William J.; California Department of Water Resources	C2-402; 3.1.5
L-169	Benson, John and D.L.	C2-265; 3.1.10
L-341	Berger, Bill; Georgetown Divide Recreation District	C2-506; 3.1.1

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L-268	Beuttler, John; California Sportfishing Protection Alliance	C2-440; 3.1.3
L-113	Billings, Steve	C2-174; 3.1.1, 3.1.6, 3.1.9, 3.1.10
F5-52	Billings, Steve	C2-578; 3.1.6, 3.1.10
L-303	Bird, Sue	C2-489; 3.1.1
F5-53	Bischel, Jill	C2-578; 3.1.6, 3.1.10
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F1-118	Boisa, Linda Straub	C2-572; 3.1.1, 3.1.3, 3.1.6
L-256	Boisa, Linda Straub	C2-415; 3.1.1
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L-1	Borovich, Bonnie and Killian, JayDeen	C2-1; 3.1.1
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L-191	Brougher, Betty	C2-292; 3.1.6, 3.1.10
F5-9	Brougher, Jack	C2-578; 3.1.6, 3.1.10
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F1-73	Brusin, Willie and Sue	C2-572; 3.1.1, 3.1.3, 3.1.6
L-316	Burge, Deborah	C2-493; 3.1.1
F1-98	Burke, Anastasia, and Quinn, Adda	C2-572; 3.1.1, 3.1.3, 3.1.6
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L-5	Cartier, Emmett	C2-8; 3.1.1, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 3.1.8
T-20	Cartier, Emmett	C2-555; 3.1.1, 3.1.3, 3.1.5, 3.1.7
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F5-10	Clark, Mark	C2-578; 3.1.6, 3.1.10
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L-187	Coe, George	C2-288; 3.1.6, 3.1.9, 3.1.10
F1-104	Cohen, Miki; Western States Horse Expos	C2-572; 3.1.1, 3.1.3, 3.1.6
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F1-150	Copeland, Mike Dr.	C2-572; 3.1.1, 3.1.3, 3.1.6
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L-265	Di Manto, John	C2-431; 3.1.6, 3.1.10
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L-118	Otto, Ronald; Auburn Ravine Creek Preservation Committee and Ophir Area Property Owners Association	C2-179
L-138	Otto, Ronald; Auburn Ravine Creek Preservation Committee and Ophir Area Property Owners Association	C2-217; 3.1.13
L-266	Otto, Ronald; Auburn Ravine Creek Preservation Committee and Ophir Area Property Owners Association	C2-434; 3.1.13
L-34	Overton, Jim	C2-55; 3.1.1
F1-33	Palmer, Gordon	C2-572; 3.1.1, 3.1.3, 3.1.6
L-291	Panter, Greg	C2-487; 3.1.1
L-108	Paradis, June	C2-160; 3.1.1, 3.1.2
L-107	Paradis, Ken	C2-159; 3.1.1, 3.1.2
L-312	Parshall, Burch R.	C2-490; 3.1.1
L-307	Parshall, Loretta	C2-489; 3.1.1
L-125	Pearson, Gus and Diana	C2-198; 3.1.6, 3.1.9, 3.1.10
F1-81	Pelliccia, Rob	C2-572; 3.1.1, 3.1.3, 3.1.6
L-11	Perry, Kathie and Ernie	C2-23; 3.1.1
L-45	Perry, Mark	C2-66; 3.1.1, 3.1.2, 3.1.5, 3.1.6, 3.1.9
L-62	Perry, Mark	C2-89; 3.1.1, 3.1.6
L-137	Perry, Mark	C2-216; 3.1.2
F1-8	Personeni, Teri	C2-572; 3.1.1, 3.1.3, 3.1.6
L-163	Peterson, Janet K.	C2-256; 3.1.1, 3.1.5, 3.1.6

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L-87	Peterson, Patricia and Robert	C2-116; 3.1.1
F5-63	Pettinnto, Joseph	C2-578; 3.1.6, 3.1.10
F1-141	Phillips, Maggie	C2-572; 3.1.1, 3.1.3, 3.1.6
L-244	Pierce, Dale A.; U.S. Fish and Wildlife Service	C2-366; 3.1.5, 3.1.14
F1-146	Pierce, Michele R.	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-40	Pierson, Keith	C2-578; 3.1.6, 3.1.10
L-152	Pinnick, Laura	C2-243; 3.1.6, 3.1.9, 3.1.10
F5-29	Pinnick, Laura	C2-578; 3.1.6, 3.1.10
L-203	Pinnick, Ron	C2-308, 3.1.2, 3.1.6, 3.1.9, 3.1.10
F5-28	Pinnick, Ron	C2-578; 3.1.6, 3.1.10
L-90	Porpiglia, Randy	C2-120
L-15	Potter, Linda and Jerry	C2-27; 3.1.1
F3-2	Power, J.R.	C2-576; 3.1.1
L-24	Prager, Kenneth	C2-38; 3.1.1
L-135	Prior, John	C2-214
L-136	Prior, Peggy	C2-215
L-129	Procissi, Robert	C2-207; 3.1.6, 3.1.10
T-3	Proe, Steve	C2-528; 3.1.1, 3.1.5, 3.1.6
L-28	Proe, Steven; El Dorado County Taxpayers for Quality Growth	C2-42; 3.1.1, 3.1.5, 3.1.6, 3.1.12
T-29	Proe, Steven; El Dorado County Taxpayers for Quality Growth	C2-569
T-7	Pryor, Bill	C2-536; 3.1.1, 3.1.3
L-170	Queen, Lynnel	C2-266; 3.1.6, 3.1.10
F1-92	Quinn, Adda	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-168	Randall, Carol	C2-572; 3.1.1, 3.1.3, 3.1.6
T-14	Rangel, Nathan	C2-545
L-223	Ray, Bill	C2-341; 3.1.6, 3.1.9
F5-8	Ray, Bill	C2-578; 3.1.6, 3.1.10
F5-7	Ray, Kathy	C2-578; 3.1.6, 3.1.10
L-89	Reed, John	C2-119; 3.1.6, 3.1.10
F1-64	Reginal, Andrea	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-76	Reinecke, Galen	C2-578; 3.1.6, 3.1.10

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F1-85	Remillard, Jim, Suzanne and Family	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-111	Ribley, Melissa	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-101	Ribley, Robert	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-58	Rice, Kathryn	C2-578; 3.1.6, 3.1.10
L-199	Rice, Randy and Kathryn	C2-303; 3.1.6, 3.1.10
F5-57	Rice, Randy W.	C2-578; 3.1.6, 3.1.10
L-25	Richine, Bobbi	C2-39; 3.1.1
L-82	Rietjens, John and Heidi	C2-110; 3.1.6, 3.1.9, 3.1.10
F1-67	Riley, Nicole	C2-572; 3.1.1, 3.1.3, 3.1.6
F3-5	Riley, Robin C.	C2-576; 3.1.1
F1-157	Risman, Toby	C2-572; 3.1.1, 3.1.3, 3.1.6
L-10	Roberts, Lore	C2-22; 3.1.1
F1-34	Robison, Ronda	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-125	Rock, Roland and Sharon	C2-572; 3.1.1, 3.1.3, 3.1.6
L-306	Rohen, Donald and Patrick, Paul	C2-489; 3.1.1
F1-87	Rollins, Lynnette	C2-572; 3.1.1, 3.1.3, 3.1.6
L-39	Romander, Linda	C2-60, 3.1.1
F5-23	Rose, Marianne	C2-578; 3.1.6, 3.1.10
L-194	Rose, Marianne E.	C2-297; 3.1.6, 3.1.9, 3.1.10
L-18	Rosenthal, Andrea H.	C2-30; 3.1.1, 3.1.7
F1-128	Rosenthal, John S.	C2-572; 3.1.1, 3.1.3, 3.1.6
L-4	Rossmann, Antonio; Western States Endurance Run Foundation	C2-5; 3.1.1, 3.1.3
T-27	Rothchild, John	C2-566
L-181	Rothwell, Bill and Elaine	C2-280, 3.1.6, 3.1.9
L-17	Rouse, Brian	C2-29; 3.1.1
F1-71	Roy, Brandon, J.	C2-572; 3.1.1, 3.1.3, 3.1.6
L-40	Rush, Barbara	C2-61; 3.1.1
F1-140	Russi, Terry L.	C2-572; 3.1.1, 3.1.3, 3.1.6
F3-8	Ryan, Carine	C2-576; 3.1.1
L-202	Ryan, David	C2-307; 3.1.6, 3.1.9, 3.1.10
L-150	Ryan, Susan	C2-238; 3.1.6, 3.1.9, 3.1.10
F5-24	Ryan, Susan	C2-578; 3.1.6, 3.1.10

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L-289	Salas, Asa	C2-486; 3.1.1
L-92	Sandy, Nancy; Bay Area Trails Preservation Council	C2-122; 3.1.1
F1-65	Sangiacomo, Wendy	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-6	Saunders, Jon	C2-572; 3.1.1, 3.1.3, 3.1.6
T-21	Schmiecher, Kathie	C2-558
L-225	Schmitz, Bob	C2-343; 3.1.10
F5-21	Schmitz, Robert	C2-578; 3.1.6, 3.1.10
F1-52	Schubauer, Mary C.	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-3	Schweider, Robert	C2-572; 3.1.1, 3.1.3, 3.1.6
L-81	Schwind, Kelsey	C2-109
L-145	Schwind, Richard	C2-231
F1-21	Seads, Cassidy, A.	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-120	Sexton, Kathleen	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-165	Sextro, Ann	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-83	Shafer, Jennifer	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-97	Shea, Lari; Ricochet Ridge Ranch	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-68	Shears, Dave	C2-578; 3.1.6, 3.1.10
L-272	Shears, David H.	C2-444; 3.1.6, 3.1.9
L-271	Shears, Dorothy M.	C2-443; 3.1.6
F1-89	Sheeter, Joan	C2-572; 3.1.1, 3.1.3, 3.1.6
F4-2	Shepard, Paul	C2-577
F1-114	Sherman, Jim and Kathy	C2-572; 3.1.1, 3.1.3, 3.1.6
T-11	Shuttleworth, Alan	C2-544
T-13	Shuttleworth, Dale	C2-545
T-10	Shuttleworth, Jay	C2-542
L-221	Sidnam, Bill	C2-339; 3.1.6, 3.1.9, 3.1.10
F5-90	Sidnam, Bill	C2-578; 3.1.6, 3.1.10
L-222	Sidnam, Judy	C2-340; 3.1.4, 3.1.6, 3.1.9
F5-34	Sidnam, Judy	C2-578; 3.1.6, 3.1.10
F5-45	Simon, Glenn	C2-578; 3.1.6, 3.1.10
F5-44	Simon, J.H.	C2-578; 3.1.6, 3.1.10
F1-151	Simoni, Lynge	C2-572; 3.1.1, 3.1.3, 3.1.6
L-195	Simpson, Linda	C2-299; 3.1.6, 3.1.10

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F5-62	Simpson, Linda	C2-578; 3.1.6, 3.1.10
L-294	Simpson, Nancy	C2-487; 3.1.1
L-41	Singh, Alice Dowdin; Mayor, City of Auburn	C2-62; 3.1.9
L-257	Smith, Beryl C.; Greater Auburn Area Fire Safe Council	C2-416; 3.1.9
L-290	Smith, Jeff	C2-486; 3.1.1
F1-158	Smith, John	C2-572; 3.1.1, 3.1.3, 3.1.6
L-13	Smith, Roberta	C2-25
T-24	Snow, Laura	C2-563; 3.1.6
F5-78	Snyder, James O.	C2-578; 3.1.6, 3.1.10
F5-77	Snyder, Myrtle M.	C2-578; 3.1.6, 3.1.10
T-19	Soderlund, Greg	C2-553; 3.1.1, 3.1.3
F1-2	Soto, James Donald Sr.	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-14	Sparkman, Alison and Art	C2-572; 3.1.1, 3.1.3, 3.1.6
L-255	Spiers, Peter	C2-414
F5-36	Spinosi, Josephine G.	C2-578; 3.1.6, 3.1.10
F5-38	Spinosi, Michael	C2-578; 3.1.6, 3.1.10
L-91	Spinosi, Mr. and Mrs. Michael	C2-121; 3.1.6, 3.1.9, 3.1.10
F1-86	Stacy, Mickie	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-88	Stalzer, Chad	C2-572; 3.1.1, 3.1.3, 3.1.6
L-66	Stanely, Leon D.	C2-93; 3.1.6, 3.1.9, 3.1.10
F5-31	Stanley, Leon	C2-578; 3.1.6, 3.1.10
F5-88	Stanley, Sally	C2-578; 3.1.6, 3.1.10
L-219	Steger, Jenning, Curly Media	C2-337
L-220	Steger, Jenning, Curly Media	C2-338; 3.1.5
L-205	Stevenson, Frank	C2-314; 3.1.6
T-5	Stork, Ronald	C2-532
L-127	Stork, Ronald; Friends of the River	C2-202; 3.1.1
F5-82	Striplin, Dave	C2-578; 3.1.6, 3.1.10
L-134	Striplin, Dave and Kristi	C2-213; 3.1.6, 3.1.10
F5-83	Striplin, Kristi	C2-578; 3.1.6, 3.1.10
L-149	Stroich, Salmon	C2-237
L-300	Stroman, Janet	C2-487; 3.1.1

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F5-13	Studdbaker, Clint	C2-578; 3.1.6, 3.1.10
L-232	Studebaker, Clint	C2-350; 3.1.6, 3.1.10
F1-93	Sublett, George	C2-572; 3.1.1, 3.1.3, 3.1.6
L-44	Suhr, Juliette W.	C2-65; 3.1.1
F1-110	Suick, Gavin	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-9	Sullivan, Dusty	C2-572; 3.1.1, 3.1.3, 3.1.6
F1-11	Sullivan, Suzanne	C2-572; 3.1.1, 3.1.3, 3.1.6
L-259	Summers, Aliana	C2-418; 3.1.1
F5-15	Sweeney, Eric	C2-578; 3.1.6, 3.1.10
L-198	Sweeney, Eric Christopher	C2-302; 3.1.5, 3.1.6, 3.1.9, 3.1.10
L-197	Sweeney, Jill	C2-301; 3.1.6, 3.1.10
L-157	Tager, Melinda	C2-249; 3.1.1, 3.1.2
F1-113	Takeuchi, Melinda	C2-572; 3.1.1, 3.1.3, 3.1.6
L-209	Taylor, J. L.	C2-321; 3.1.2, 3.1.6, 3.1.9, 3.1.10
F1-12	Taylor, Stephen	C2-572; 3.1.1, 3.1.3, 3.1.6
L-130	Taylor, William J. and Carol A.	C2-208; 3.1.6, 3.1.9, 3.1.10
F5-17	Thomas, Ivor	C2-578; 3.1.6, 3.1.10
L-235	Thomas, Pat	C2-353
F5-18	Thomas, Pat	C2-578; 3.1.6, 3.1.10
F2-1	Thomas, Pat and Ivor	C2-574; 3.1.6, 3.1.10
F4-3	Thompson, Shannah	C2-577
L-327	Thompson, Susie and Maddie, and Broers, Andrea	C2-495; 3.1.1
F1-72	Tibbitts, Walter	C2-572; 3.1.1, 3.1.3, 3.1.6
L-207	Troia, Ben	C2-317; 3.1.6, 3.1.10
T-23	Troia, Ben	C2-561; 3.1.1, 3.1.5, 3.1.6, 3.1.9
F1-68	Troiani, Connie	C2-572; 3.1.1, 3.1.3, 3.1.6
L-99	Trotter, Thomas W.	C2-146; 3.1.6, 3.1.10
T-16	Tucker, S. Craig	C2-550; 3.1.1
L-77	Tudsbury, Bobby	C2-105
L-167	Turner, Roger and Micheline	C2-261; 3.1.6, 3.1.9, 3.1.10
F5-27	Turner, Roger and Micheline	C2-578; 3.1.6, 3.1.10
F5-47	Turner, William	C2-578; 3.1.6, 3.1.10
L-98	Turner, William J.	C2-145; 3.1.6, 3.1.9, 3.1.10

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F5-25	Twietmeyer, Kathy	C2-578; 3.1.6, 3.1.10
L-168	Twietmeyer, Tim and Kathy	C2-263; 3.1.6, 3.1.10
F3-11	Ulrey, Brent	C2-576; 3.1.1
L-29	Unknown	C2-50; 3.1.1
L-55	Unknown	C2-77; 3.1.6
L-262	Unknown	C2-422; 3.1.5
L-298	Unknown	C2-487; 3.1.1
L-319	Unknown	C2-494; 3.1.1
L-320	Unknown	C2-494; 3.1.1
L-321	Unknown	C2-494; 3.1.1
L-269	Vaghti, Mehrey and Toy, Thomas	C2-441; 3.1.5, 3.1.6, 3.1.9
L-172	van der Linden, Louwrens k.	C2-268; 3.1.6, 3.1.9, 3.1.10, 3.1.12
L-270	van der Linden, Louwrens k.	C2-442; 3.1.6, 3.1.9, 3.1.12
F5-66	Veader, Amy	C2-578; 3.1.6, 3.1.10
F5-65	Veader, Doug	C2-578; 3.1.6, 3.1.10
L-83	Von Borstel, Carol	C2-112
L-329	Von Miller, Sherry L.	C2-496; 3.1.1
F1-132	Walth, Lois	C2-572; 3.1.1, 3.1.3, 3.1.6
L-179	Ward, Corinne	C2-278; 3.1.6
L-180	Ward, Howard M.	C2-279; 3.1.6, 3.1.10
L-334	Warner, Bill and Unknown	C2-500; 3.1.1
L-19	Warren, Richard	C2-31; 3.1.1, 3.1.5, 3.1.6, 3.1.7
F1-4	Warren, Sherry	C2-572; 3.1.1, 3.1.3, 3.1.6
L-254	Watts, Lois	C2-413; 3.1.1
L-12	Wauters, William	C2-24; 3.1.1
L-93	Week, Larry; California Department of Fish and Game	C2-123
L-286	Weibel, Ryan	C2-485; 3.1.1
L-158	Weiler, Karri R.	C2-250; 3.1.6, 3.1.10
L-155	Weiler, Steven W.	C2-247; 3.1.6, 3.1.9
L-243	Welsh, Richard A.; U.S. Bureau of Reclamation	C2-364
F1-29	West, Deborah B.	C2-572; 3.1.1, 3.1.3, 3.1.6
L-297	Whetzel, Demi Whitehorse	C2-487; 3.1.1

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L-20	White, Barbara	C2-32; 3.1.1
L-251	White, Kathryn	C2-410; 3.1.6
F5-80	White, Kathryn	C2-578; 3.1.6, 3.1.10
F5-67	Whitley, Marvin	C2-578; 3.1.6, 3.1.10
F1-105	Widler, Becky	C2-572; 3.1.1, 3.1.3, 3.1.6
L-114	Wilfley, Gerald J.	C2-175; 3.1.6, 3.1.9
L-189	Wilfley, Glenna	C2-290; 3.1.5, 3.1.6, 3.1.9
F1-126	Williams, Marcy	C2-572; 3.1.1, 3.1.3, 3.1.6
L-60	Williamson, Harry; National Park Service	C2-86; 3.1.1, 3.1.3
F1-70	Winstead, Bobby	C2-572; 3.1.1, 3.1.3, 3.1.6
F5-89	Wire, Katherine	C2-578; 3.1.6, 3.1.10
L-48	Wisby, Amanda; Stewart Ranch	C2-70; 3.1.1
L-50	Wise, Diana	C2-72; 3.1.1
L-301	Wiswell, Cory	C2-488; 3.1.1
F1-115	Wobus, Betsy	C2-572; 3.1.1, 3.1.3, 3.1.6
L-56	Wobus, Betsy	C2-78; 3.1.1
F5-60	Wong, Betsy	C2-578; 3.1.6, 3.1.10
F5-59	Wong, Lenbert	C2-578; 3.1.6, 3.1.10
L-128	Wong, Wilfred; Community Development Director, City of Auburn and Fossum, Thomas A.; Public Works Director/City Engineer, City of Auburn	C2-206; 3.1.6
T-8	Woodall, Tim	C2-537; 3.1.1
L-126	Woodall, Tim; Protect American River Canyon	C2-199; 3.1.1, 3.1.6, 3.1.9, 3.1.10
L-330	Wootton, Keith	C2-497
L-253	Wyeth, Harry B. and Karen A.	C2-412; 3.1.1
L-80	Yaffe, Linda Frederick	C2-108; 3.1.1
F3-6	Yarris, Gregory S.	C2-576; 3.1.1
L-69	Yost, John	C2-97
F5-41	Young, Carol	C2-578; 3.1.6, 3.1.10
L-247	Young, Gerald C.	C2-400
F1-31	Young, Katherine	C2-572; 3.1.1, 3.1.3, 3.1.6
L-177	Young, Lyle K.	C2-275; 3.1.6, 3.1.10
F1-96	Zabriskie, Jean; Western States Horse Expo	C2-572; 3.1.1, 3.1.3, 3.1.6

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Number	**Commenter Name**	**Page and/or Master Response Number(s)**
F1-138	Zahar, Toni	C2-572; 3.1.1, 3.1.3, 3.1.6
L-63	Zander, Bill and Jill	C2-90; 3.1.5, 3.1.6, 3.1.9, 3.1.10
L-14	Zanot, Gene and Debbie	C2-26; 3.1.1
F5-73	Zimmerman, M.	C2-578; 3.1.6, 3.1.10
L-323	Zlotlow, Joshua	C2-494; 3.1.1

3.0 MASTER RESPONSES

3.1 INTRODUCTION

In several instances, public and agency comment letters, public oral comments, and form letters received on the Draft EIS/EIR raise the same or similar issues related to certain topics. In response to these comments, the lead agencies have prepared Master Responses to provide a comprehensive discussion to address significant environmental issues or provide further clarification. The Master Responses include the following:

3.1.1 Auburn-to-Cool Trail
3.1.2 American River Pump Station Project Funding
3.1.3 Recreation Trail Access During Construction
3.1.4 Auburn Dam Construction Bypass Tunnel
3.1.5 Project Area River Restoration
3.1.6 Public River Access Features
3.1.7 Tamaroo Bar
3.1.8 Ralston Afterbay
3.1.9 Fire Management
3.1.10 Project Access
3.1.11 PCWA's Water Conservation Program
3.1.12 Project Area Wildlife
3.1.13 Auburn Ravine
3.1.14 Cumulative Impact Analysis

Amendments and revisions to the Draft EIS/EIR in response to the comments received are found in the Final EIS/EIR. A summary of the revisions and corrections to the Draft EIS/EIR is provided in the Final EIS/EIR, Chapter 1.0, Introduction, Section 1.4.4, Final EIS/EIR Process. These revisions and corrections do not alter the conclusions presented in the Draft EIS/EIR. The complete list of references cited and acronyms used in Appendix C can be found in Chapter 6.0, References, and List of Acronyms of the Final EIS/EIR.

3.1.1 AUBURN-TO-COOL TRAIL

A large number of comments addressed the recreational impact associated with the bifurcation of the Auburn-to-Cool Trail, necessitated by the proposed restoration of the currently dry riverbed of the North Fork American River near the proposed Auburn Dam site. In particular, many of these comments questioned the conclusion, found in the Draft EIS/EIR, that the bifurcation of the trail was a significant *unavoidable* impact. These commenters argued that the impact was actually *avoidable*, in that it could be mitigated by the construction of a new multi-use bridge over the currently dry river bed across which runners, hikers, equestrians, and mountain bikers can currently cross without the hindrance of flowing water (suggested "proposed mitigation"). Although nearly all of these commenters applauded the plan to close the Auburn Dam bypass tunnel, and recognized the obvious benefits associated with such action, the commenters nevertheless urged the expenditures of whatever money was necessary to provide a bridge over what will become a stretch of a flowing river.

These comments raise the following issues: (1) whether this particular recreational impact is related to meeting the objectives of U.S. Bureau of Reclamation (Reclamation), of Placer

County Water Agency (PCWA), or of both agencies; (2) whether, from Reclamation's standpoint, the proposed mitigation or an alternative approach to dealing with the impact, is necessary; (3) whether, from PCWA's standpoint, the proposed mitigation or an alternative approach is feasible, in whole or in part; (4) whether either agency can accomplish the proposed mitigation as part of the NEPA/CEQA process for the proposed American River Pump Station Project, or whether, instead, a separate environmental review process would be necessary; (5) whether adequate funding can be obtained for a new river crossing or other mitigation measure, neither of which had been envisioned as part of the original project; (6) what regulatory approvals or other agency actions would be necessary prior to construction of a new river crossing or implementation of an alternative mitigation strategy; and (7) how much funding, if any, should be dedicated by Reclamation, PCWA, and other agencies that would be involved in approving and constructing such a crossing.

As will be explained in detail below, Reclamation and PCWA staff have agreed to the following: PCWA staff will recommend to the PCWA Board of Directors that, in order to mitigate PCWA's limited contribution to the impact to the Auburn-to-Cool Trail, PCWA should provide a maximum of $500,000 towards the eventual construction of a new river crossing or similar mitigation strategy. This money will be added to $1 million that has tentatively been set aside by the State of California. Taken together, these amounts should be sufficient to complete the environmental review, planning, and construction of a new crossing or other mitigation strategy. Such a project, however, cannot be approved as part of the NEPA/CEQA process for the Proposed Project. Instead, separate environmental review must be conducted by Reclamation and California Department of Parks and Recreation (CDPR), acting as joint lead agencies responsible for recreation activities within the Auburn SRA. At present, neither Reclamation nor PCWA can be certain of the outcome of that process, though CDPR has thus far been very supportive of the concept of a new crossing or other means of ensuring a multi-use trail linkage between Auburn and Cool.

The Auburn-to-Cool Trail Bifurcation Issue

As the Draft EIS/EIR explained, the closure of the Auburn Dam bypass tunnel and restoration of the North Fork American River to its historic channel would result in the bifurcation of the Auburn-to-Cool Trail, which currently crosses the dewatered portion of the river. Many trail users and trail advocacy groups (equestrians, mountain bikers, hikers, and runners) have requested that the bifurcation of the trail be mitigated, and have suggested that a multi-use trail bridge across the canyon in the vicinity of the project site would be an appropriate mitigation measure. Other potential mitigation options include creating a new multi-use trail that would link the Robie Point Firebreak Trail to the Olmstead Loop Multi-use Trail and would use the Highway 49 Bridge over the North Fork American River.

The following are key aspects of this issue:

- The Auburn-to-Cool Trail is currently the only complete *trail* access from Auburn to Cool for mountain bikes. Other routes across the canyon for mountain bikes require riders to use portions of Highway 49, which has numerous tight turns and traffic. Equestrians and pedestrians can cross the river at the Mountain Quarries Bridge (also called No Hands

Bridge), and have several trail options on both sides of the canyon, including the Western States Trail.

- Equestrians and runners are concerned that, if mountain bikes lose access to the Auburn-to-Cool Trail route, bikers will be more likely to illegally ride the Western States Trail and other equestrian/pedestrian routes. The equestrians and runners are concerned that such illegal activity would lead to increased conflicts between bikers, horses and pedestrians along these routes.

The fundamental policy issue for Reclamation and PCWA, then, is whether the desirability of avoiding this potential conflict between various trail users on the No Hands Bridge warrants the expenditures necessary either to build an entirely new bridge that could accommodate mountain bikers in addition to pedestrians and equestrians or to undertake some alternative form of mitigation intended to preserve various recreationists' ability to travel between Auburn and Cool. In addressing these questions, the background and nature of the Auburn-to-Cool Trail are relevant considerations.

Background on the Auburn-to-Cool Trail

The Auburn State Recreation Area (SRA) is managed by CDPR through a management agreement with Reclamation. The Auburn SRA includes most of the lands withdrawn for the proposed Auburn Dam Project, including area that would have been inundated by the associated reservoir. The actual dam site area (approximately one-half mile upstream of the abutments and one-half mile below them) is closed to public use. Exceptions to this closure have been made for specific trails that pass through the area, including the Auburn-to-Cool Trail, on which Reclamation has allowed public use since 1996.

In allowing CDPR authority to open the Auburn-to-Cool Trail to public use, Reclamation expressly reserved the right to close the trail at any time in the future. In a February 23, 1996, letter addressed to CDPR District Superintendent Bruce Krantz, Reclamation Area Manager Thomas J. Aiken stated that *"...it must be understood that the trail may be closed at any time for administrative and/or health and safety purposes, and if an Auburn Dam should be built"* (Reclamation 1996b). In a subsequent letter to CDPR Supervising Park Ranger Jill Dampier dated March 23, 1996, Mr. Aiken stated that *"...[t]he Auburn Dam construction site may be used for the trail provided that no other project purpose activities are occurring which may require the trail's closure to protect the health and safety of the recreating public. Other project purposes may include road repairs, construction activities, etc."* (Reclamation 1996c).

Although the public use of the Auburn-to-Cool Trail was authorized in 1996, the route across the canyon may have been used, to some degree, since the diversion tunnel was first constructed. Following the cessation of Auburn Dam construction activities in 1977 and 1978, public use of the trails and roads running through the dam site area became more established, and likely increased when the Mountain Quarries Bridge was closed for a year in 1997. In acquiescing in the use of Auburn-to-Cool Trail in 1996, Reclamation was acting in response to expressed concerns regarding the impacts on trail users who would lose access to the Mountain

Quarries Bridge during the period in which it was to be repaired. That bridge was closed while repairs were made because it was deemed unsafe during that period, but is now open.

Although the Auburn-to-Cool Trail serves mountain bikers, equestrians, runners, and hikers, the route is not a designated recreational trail. Rather, the Auburn-to-Cool Trail makes use of dam construction roads on the south side of the canyon from the Olmstead Loop near Cool, crosses the dewatered section of river channel, and then follows construction roads up the north side of the canyon. Though the official route follows the primary construction road down to the Auburn Dam site from Maidu Drive to the bottom of the canyon, trail users follow several alternate routes up the north side of the canyon, including a steep dirt track that follows the approximate alignment of PCWA's temporary pipes.

To assess the amount of public use the Auburn-to-Cool Trail currently receives, CDPR placed a counter along the route from early November through early December 2001. Five hundred and eighty nine users were counted during this two-month time period. The Auburn-to-Cool Trail is likely to be most popular in the fall (September through November) and spring (March through May). Based on estimates of the seasonal patterns of use in the Auburn SRA, CDPR managers estimate that the Auburn-to-Cool Trail is used between 2,500 and 3,500 times each year.

Legal Responsibility for Impacts to the Auburn-to-Cool Trail

The Draft EIS/EIR identified as a "significance criteri[on]" the "[p]ermanent closure of recreation trails through the project site." (Draft EIS/EIR, page 3-208.) Based on this criterion, the document concluded that the bifurcation of the Auburn-to-Cool Trail would constitute a potentially significant "impact upon recreation." (*Id.* at page 3-210.) This conclusion was more important for CEQA purposes than for NEPA purposes. Although the identification of a "significant effect on the environment" (Cal. Pub. Resources Code, § 21068) triggers a state or local agency's legal duty under CEQA to mitigate such an effect to the extent *feasible*, no similar duty arises under NEPA, which merely requires federal agencies to consider the impacts of their proposed major actions, making mitigation purely optional.

After concluding that the trail bifurcation was a potentially significant environmental effect, the Draft EIS/EIR concluded that the effect was "unavoidable," and thus proposed no mitigation measures to address the impact. (Draft EIS/EIR, pages 2-85, 3-210.)[1] As noted earlier, numerous commenters have challenged this conclusion, and have identified what they consider to be feasible mitigation. In determining whether, in fact, feasible mitigation is truly available for this impact, however, the lead agencies must first consider the complex jurisdictional issues related to land-based recreation in the American River Canyon.

The Draft EIS/EIR was intended to comply with the most rigorous provisions of both NEPA and CEQA, and in numerous places does not expressly distinguish between federal actions subject to NEPA and state or local actions subject to CEQA. For that reason, the document may have given members of the public the impression that each and every one of the impacts identified in the document equally implicated both NEPA and CEQA considerations. In other

[1] The requirement to determine whether particular environmental effects are "significant" is a requirement of CEQA, but not of NEPA.

words, the document may have given people the impression that the river restoration and pump station were a single indivisible project subject to both CEQA and NEPA in all particulars. Such impressions are not completely accurate.

The closure of the Auburn Dam bypass tunnel is a proposal made by, and which would be undertaken by, Reclamation in response to (1) assertions by the State of California that, in the absence of a Congressional commitment to proceed with the long-stalled Auburn Dam, Reclamation lacks authority to continue to divert water from the dewatered stretch of the North Fork American River through the bypass tunnel, and (2) the State of California's insistence that the river be restored to its historic (pre-Auburn Dam) channel. PCWA has tentatively agreed, subject to CEQA compliance, that the best location for a permanent pump station may be in a spot that is currently dewatered; but PCWA is by no means the primary actor in closing the tunnel and restoring the river. Nor does it control Reclamation's decision to do so. In fact, as Reclamation has acknowledged, the federal government has a contractual obligation, under the so-called "Land Purchase Agreement," to provide an interim pumping facility or alternative water supply until the Auburn Dam was completed (see Draft EIS/EIR, pages 1-1 through 1-4). PCWA's interest is simply to obtain a permanent pump station that will allow it to resume the water supply operations interrupted by Auburn Dam construction activities, and to expand its diversions, consistent with existing water rights, to address increasing demands for water due to population growth in the PCWA service area.

It is PCWA's position, then, and not necessarily Reclamation's, that PCWA is not undertaking any discretionary actions that would constitute the sole or even primary cause of the bifurcation of the Auburn-to-Cool Trail. Instead, responsibility for loss of the Auburn-to-Cool Trail lies primarily with Reclamation, as the entity responsible for closing the tunnel and returning the North Fork American River to its historic channel. Although the Draft EIS/EIR does not make these distinctions, they follow from the very nature of the agency decisions at issue. Thus, though the Draft EIS/EIR may have given the impression that the pump station and river restoration were a single indivisible project in all respects, the project should not be understood in those terms. Rather, it should be understood as a combination of two independent but closely related actions in which Reclamation proposes both to restore the river and to build PCWA a new pump station, and PCWA proposes to enter into a contract accepting ownership of such new facilities, and operate them for water supply purposes, thereby relieving Reclamation of its obligations under the Land Purchase Contract.

Because, from a CEQA standpoint, PCWA's actions will not be the primary cause of the impacts on the Auburn-to-Cool Trail, PCWA cannot be solely responsible for attempts to mitigate those impacts. Instead, assuming that PCWA is only partly responsible for the impact, PCWA staff, as coauthor of this Final EIS/EIR, recommend that the PCWA Board agree to make a very substantial financial contribution to the funding of a new river crossing or similarly effective alternative mitigation strategy – if Reclamation and the state (CDPR), after conducting further environmental review, decide to proceed with such a crossing. Notably, though, PCWA has no legal authority or ability to dictate terms to either Reclamation, which owns the subject property, or CDPR, which manages the property pursuant to an agreement with Reclamation. Rather, those two entities, which control the land on which a new crossing would be implemented, must decide for themselves whether to proceed with a replacement crossing or

some other form of effective mitigation (e.g., a new multi-use trail linking Auburn to Cool using the existing Highway 49 Bridge or the Mountain Quarries Bridge to cross the North Fork American River). PCWA can do no more than provide financial support for any such undertaking.

Reclamation agrees with PCWA that the most appropriate venue for considering a new crossing is a separate planning and environmental review process, such as the pending update of the General Plan/Resources Management Plan for the Folsom Lake SRA. Reclamation, therefore, further believes that the current EIS process for the American River Pump Station Project is not the proper vehicle or venue for developing a potential crossing or other means of preserving a multi-use route between Auburn and Cool. For these reasons, Reclamation does not, as part of this process, propose any mitigation measure addressing Reclamation's contribution to impacts associated with bifurcation of the Auburn-to-Cool Trail. Importantly, though, Reclamation will cooperate in any CDPR-initiated planning and environmental review process addressing a proposal to build a crossing with state- or local-funding.

In further explanation of its position with respect to the American River Pump Station Project, Reclamation notes that the Auburn-to-Cool Trail route exists only because of the diversion tunnel, and did not exist prior to the diversion of the river for Auburn Dam construction purposes. In 1996, Reclamation permitted limited use of the Auburn-to-Cool Trail, which permission could be withdrawn at any time for project purposes. Reclamation believes itself under no obligation now to provide a replacement river crossing or similar mitigation measure simply because a temporary river diversion to accommodate Auburn Dam construction may be eliminated, and a temporarily dry stretch of riverbed may now be rewatered. Reclamation also is cognizant that there are numerous other trails within the Auburn SRA, including the new Foresthill Divide Loop, that will continue to provide high-quality recreational opportunities. Some of these trails serve both equestrians and pedestrians, while others serve other users as well. As emphasized above, however, Reclamation is willing to cooperate in planning and environmental review for any proposed new crossing or similar project. Indeed, the fact that Reclamation does not believe that the current project necessitates mitigation in the form of a new crossing or similar strategy will not prevent Reclamation, in a later context, from concluding that a new crossing or a similar construction program would be a valuable public amenity worth considering for the Folsom Lake SRA.

Placer County Water Agency's Limited Authority for Implementing a Bridge Project

Although PCWA, as lead agency for CEQA compliance purposes, is required to ensure that the EIR portion of the EIS/EIR adequately addresses all impacts that will follow from its own actions or those of state agencies subject to CEQA, PCWA has no ability to ensure the implementation of certain proposed mitigation measures, including the proposed provision of a replacement river crossing. Most importantly for this discussion, PCWA does not own the property over which a new crossing would have to be constructed. Instead, as noted earlier, the United States owns that land, which is leased to, and managed by, CDPR. Before a replacement crossing can be implemented, Reclamation must agree that the specific land proposed for such a

route can be devoted to that use. Moreover, CDPR would have substantial input regarding the design, evaluation, and implementation of any such project.

As noted above, PCWA's proposed actions in accepting a new pump station constructed by Reclamation, operating such a facility, and releasing Reclamation from its obligations under the Land Purchase Contract are not the sole cause of the identified significant impact associated with Auburn-to-Cool Trail bifurcation. At most, PCWA bears *some limited responsibility* for the need for a new crossing. PCWA staff therefore recommend that the PCWA Board allocate a maximum of $500,000 towards future construction of a river crossing or similar mitigation – *if*, after a project-specific NEPA/CEQA process, Reclamation and CDPR choose to proceed with such a crossing, and only at a point in time at which the pump station has cleared all regulatory and other legal hurdles, so that it is clear that a new pump station actually will be built and operated. Such an amount is intended to approximate what might be called a "fair share" contribution to the total estimated costs of such a process and such a crossing, which are currently estimated to be $1.5 million.

As to PCWA, there is legal authority under California law suggesting (by analogy) that such a contribution can constitute sufficient mitigation for any impact caused by PCWA's activities. This analogous authority provides that, where a particular project will incrementally contribute to a larger cumulative impact, the project's incremental contribution can be adequately mitigated if the project "is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." (Cal. Code Regs., tit. 14, div. 6, ch. 3 ["CEQA Guidelines"], § 15130, subd. (a)(3)). Although the bifurcation of the Auburn-to-Cool Trail is not, strictly speaking, a "cumulative impact," it is analogous in the sense that the impact is caused either by Reclamation, acting alone, or by Reclamation and PCWA acting together. Thus, a "fair share" contribution to a new bridge is a fair and reasonable means by which PCWA can attempt to facilitate the ultimate approval and construction of a replacement river crossing or similar mitigation measure (e.g., construction of a new multi-use trail allowing mountain bikers and others to use the Highway 49 Bridge or Mountain Quarries Bridge to cross over the North Fork American River).

There is little more that PCWA can do. Because any such crossing will involve environmental issues requiring project-specific analysis, and all actions necessary to implement a replacement crossing must be taken by entities other than PCWA, another and separate environmental review process will be required. Such a process will likely involve preparation of a joint NEPA/CEQA document, with Reclamation and CDPR acting as joint lead agencies.

Although Reclamation does not currently have federal funds to commit to such a process, and is not in a position to seek federal money for a river crossing as part of the American River Pump Station Project, it is willing to determine whether a crossing can be approved funded solely with local and state funds. Of equal importance, PCWA and Reclamation have had numerous conversations with CDPR and the Resources Agency of the State of California, in which the latter entity has indicated that it will devote a total of $1 million to environmental review for a replacement river crossing and, eventually, construction of such a project – if, that is, the resulting environmental impacts are deemed acceptable after compliance with NEPA and CEQA.

Future California Department of Parks and Recreation/Reclamation Planning and Environmental Review Processes for a Bridge Proposal

CDPR and Reclamation will have to decide between themselves exactly how to proceed with environmental review for any bridge proposal. The two most likely possible approaches are (1) to prepare a project-specific environmental document focusing solely on the bridge and alternatives and (2) to fold bridge planning into the pending revision of the General Plan/Resource Management Plan for Folsom Lake SRA, which is contiguous to Auburn SRA. Under either approach, the two agencies will focus their efforts on identifying the best possible location for a new crossing or other measures that can mitigate the impact of the bifurcated Auburn-to-Cool Trail.

A long-held desire by many trail users has been the development of a trail system that completely encircles Folsom Reservoir. This concept was stated in the current Folsom Lake SRA General Plan, which was completed in 1978 and is now in the early stages of a pending update and revision. While a trail crossing is not currently mentioned in that plan, the plan revision process would certainly be an appropriate venue for addressing a new river crossing as one means of securing a trail route around Folsom Reservoir, and further connecting the trails in the Folsom SRA with those of the adjacent (upstream) Auburn SRA. Alternatively, if a project-specific environmental document is prepared for the proposed crossing, the desirability of linking the trails of the two SRAs can be identified as a project purpose and objective.

Level of Significance of Impacts

As the preceding discussions reveal, PCWA staff will recommend to the PCWA Board that PCWA agree to pay a maximum of $500,000 towards eventual construction of a new crossing or other mitigation strategy that will mitigate the bifurcation of the Auburn-to-Cool Trail. Such money would only be spent after CDPR and Reclamation, after conducting additional environmental review, agree that such a crossing is desirable and should be built, and only after the pump station has cleared all regulatory and legal hurdles that might delay construction or prevent construction entirely.

In light of the complex issues set forth in the preceding discussion, the recreational impact caused by the Auburn-to-Cool Trail bifurcation must, at present at least, be treated as a significant and potentially unavoidable impact. At the time the PCWA Board adopts its "CEQA Findings" pursuant to Public Resources Code Section 21081, the Board will have no way of predicting future events, and has no way of imposing its own preferences on CDPR and Reclamation. Based solely on these realities, the Board will therefore have to treat the impact as significant and potentially unavoidable. PCWA's staff's hope, however, is that the impact will in fact eventually be mitigated to a less-than-significant level after Reclamation and CDPR complete environmental review for a proposed crossing. Under such a scenario, PCWA would strongly support construction of a new crossing or other appropriate mitigation, and would make up to $500,000 available for such a purpose if the other key players agree with such a course of action, and if the pump station has cleared all regulatory and legal hurdles that might delay or prevent construction. The following mitigation will be considered by the PCWA Board:

> *In order to mitigate PCWA's share of the recreational impact associated with bifurcation of the Auburn-to-Cool Trail, PCWA shall pay a maximum of $500,000 to be used for costs associated with the construction of a new bridge across the North Fork American River or another alternate mitigation program (e.g., the construction of new trail segments). Such money, or some lesser amount if the full amount is not required, shall be made available to CDPR only after all of the following have occurred: (1) CDPR and Reclamation have completed the environmental review necessary to implement such a project, have chosen to proceed with such a project, and have obtained all regulatory approvals necessary to proceed with the project; (2) any litigation over such environmental review or regulatory approvals has been resolved in favor of CDPR and/or Reclamation or other approving agency; and (3) the pump station has obtained all necessary regulatory and/or discretionary approvals necessary for construction, and any litigation over any such approvals has been resolved in favor of PCWA.*

PCWA staff is confident that, if its Board approves the portion of the Proposed Project subject to its control, the Board will be able to approve a Statement of Overriding Considerations identifying project benefits that outweigh the potentially significant environmental effect associated with Auburn-to-Cool Trail bifurcation, as well as other significant unavoidable effects. Such benefits include, but are not necessarily limited to, (1) elimination of the disruption and limitations associated with annually installing and then disassembling a temporary pump station; (2) increased water diversions needed to satisfy PCWA's statutory obligation to serve development within its service area, as approved by Placer county and incorporated cities within the county; (3) increased reliability in PCWA's overall delivery system, since North Fork American River water can be provided as back-up to Yuba/Bear River water, deliveries of which are sometimes subject to interruption; (4) elimination of safety issues associated with the diversion tunnel (to the extent that PCWA's action helps bring about this result); and (5) restoration of a portion of the North Fork American River dewatered in order to accommodate construction of the Auburn Dam (to the extent that PCWA's action helps bring about this result).

3.1.2 AMERICAN RIVER PUMP STATION PROJECT FUNDING

As explained in the Draft EIS/EIR (Section 1.2.2 through Section 1.2.5), funding for the Proposed Project was authorized in accordance with the "Land Purchase Agreement" pursuant to the conditions negotiated and executed in the Land Purchase Contract (14-06-859-308) dated July 25, 1972 as amended, modified and supplemented by the Supplemental Agreement to Land Purchase Contract (14-06-859-308A) dated May 25, 1979. Reclamation is responsible for the majority of the project costs as part of its obligation to provide PCWA with a reliable water supply under the terms of the Land Purchase Agreement.

The State of California, pursuant to Chapter 52, Statutes of 2000, has appropriated $4 million to the California Resources Agency for the restoration of the natural stream channel of the North Fork of the American River, to be completed in partnership with Reclamation. This

arrangement between Reclamation and the State of California, California Resources Agency is described in the Memorandum of Agreement (MOA) between the United States and the State of California included as Appendix A to the Draft EIS/EIR. The initial project cost-sharing arrangement described in the MOA is in regard to the completion of environmental documentation and construction plans and specifications. An additional agreement between the parties would be entered into following completion of the environmental review and project decision-making by the lead agencies.

Future operation and management of the public river access facilities would become the responsibility of CDPR, under a management contract/agreement with Reclamation. CDPR has indicated that the level of future operation of the facilities would be commensurate with available funding. This could potentially further limit the hours or days of operation (i.e., seasonal closures during low-use winter months). The entrance station and gate would be locked and no vehicles permitted to enter the river access area.

3.1.3 RECREATION TRAIL ACCESS DURING CONSTRUCTION

The Draft EIS/EIR indicates that public access to recreation trails through the project area would be restricted during construction of the project facilities (Chapter 3.0, Section 3.8, Recreation, pages 3-210, 3-212, and 3-229). Restricted access in the project area is appropriate and required to protect the health and safety of the general public from the various hazards (i.e., heavy construction equipment operations, blasting, and extensive earthwork) associated with construction of the Proposed Project. The total area (acres) closed to public access would vary by construction phase and activity.

At the time the Draft EIS/EIR was published (September 2001), it was undetermined which of the lead agencies would have responsibility for managing construction of the Proposed Project. Since publication of the Draft EIS/EIR, it has been determined that Reclamation would be responsible for overseeing and managing construction of the Proposed Project, including implementation of construction-related mitigation measures and environmental commitments. In response to comments received on the Draft EIS/EIR, Reclamation has developed additional specific language to describe the type, extent and location of anticipated public access restrictions that would be necessary during the construction of the Proposed Project to ensure public safety. Reclamation has indicated that the construction contractor would, to the extent feasible, provide public trail access through the project area. Active construction areas would be fenced and signs would be posted to indicate closed areas and areas open for public use. Permitted trail uses would remain as currently designated. Trail access information would be provided through the Public Outreach and Information Program of the Mitigation Plan. This update to the recreation impact analysis is included in the Final EIS/EIR in Chapter 3.0, Section 3.8, Recreation. This change does not alter the conclusions presented in the Draft EIS/EIR.

3.1.4 AUBURN DAM CONSTRUCTION BYPASS TUNNEL

The Auburn Dam construction bypass tunnel initially was constructed as part of the original work on the Auburn Dam Project and has remained in place even though dam construction was

halted in 1977 due to concerns over seismic safety. Tunnel safety has been an ongoing concern to Reclamation and was investigated in the 1996 Concept Plan (Reclamation 1996a) and again in the 1997 Value Planning Study (Reclamation 1997a).

Tunnel safety is an issue not limited to boaters. It is a threat to anyone who may enter the tunnel, purposely or otherwise, including people who may be wading, swimming, or fall into the water upstream of the tunnel inlet. At all river flows, the tunnel is too steep for a person to pull him/herself out of the water for the entire one-half mile length of the tunnel. At low flows, a person could be stuck in the tunnel for an extensive period of time. At high flows, the exit of the tunnel becomes submerged; a person in the tunnel would be under water for an unknown length of time before leaving the tunnel. Reclamation has anecdotal information that boaters have passed through the tunnel, including during winter months. It is extremely fortunate that there have been no documented fatalities associated with the tunnel, however, as use of the area increases, the risk of an injury or fatality rises.

Safety issues associated with the bypass tunnel do not compare to natural tunnel features. Even Tunnel Chute on the Middle Fork American River is very different than the Auburn Dam site. Tunnel Chute is a Class IV to V rapid in a Class IV section of the river and is primarily negotiated by the most skilled boaters or licensed guides. The restored river reach in the project area would be considered a Class I to easy III level of difficulty (low) and would attract less-skilled boaters. The Tunnel Chute features are only inundated at extreme flood flows when skilled people would not be boating. Additionally, Tunnel Chute is only about 100 feet long, whereas the bypass tunnel at the project site is more than 2,600 feet long. No where on the North or Middle forks of the American River is there a situation similar to the project area/Auburn Dam site where unskilled boaters could be exposed to one-half mile of not being able to exit the water; the dangers of unseen trees, boughs, or other debris in the tunnel posing the risk of trapping boaters or swimmers; or the possibility of entering the tunnel when the outlet is completely submerged. Under such conditions, a person caught in the tunnel may be underwater for an extended period of time.

Although some guidebooks may overlook the situation, as stated in Section 3.8.1.2 of the Draft EIS/EIR, the American River one-half mile upstream and one-half mile downstream of the bypass tunnel is officially closed to public water-based activities (CDPR Order #318-02-91). Therefore, there currently are no official boating opportunities recognized by the lead agencies or CDPR in this reach of the river. A reference to the safety hazard that the tunnel poses to boaters, as well as the fact that it is illegal to run is mentioned in *California Whitewater – A Guide to the Rivers* by Jim Cassady and Fryar Calhoun (1995). The lead agencies do not know why the diversion tunnel is not mentioned in other guidebooks that describe the area. The American Canoe Association's River Safety Reports analyzes fatal and near fatal accidents. Since the lead agencies are not aware of any such accidents, they would not expect any to be included in the reports.

Please also refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features, for additional information related to the bypass tunnel.

3.1.5 PROJECT AREA RIVER RESTORATION

The proposed design for the American River pump station, intake/diversion facilities, bypass tunnel closure, river channel restoration, and public river access features all have been undertaken with consideration that the Auburn Dam Project could at some time in the future be re-authorized by Congress. The Proposed Project restoration efforts, therefore, focus only on areas within the project site that would directly influence the function and reliability of the proposed water supply facilities or safety of the public river access features. As such, it is beyond the scope of this project to provide complete restoration of the entire Auburn Dam construction area.

The Draft EIS/EIR (Section 2.2.2.1, Major Features of the Proposed Project pages 2-21 and 2-22) describes the river channel restoration elements of the Proposed Project, including restoration of the currently dewatered river by excavation of deposited cofferdam debris to create, to the extent possible, a naturally functioning river system. The return of river flows to the historic riverbed would, over time, result in establishment of fish and aquatic resource and wildlife habitat thereby creating more favorable ecosystem conditions. The restored channel segment design would incorporate features to blend the project area segment with upstream and downstream reaches of the North Fork American River enhancing the existing degraded or "scarred" visual qualities of the area. Restoration of natural river functions, including growth of native vegetation species, is considered a long-range goal of the river restoration component. As stated in the Draft EIS/EIR, the river would be expected to scour pools and side channels and deposit finer sediments in localized backwater areas and overbank depressions. These areas eventually would be expected to provide suitable growing sites for willows, alders, and cottonwoods that occur in the canyon. It is assumed that vegetation would establish through natural seed recruitment as has been observed in certain areas of the project site.

Bank and slope erosion would be common for annual flows much less than the 100-year flood event, and passive restoration according to site potential would occur naturally once the disturbed areas within the project area stabilize in response to natural processes associated with channel formation and seasonal fluctuations in river levels. However, until the extent of floodplain inundation and other channel characteristics have been established, it would not be practical to implement a revegetation program because the benefits of these efforts may be lost during high water events. Reclamation, through implementation of the environmental commitments included in the Mitigation Plan (Appendix D to the Final EIS/EIR), would monitor the area for natural vegetation growth and habitat establishment to determine whether adaptive resource management actions would be appropriate or needed in the project study area.

3.1.6 PUBLIC RIVER ACCESS FEATURES

A large number of comments addressed the potential impacts associated with development of the Proposed Project and use of the of the public river access features. Although many of the commenters supported the water supply elements of the project, they questioned the need for the public river access features at this location. Other commenters requested clarification regarding the description of the facilities, including management, operation and funding information. Residents of the neighborhoods located along Maidu Drive expressed concern

regarding the potential effects upon the area due to: (1) increased traffic resulting in decreased level of service and increased traffic congestion along Maidu Drive, particularly during peak school/worker commute hours; (2) pedestrian safety at the intersection of Maidu Drive/Burlin Way, particularly school children arriving or departing Skyridge Elementary School; (3) spillover traffic onto adjoining neighborhood streets; (4) vehicular air pollutant emissions associated with project construction and public use of the area; (5) noise levels in Maidu Drive neighborhoods due to construction, traffic, and public use in the canyon; (6) litter along Maidu Drive; and (7) illegal and inappropriate activities occurring at the river and within the adjacent neighborhoods.

Several commenters suggested the use of Pacific Avenue as an alternate project access route to Maidu Drive. Master Response 3.1.10, Project Access, provides an explanation of the problems with this suggestion and the reasons for maintaining Maidu Drive as the project access route.

Many commenters also expressed concern over the potential for increased public use in the area to increase the fire hazard in the project area and risks to adjacent neighborhoods. These issues are addressed in Master Response 3.1.9, Fire Management.

Overview

This Master Response provides background on the development of the Proposed Project, explaining the relationship of certain project elements, including closure of the bypass tunnel and river channel restoration that led to Reclamation's incorporation of the public river access features as an element of the proposal. It also describes the complex land ownership pattern, State of California interests and the recreation area management framework, and lead agency project objectives and responsibilities which influenced design of the various project components.

Background

Reclamation, on behalf of the United States, owns the lands within the North Fork American River Canyon that encompass the Auburn Dam construction area. PCWA has state water rights, obtained through the State Water Resources Control Board (SWRCB), to divert its Middle Fork Project (MFP) water entitlements from the North Fork American River near Auburn. The existing seasonal pump station and the proposed pump station project alternative sites all exist upon Reclamation-owned lands, within the area acquired by Reclamation for the Auburn Dam Project.

CDPR, through a management agreement with Reclamation, manages the public use of the Reclamation lands in the Auburn SRA. The Auburn SRA, designated as a SRA in 1979, includes 41,000 acres of lands withdrawn for development of the proposed Auburn Dam Project (CDPR and Reclamation 1992). The unique character of the landscape and the nearly 50 miles of river canyons within the Auburn SRA offer a multitude of cultural, natural, and scenic resources providing diverse recreational opportunities and serving as a major recreation resource for the region.

The proposed American River Pump Station Project features have been designed in consideration of this land ownership pattern, the recreation area management framework, and PCWA's water rights.

As described in the Draft EIS/EIR, PCWA's primary project objective is to obtain a reliable, year-round water supply to meet increasing water demands within its customer service area. Reclamation proposes to satisfy its obligations to PCWA under the Land Purchase Agreement entered into by both parties associated with Reclamation's acquisition of land within the North Fork American River Canyon (see Chapter 1.0 of the Draft EIS/EIR for additional detail). The study and preliminary design of alternative pump station configurations to meet the lead agencies' objectives began in 1995. Prior to and since that time (1992 and 1996) there were unsuccessful Congressional attempts to modify and reinitiate the Auburn Dam Project. In 1997, following publication of the Value Planning Study for the American River Pump Station Project (Reclamation 1997a), it appeared that critical Congressional support for a pump station on the North Fork American River would be lost if it included blocking the Auburn Dam construction bypass tunnel or restoring the river channel, since the Auburn Dam remains a federally authorized project. In light of this situation, Reclamation and PCWA, until recently, concentrated on designing a pump station that would not require tunnel closure (the Upstream Diversion Alternative).

In September 1999, the California State Attorney General's Office sent the Secretary of the Interior a letter indicating that, in the Attorney General's view, the Auburn Dam construction bypass tunnel diversion was in violation of the 1992 Central Valley Project Improvement Act (CVPIA), the Reclamation Act of 1902, and California's Public Trust Doctrine. In support of these contentions, the Attorney General's office noted that the river has been diverted with no present or foreseeable beneficial use, to the detriment of the values of the natural resources of the North Fork American River. The claimed legal obligations outlined in the letter provided the impetus and guidance that determined how the American River Pump Station Project evolved. From that point forward, the design included tunnel closure, restoring the river to its channel and allowing pre-dam construction beneficial uses of the river as primary elements of the Proposed Project (Mid-Channel Diversion Alternative).

Closure of the bypass tunnel would remove the existing hazard to river use; CDPR and Reclamation would no longer have need to prohibit public use of this section of the river. Once restored, the river would be expected to be characterized within the Class I to Class III whitewater categories (easy to moderately difficult rating). Because the river conditions created by restoring the river channel through the project area would be appealing to boaters with a wide range of skills, the State of California Resources Agency expressed concern regarding potential public health and safety issues related to such uses. Specific concerns included the current lack of suitable take-out points along the river between the confluence of the North Fork and Middle Fork (upstream) and Rattlesnake Bar at Folsom Reservoir (downstream), a nine-mile stretch. Under certain flow conditions, the upstream extent of Folsom Reservoir creates a two- to five-mile stretch of flat water that would be difficult to paddle, particularly for less experienced boaters. PCWA has arranged with Pacific Gas and Electric Company (PG&E) to make water releases from the Oxbow Powerhouse/Ralston Afterbay that support whitewater boating activities in the Middle Fork American River during summer months. Morning releases

reach the North/Middle Fork confluence area by mid- to late afternoon. Without adequate locations to exit the river, boaters could become stranded late in the day or be left without a reasonably accessible river take-out.

Reclamation and the California Resources Agency entered into a MOA (Appendix A of the Draft EIS/EIR) to address these concerns. Reclamation and PCWA coordinated with representatives from the State Attorney General's Office, CDPR and California Department of Fish and Game (CDFG) to develop a pump station project alternative that would incorporate the additional project objectives related to closing the bypass tunnel and returning river flow to the North Fork American River channel through the project site.

As stated in the MOA, Exhibit A, the parties believe that an increase in recreational navigation and use of the river in the project area would be a reasonably foreseeable result of the Proposed Project's closure of the bypass tunnel and rewatering of the North Fork American River, and further believe that an appropriate regulated public access to the river to address public health and safety, resource protection, and emergency purposes would be warranted. The MOA stipulates that the public access features would be rustic with minimal site improvements as needed only to serve the stated access and management objectives. The proposed public river access features were developed by CDPR, with input from the lead agencies and CDFG.

Consistent with the terms of the MOA, CDPR provided a preliminary concept for the public river access features to be developed as part of the American River Pump Station Project Mid-Channel Diversion Alternative (Proposed Project) as described in the Draft EIS/EIR (Chapter 2.0, Description of Project Alternatives, Section 2.2.2 Major Features of the Mid-Channel Alternative – Proposed Project). The preliminary features included a gated entrance and ranger-staffed booth, access roadway improvements, parking areas, pedestrian/equestrian trail improvements and sanitation facilities (trash containers and restrooms). Also consistent with the Auburn SRA Interim Resources Management Plan (IRMP) (CDPR and Reclamation 1992), the proposed features would involve minimal construction or modifications at the site and would be of "rustic" design. Additionally, these facilities would be totally within the existing Auburn SRA and would not constitute or lead to expansion of the existing boundaries.

CDPR would remain responsible for the management of recreation activities within the Auburn SRA. Reclamation and CDPR would update or modify their management agreement regarding these responsibilities.

In response to concerns expressed at public meetings, stakeholder information sessions, and in written comment letters received on the Draft EIS/EIR, the lead agencies and CDPR have developed additional specific detail regarding the design and management of the public river access facilities. Additional information has been obtained from City of Auburn and Placer and El Dorado County public agencies with jurisdiction over resources and activities in the project vicinity. Agencies contacted include: City of Auburn Police, Fire, Public Works and Planning Departments; Placer County Planning and Public Works Departments; Placer County Sheriff; El Dorado County Planning Department; Auburn Recreation District; California Department of Forestry and Fire Protection (CDFFP); and Georgetown Divide Recreation Department. This information is provided below and is incorporated into the Final EIS/EIR, in Chapter 2.0,

Section 2.2.2.1 (Major Features of the Proposed Project) and Chapter 3.0, Section 3.8.1.2 (Project Area Setting) of the Final EIS/EIR. These changes do not alter the conclusions presented in the Draft EIS/EIR.

Existing and Anticipated Recreational Activity in the Project Area

Recreation use in the American River Pump Station Project area is currently limited to trail uses (hiking, mountain biking and horseback riding) within the bounds of the Auburn Dam construction area. Boating and swimming are prohibited one-half mile upstream of the bypass tunnel inlet and one-half mile downstream of the bypass tunnel outlet. There currently are no provisions for vehicular access to the river in this area. To obtain an estimate of trail use in the Project area, CDPR installed a trail counter along the Auburn-to-Cool route in November and December 2001. The count over this two-month period totaled 589 trail users. Based upon seasonal use patterns anticipated in the area, CDPR estimates that this use would equate to a range of 2,500 to 3,500 trail users in this area annually. As shown in **Table 3-1**, this level of use is substantially less than estimated for other nearby locations in the Auburn SRA. Trail use estimates for Foresthill Divide Loop, Quarry, and Cool/Olmstead Loop trails are based on vehicle counts at trailhead parking areas and other recreation use factors to account for number of persons per vehicle and other considerations (J. Micheaels, pers. comm. 2002).

Table 3-1
Estimated Trail Use in the Auburn SRA

Trail	Estimated Use Counts (Annual Users)
Auburn-to-Cool Trail	2,500 - 3,500 [a]
Foresthill Divide Loop Trail	13,680 [b]
Quarry Trail	12,717 [b]
Cool/Olmstead Loop Trail	20,265 [b]

[a] Based on trail user counts, November to December 2001.
[b] Based on vehicle counts at trailhead parking areas and factors to account for average number of persons per vehicle.

Return of the North Fork flows to the dewatered river channel would result in increased boating opportunities below the Middle Fork/North Fork confluence. The anticipated Class I to easy Class III character of the river reach would be suitable for use by individuals with a wide range of boating skills. The area would be open to non-motorized river uses, including canoes, kayaks, and rafts. Motorized boating currently is prohibited by posted order on the rivers of the Auburn SRA (with the exception of Lake Clementine). The posted order would apply to the project area river section. No commercial river use is proposed as part of this project; nor is any being considered by CDPR at this time. Any future consideration of commercial river activities would require separate feasibility assessment, planning and environmental review and analysis.

Currently, there are few locations between the Middle/North Fork American River confluence and Rattlesnake Bar that would permit safe river access. Additionally, based on Folsom Reservoir data for the past several decades, roughly 70 percent of the time, Folsom Reservoir elevation during the months of April through September varies between 400 and 465 feet. These reservoir elevations result in a distance of approximately two to five miles of flat water between the bypass tunnel outlet and Rattlesnake Bar. The release of water at Ralston Afterbay

provides flows suitable for afternoon boating. Therefore, limiting river access to the confluence and Rattlesnake Bar with no other adequate means of exiting the river between these two locations could increase the likelihood that boaters become stranded or have to complete their river trips after dark. The Proposed Project facilities would minimize the potential for these indirect project effects by providing river access prior to Rattlesnake Bar, thereby providing CDPR with safe and effective means of accommodating and managing river use. Additionally, the provision of river access at the project site reduces the number of non-motorized boaters who would travel to Folsom Reservoir, where the mix with motorized boats poses a potential safety hazard.

River use in the project area would be limited by seasonal river flows. Spring use would vary according to watershed conditions resulting in sufficient runoff. Summer flows would be tied to releases from the Oxbow Powerhouse at Ralston Afterbay. During this time period, river flows vary between a minimum flow of up to 300 cubic feet per second (cfs) and the typical summer release flow of 1,000 to 1,500 cfs. The powerhouse releases occur in the morning at Oxbow/Ralston Afterbay and reach the confluence area by mid to late afternoon. Therefore, river users would have a relatively short window of opportunity for boating in the late afternoon during summer months.

In addition to boaters, the public river vehicle access routes likely would be used by trail users and other visitors. Trail users likely attracted to the area would be those who wish to hike or ride from Auburn SRA along the Pioneer Express Trail to Rattlesnake Bar in the Folsom Lake SRA. Other visitor uses, including fishing or swimming, also may occur in the project area. These types of uses, however, are difficult to estimate. Because the parking area would be one-half to three-quarter-mile from the river, many individuals would not find this area attractive compared to other areas along the river that provide easier and closer river access points.

Proposed Public River Access Features

In response to public comments received on the Draft EIS/EIR, the lead agencies and CDPR have modified the public river access features element of the Proposed Project. The primary change is the reduction in the total number of parking spaces through elimination of the 20-space parking lot formerly proposed to be located near the river, just upstream and across from the existing bypass tunnel outlet. Instead, the Proposed Project now includes development only of a vehicular turnaround area for loading and unloading and three spaces to be designated for handicap-accessible parking that meet American Disabilities Act (ADA) standards, including one van-sized space.

CDPR also plans to improve the existing parking area located outside of the gate at the Maidu Drive entrance to the project area in order to further minimize the potential for recreation-related parking along Maidu Drive. These activities would be completed as part of the entrance booth development and would serve to reduce potential project-related roadside parking impacts.

Major Facilities - Public River Access Features

CDPR would be responsible for the operation and maintenance of the Proposed Project river access features. The existing agreement between Reclamation and CDPR would be updated to reflect CDPR's responsibilities for management of the area, including patrolling and enforcement activities.

The major features associated with this element of the Proposed Project include: an entrance gate and booth at the Maidu Drive intersection with the Auburn Dam construction access road; roadway and trail improvements; a 50-space vehicle parking area, 3 handicap-accessible spaces and riverside turnaround provisions; and sanitation facilities (trash containers and restrooms). These features are depicted on **Figure 3-1** and described in detail in the following sections.

Entrance Gate and Booth - Hours of Operation

As indicated in the Draft EIS/EIR, the entrance to the proposed river access area would be located along Maidu Drive at the existing access road leading to the Auburn Dam/American River Pump Station Project area. The entrance to the area would include a booth, staffed by seasonal CDPR employees. The entrance would be gated and open only during designated hours of operation. CDPR has indicated that hours of operation would correspond to the anticipated boating-related use of the project area and availability of funding to staff the entrance station. It is a possibility that initially this access may be open only seasonally (spring and summer). The summer hours would be based on the availability of river flows suitable for boating, corresponding to PG&E's hydropower releases from the Oxbow Powerhouse at Ralston Afterbay. The spring hours of operation may be greater than during summer as the watershed's seasonal runoff contribution to river flow would result in greater boating opportunity throughout the day. Vehicular access to the project area would be restricted at all other times (the entrance gate would be locked).

Vehicular access to the project area would be limited by the capacity of the proposed parking area (see Parking). CDPR employees (park aids) and volunteers would monitor vehicle access, turnaround use and parking lot capacity. During peak use periods, CDPR park rangers would patrol the area twice daily. CDPR also has indicated that the Auburn SRA Canyon Keepers would be requested to assist in patrolling and monitoring project area use.

Parking

The Draft EIS/EIR described the preliminary parking lot design to include two lots: 50 spaces at the former Auburn Dam concrete batch plant area above Oregon Bar and 20 spaces along the western river bank across the river channel from the bypass tunnel outlet, for a total capacity of 70 vehicles.

In response to concerns expressed in public comment letters on the Draft EIS/EIR, the lead agencies and CDPR have revised the proposed parking lot configuration and reduced the total number of parking spaces to 53. The proposed 50-space parking area at the former Auburn



Figure 3-1 Public River Access Facilities at Auburn Dam Site and Oregon Bar

Dam concrete batch plant is retained as proposed in the Draft EIS/EIR. The 20-space parking area was redesigned and would be limited to 3 handicap-accessible spaces with a vehicle turnaround for loading and unloading. The handicap-accessible spaces and turnaround area would be located on the western riverbank, across the river channel and upstream from the bypass tunnel inlet. One of the three spaces would be sized to accommodate van parking. These provisions satisfy the requirements of the ADA.

The area at the former concrete batch plant site is already a large gravel flat; an area sufficient for 50 vehicles would be graded and large rocks or other barriers would be installed around the perimeter to prevent vehicles from traveling outside of designated parking areas. A fuel break would be developed around the parking area as a fire prevention measure. The river-side parking and turnaround area across from the existing bypass tunnel outlet would be created as part of the river channel excavation and construction. A flat area would be created and large boulders or other features would be strategically placed to clearly designate the boundaries and to prevent off-road travel.

No overnight recreational vehicle use, nighttime parking or camping would be permitted in the parking lots or project area. Cars left unattended would be ticketed and then towed from the site if not removed or claimed.

If needed, a sign indicating that the parking areas are at capacity would be placed at the Maidu Drive/Auburn-Folsom Road intersection to minimize the number of vehicles that approach the facilities and then must immediately turnaround. Parking enforcement also would include prohibiting road-side parking along project area roads or trails and a sweep of the parking areas prior to gate closure to determine whether all cars had exited the area.

Currently, many trail users accessing the Auburn-to-Cool Trail and other roads and trails in the project area, park at the gate at the end of Maidu Drive. As part of the entrance gate development, CDPR would provide a small parking area outside of the gate/entrance booth to provide limited parking for trail users who want to access the trails when the river access area is closed. This provision would better accommodate existing trail use parking and minimize the potential for roadside parking along the lower portion of Maidu Drive or other neighborhood streets.

Some commenters suggested that the parking provisions be removed from the Proposed Project, or that parking provisions be made at the top of the canyon only, with near river turnaround areas for equipment unloading/loading. These suggestions are not acceptable because providing a limited turnaround area could result in access difficulty, potentially leading to access road or trail use conflicts if vehicles were forced to line-up and take turns at the turnaround area, with no closer option than the top of the canyon. The distance, approximately 1-1/2 to 2 miles steep terrain and change in elevation (about 850 feet) between the top of the canyon and river do not make this a reasonable access option for river users. Further, this option also would not provide access for disabled recreationists.

Access Roads and Trails

The proposed improvements to project area access roads necessary to provide public river access are described in the Draft EIS/EIR. In addition to the road improvements, vegetation would be reduced and removed from the adjacent areas as part of the efforts to minimize fire potential in the project area.

Vehicle access would be limited to the batch plant parking area (see Parking) and the access routes described below. Off-road vehicle use would be prohibited. Spur roads along the primary access route would be blocked with barriers to prevent off-road vehicle travel and keep vehicles on the main access road. Large rock barriers, guardrail, posts and other barriers would be placed along this roadway as needed to prevent vehicles from driving off road. Additionally, the park rangers would enforce roadway speed limits, to be posted at 15 to 20 miles per hour through the project area. Drivers found speeding or in violation of the parking rules would be ticketed.

The existing road from the batch plant site to the river near the tunnel outlet would be improved as needed for access to the riverside turnaround and handicap-accessible spaces. The existing dirt road from the batch plant parking area to Oregon Bar would be improved as well. As described in the Draft EIS/EIR, a vehicle turnaround would be created just east of the creek that empties into the North Fork at Oregon Bar. This existing dirt road is currently the route of the Pioneer Express equestrian/pedestrian trail. This section is also called the Cardiac Hill Bypass Trail. To minimize potential trail and road user conflicts, a separate single-tack equestrian/ pedestrian trail would be constructed from the turnaround near Oregon Bar to the batch plant flat. The distance from the river at Oregon Bar to the turnaround is approximately 500 feet. The section of new trail, from the turnaround at Cardiac Hill Bypass to the batch plant parking area, would be approximately 1,600 feet, or one-third mile. This trail would be available to river users to access vehicles parked at the batch plant.

Boater and other river users using the turnaround areas would be able to drop off and pick up equipment at these locations, but would need to park at the batch plant parking area.

Public Health and Safety Provisions

The Draft EIS/EIR describes the provision of sanitary facilities in the project area. These would include animal-proof trash containers and restrooms. At a minimum, trash containers would be placed at the entrance gate, at the batch plant parking area, and at both turnaround sites. Restrooms would be located at each turnaround and at the batch plant parking area. The trash containers and restrooms would be maintained regularly to reduce litter.

Management - Public River Access Feature

Management of the public river access features would include enforcement of rules, regulations, and posted orders to provide a safe and enjoyable experience for all recreationists as well as to minimize potential impacts to adjacent residential areas. Such activities include, but are not limited to, the following:

- Limited hours of operation
- Prohibition of alcohol
- Prohibition of open fires
- No overnight camping/parking
- Enforcement of parking, speed limits, noise levels and litter regulations

Discussion of Maidu Drive Neighborhood Concerns

Maidu Drive neighborhood concerns related to traffic, air quality, noise, litter, and public safety topics are discussed in the following sections. Please refer to Master Response 3.1.9, Fire Management, for a discussion of issues related to potential fire hazards in the study area and to Master Response 3.1.10, Project Access, for an explanation regarding the use of Maidu Drive as the primary access route for the Proposed Project.

Traffic

One of the primary concerns raised by Maidu Drive neighborhood residents was the potential for increased construction and project-related traffic to impact roadway conditions, including safety of school children and other pedestrians. Traffic counts for Maidu Drive were not available at the time the Draft EIS/EIR was prepared, however, since that time, the City of Auburn collected traffic count data for Maidu Drive. Additionally, the lead agencies retained a professional traffic engineer to conduct a supplemental study of potential project-related traffic effects upon Maidu Drive, with focus upon the Maidu Drive/Burlin Way intersection. The findings of the Traffic Study (Anderson 2002) are described in this Master Response and incorporated into the Final EIS/EIR, Section 3.14, Transportation and Circulation. This information does not alter the conclusions presented in the Draft EIS/EIR.

Description of Maidu Drive and Results of Traffic Study

Reclamation built Maidu Drive in the early 1960s to serve as a construction haul and access route for the Auburn Dam Project. As such, Maidu Drive was built to accommodate heavy loads and high capacity. Within the City of Auburn, Maid Drive serves as a collector road that connects to and receives traffic from neighborhood streets within the subdivisions along Maidu Drive. Maidu Drive is configured with one lane of traffic in each direction; each lane is 12-1/2 feet wide. The roadway shoulders are five feet wide; no parking is permitted along the shoulder. By comparison, other newer two-lane neighborhood streets typically have nine-foot wide lanes with eight-foot wide shoulders to accommodate streetside parking that commonly occurs in front of residences. Such roads also typically have curbs, gutters and sidewalks. There are no homes fronting to Maidu Drive along the segment from the Auburn-Folsom Road intersection with Maidu Drive to the Proposed Project entrance area.

The focus of the Traffic Study was to evaluate the potential for the Proposed Project to result in a decrease in the level of service (LOS) at the Maidu Drive/Burlin Way intersection. The evaluation used updated average daily traffic (ADT) counts provided by the City of Auburn (December 2001/January 2002) and counts made during the conduct of the study (February 2002). Additionally, the study obtained a count of pedestrian activity at the Maidu Drive/Burlin

Way intersection and evaluated that use against California Department of Transportation (CALTRANS) Traffic Manual standards to determine the need for school pedestrian crossing improvements. This assessment is discussed following the traffic analysis, under Skyridge Elementary School.

City of Auburn ADT counts for Maidu Drive are listed below, by roadway segment.

East of Falcons Point Drive	297 ADT
Falcons Point Drive west to Burlin Way	457 ADT
Burlin Way to Shirland Tract Road	3,098 ADT

These counts clearly indicate the relationship of housing location to roadway use.

The supplemental Traffic Study collected additional traffic data by monitoring morning, afternoon and evening peak hour travel along Maidu Drive, with an emphasis on the Maidu Drive/Burlin Way intersection. The study found that the morning peak hour (i.e., between 7:15 a.m. and 8:15 a.m.) has the highest traffic count, with a total of 641 vehicles passing through the Maidu Drive/Burlin Way intersection. Using this data, in combination with the City of Auburn traffic counts, the Traffic Study evaluates existing LOS conditions and determines the potential impacts upon traffic congestion (LOS) and pedestrian safety associated with construction and operation of the Proposed Project. Additionally, the Traffic Study evaluates future cumulative conditions based on build-out of planned development projects in the Maidu Drive area.

Level of Service Analysis

The quality of traffic flow and its relationship to adopted standards is evaluated based on level of service. LOS is a qualitative measure of traffic operations whereby a letter grade, A through F, is assigned to a roadway segment or intersection. LOS A is indicative of good traffic flow with little or no delay, while LOS F is indicative of "at-capacity" conditions with significant congestion and delay. The City of Auburn has established LOS D as the minimum acceptable LOS beyond which mitigation measures would be warranted to reduce the level of a project's impact upon LOS. The analysis of the Proposed Project determined LOS using the procedures of the 2000 Highway Capacity Manual.

The existing levels of service at the Maidu Drive/Burlin Way intersection for the peak travel hours (morning, afternoon and evening) and peak 15-minute intervals are shown in **Table 3-2**.

Table 3-2
Existing Condition Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer) - Overall Hour	14.8	B	10.0	B	7.6	A
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.

As indicated by these results, the greatest delay occurs during the morning peak hour reflecting commuter and school-related travel. Overall, LOS B is maintained, although LOS drops to C during the peak 15-minute period when school arrivals occur (7:15 a.m. to 8:00 a.m.). Afternoon and evening hours are rated LOS B and LOS A, respectively, with the delay being several seconds less than in the morning peak hour.

To evaluate the potential impacts of the Proposed Project upon the Maidu Drive/Burlin Way LOS, anticipated levels of construction and operations traffic were added to the existing condition. The study focuses on the critical time periods when LOS is influenced by commuter and school-related travel (morning, afternoon, and evening peak hours). These conditions occur on weekdays during the school year. Weekend and summer travel on Maidu Drive would be expected to be less than during these critical "peak hour" timeframes, therefore, specific evaluation of weekend or summer days was not considered necessary. The evaluation of Proposed Project impacts, therefore, can be considered to represent the peak or "worst-case" conditions that could be encountered. Overall, traffic levels would be less than indicated by the evaluation because (1) construction-related travel would not occur during peak commuter or school-related travel periods; and (2) peak public river access travel generally would occur on weekends and during summer months, when school is not in session.

Proposed Project Construction Traffic

As described in the Draft EIS/EIR, on average, construction of the Proposed Project would result in 30 to 35 construction workers at the project site daily, with up to 50 construction workers on site during peak construction. Using the peak condition, up to 100 daily trips would result from travel by these workers. Additionally, there would be a maximum of 23 daily supply deliveries to the site during peak construction, resulting in up to 46 additional trips to the site. Combined, the sum of construction worker and delivery trips could total up to 146 new trips per day, during peak construction. This represents up to 116 more trips than under the existing condition (30 daily trips are made during the two to four-week installation and removal activities for the seasonal pump station each year). On average, the total number of daily trips associated with Proposed Project construction and the increase relative to existing conditions would be less. These impacts all would be of relatively short-term duration, and would no longer occur after construction activities are completed.

While Maidu Drive itself has the capacity to accommodate this construction-related traffic volume increase, the local impact to the Maidu Drive/Burlin Way intersection will be linked to the actual hours of travel to and from the project site. Trips generated during the peak 15 minutes before school begins have the potential to increase delays and contribute to the perception of safety problems.

The Draft EIS/EIR indicates that hours of certain construction activities for the Proposed Project could extend from 7:00 a.m. to 6:00 p.m. (based on noise-level restrictions). Assuming these hours represent the typical construction work day, construction contractor personnel work trips would be outside of the peak a.m. and p.m. travel periods.

The Traffic Study evaluated two construction trip scenarios: (1) all construction personnel arrive and pass through the Maidu Drive/Burlin Way intersection within the morning peak hour,

with one-quarter of these trips occurring during the critical 15 minutes before school; and (2) a worst-case representation where all construction arrival trips pass through the Maidu Drive/Burlin Way intersection within the critical 15 minutes before school. Both analysis scenarios also assumed that deliveries of project construction supplies would be spread uniformly throughout the construction day, with four to eight trips occurring during any one hour. The distribution of peak construction-related trips is presented in **Table 3-3**.

Table 3-3
Project Construction Trip Generation Assumptions

	Time Period						
		a.m. Peak Hour		Afternoon		p.m. Peak Hour	
	Daily [a]	In	Out	In	Out	In	Out
Anticipated Construction Trips	146	54	4	4	4	4	54

[a] Number of trips represents peak construction activity; on average, the total number of daily trips would be less than evaluated.

The results of the LOS evaluations for the critical 15 minutes before school for these two scenarios are shown in **Table 3-4**.

Table 3-4
Proposed Project - Construction Traffic LOS Evaluation

	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
Maidu Drive Condition	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.
Existing (Non-summer) Plus Proposed Project Construction Traffic	32.9	D	11.3	B	7.9	A
Existing (Non-summer) Plus "Worst Case" Proposed Project Construction Traffic [b]	92.0	F	n.a.	n.a.	8.9	A

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] "Worst Case" would include all overlapping traffic including peak river access use in combination with commuter and school-related traffic.

Under the first scenario, the addition of up to one-quarter of the construction trips during the critical 15 minutes before school begins could result in an additional delay of 11.4 seconds and a reduction of LOS from C to D. Based on application of the City of Auburn LOS standard, this change in LOS would not be considered a significant impact, and would not warrant implementation of mitigation measures. The "worst-case," or second scenario, where all construction trips arrive and pass through the Maidu Drive/Burlin Way intersection during the critical 15 minutes before school, would result in significant traffic impacts. The average delay would increase by up to 70.5 seconds (compared to existing condition) and result in LOS F conditions. This change from the existing condition would represent a significant impact requiring mitigation. The results show that afternoon or evening Proposed Project construction-related trips would not affect existing LOS ratings.

The Proposed Project construction-related travel conditions would result in lesser impacts than either of the two scenarios represented for the following reasons: (1) the majority of the

construction contractor personnel would arrive at the project site prior to the 7:00 a.m. start of the work day; and (2) on average, only 30 to 35 construction personnel would travel to the project site, not 50. Additionally, Reclamation will require the construction contractor to limit employee trips and supply deliveries along Maidu Drive during the morning hours before school. Reclamation will require the construction contractor to prepare a Construction Traffic Management Plan including the following element:

- Require construction personnel and supply deliveries to limit use of Maidu Drive during the peak school-related travel times, including: morning school drop-off (approximately 7:15 a.m. to 8:15 a.m.) and afternoon school pick-up (2:30 p.m. to 3:30 p.m.) throughout the school year.

Overall, the Proposed Project construction-related traffic would not result in significant impacts upon Maidu Drive traffic conditions.

Proposed Project Operation and Public River Access Traffic

As reported in the Draft EIS/EIR, PCWA anticipates that operations and maintenance personnel will make up to four visits (eight trips) to the project site each day. In addition to these trips, it is estimated that use of the public river access areas would generate up to 206 trips to the project area on a peak day. Combined, the total number of Proposed Project trips would be 214. This estimate is revised from the Draft EIS/EIR assumption of 210 trips based on the reduction in number of spaces at the riverside parking area, described earlier, and on the use of a higher rate of turnover at the 50-car parking lot (2 cars per space on a peak day based on anticipated hours of operation). The trip generation assumptions are shown in **Table 3-5.**

Table 3-5
Project Operation Trip Generation Assumptions

Condition	Time Period						
	Daily	a.m. Peak Hour		Afternoon		p.m. Peak Hour	
		In	Out	In	Out	In	Out
Anticipated Project Operation Trips	218 [a]	12	12	12	12	12	12

[a] The Traffic Study was completed before the lead agencies revised project trip counts, therefore, the assumption was 218 trips; based on the revised count of 214, however, the evaluation of 218 trips remains conservative.

Peak use of the river access features is anticipated to occur infrequently, typically on weekends or holidays during summer months. Additionally, based on the anticipated hours when vehicular access to the project site would be permitted, river access-related travel would not coincide with peak morning hour commuter and school-related trips. The Traffic Study evaluation of Proposed Project impacts on traffic and LOS at the Maidu Drive/Burlin Way intersection therefore also may be considered a "worst-case" assessment because it assumes up to 24 trips would occur during the peak 15 minutes before school during the morning peak hour. The results of the LOS evaluation are shown in **Table 3-6**.

Table 3-6
Proposed Project Operations Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B	n.a.	n.a.
Existing Plus Project Operations and Public River Access Traffic [b]	25.5	D	11.1	B	7.9	A

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] Public river access traffic projected during periods of peak use under the maximum use conditions.

As indicated by the analysis, even if Proposed Project operation and river access trips were to occur during the morning peak 15 minutes before school, the change in average delay and LOS would represent a less-than-significant impact, according to City of Auburn standards. No mitigation would be required. The afternoon and evening peak hour delay and LOS conditions would not be adversely affected. Further, if the 24 trips assumed to occur in the morning peak hour were shifted to the afternoon and evening peak hours, the LOS likely would not change. Even if it did, however, it would not drop below the City's standard of LOS D and would not require mitigation. Overall, the Proposed Project traffic impacts would be less than represented by these results because (1) typical use of the river access area would generate less traffic than assumed for peak holiday and summer weekend use; (2) peak use periods would not coincide with commuter and school-related trips; and (3) river access trips would not occur during the morning peak hour. Additionally, the lead agencies will pay a traffic mitigation fee to the City of Auburn, as required for other development projects that generate additional traffic on City streets.

Cumulative Conditions

Near-term and future residential development in the study area would increase the volume of traffic on Maidu Drive and through the Maidu Drive/Burlin Way intersection. Future cumulative background traffic volumes at the study intersection were developed based on a list of approved/pending projects identified by the City of Auburn.

The City is currently considering the Canyon Rim Estates Subdivision Project in the area south of Maidu Drive. This 23-unit project would have access via Burlin Way and would generate about 17 a.m. and 23 p.m. peak hour trips. The traffic study prepared for the Canyon Rim Project identified other in-fill development that would occur at Shirland Tract Road. Some of the trips generated by that development would use the Maidu Drive/Burlin Way intersection to reach Skyridge Elementary School.

The cumulative level of service analysis assumes completion of the Proposed Project and peak use of the public river access facilities plus development of residential subdivisions in the Maidu/Skyridge area. This evaluation represents a "worst case" cumulative condition because it assumes concurrent use of the intersection by commuters, parents with elementary school students and recreationists. However, the public river access facilities are unlikely to be fully utilized except during the summer or on weekends, generally outside of peak commuter or school travel hours. Therefore, for this condition, the actual future roadway LOS impact would be less than

represented by this evaluation. The results of the cumulative LOS analysis are shown in **Table 3-7**.

Table 3-7
Cumulative Condition Traffic LOS Evaluation

Maidu Drive Condition	a.m. Peak Hour [a]		Afternoon [a]		p.m. Peak Hour	
	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS	Average Delay (Seconds)	LOS
Existing (Non-summer)	21.5	C	10.6	B		
Cumulative Background Conditions	39.0	E	11.7	B	7.7	A
Cumulative Plus Proposed Project Traffic [b]	42.7	E	12.3	B	8.0	A
Cumulative Plus Proposed Project Traffic - Overall Hour [b]	18.4	C	n.a		n.a.	n.a.

[a] Conditions occurring during the peak 15 minutes before or after school, except where "overall hour" is noted.
[b] "Worst Case" assumes all traffic trips occur concurrently including peak river access use and project operations trips in combination with commuter and school-related traffic arising from the future proposed subdivisions.

Cumulative conditions without the Proposed Project would result in increased delay and lower LOS ratings during the morning peak 15 minutes before school. LOS potentially would drop to a rating of E with an increase in average delay of 17.5 seconds. Future development projects within the city are required to pay traffic mitigation fees applied toward the implementation of traffic safety and control measures to minimize effects upon LOS. In fact, the city is planning to install a traffic signal at the intersection of Auburn-Folsom Road/Maidu Drive later this year. Operation of this signal potentially would result in a better LOS than estimated by this analysis for future conditions.

The addition of Proposed Project traffic to the cumulative background condition increases the average delay during the morning peak 15 minutes before school by up to 3.7 seconds, but does not cause the estimated LOS to worsen. Because it is unlikely for the cumulative trips to be concentrated solely within this 15-minute period, consideration of the cumulative "overall hour" LOS also is presented. The overall hour average delay increases by up to 3.6 seconds and the LOS rating would change from the existing LOS B to LOS C. This overall rating would not be considered a significant impact, based on City of Auburn standards.

Additionally, because the river access area would not be open for vehicular access during this hour (7:15 a.m. to 8:15 a.m.), the potential contribution of the Proposed Project to the cumulative condition would be less than represented by these results. The Proposed Project's incremental contribution to these conditions would not be considered cumulatively considerable.

Afternoon and evening periods would not be adversely affected under the cumulative condition.

Spillover Traffic Onto Adjoining Neighborhood Streets

Commenters expressed concern that there would be an increase in traffic on neighborhood side streets such as Riverview Drive, Falcons Point, Sacramento Street, and Snowy Owl Way as a result of the increased traffic associated with public access to the area.

The construction contractor and PCWA employees would not use these roads; however, the possibility of additional trips along these roads is recognized, and reference to these occurrences is added to the Final EIS/EIR. The addition of these trips to these roads, which currently have low traffic volumes, would not be considered a significant impact. Additionally, due to the distance from the river and proposed parking areas, it is highly unlikely that river users would choose to park their vehicles along these roads and walk the distance (over 1/2 mile and steep terrain) to the public river use areas.

Mitigation Measures

In addition to the Construction Management Traffic Plan, the Proposed Project would include payment of mitigation fees commensurate with a subdivision that would generate the same number of trips (approximately 20 residential units). These fees would be used to implement future traffic safety controls, as needed. Even if the project's incremental contribution to cumulative conditions were "cumulatively considerable," this "fair share" contribution would be sufficient to reduce that incremental contribution to a "less than cumulatively considerable" level (CEQA Guidelines, § 15130, subd. (a)(3)).

Skyridge Elementary School

Commenters expressed concerns related to the project areas proximity to the Skyridge Elementary School and potential impacts related to traffic at the intersection of Maidu Drive/Burlin Way and increased public access near the school site (protection of the children from strangers).

Skyridge Elementary School is located on Perkins Way, approximately one-tenth of a mile from Maidu Drive/Burlin Way. The entrance to the school site is directly off of Perkins Way. The school campus is setback approximately 300 feet from the roadway and enclosed behind a 6-foot high wooden fence. The school buildings and playground areas are not easily viewed from Perkins Way. The driveway to the school immediately enters the parking area and bus loading/unloading lanes. The buildings are set further back on the property and face the parking area. It is school policy that all visitors to the campus check-in at the front office and obtain a badge to be kept visible while on school premises. Visitors are to check-out and return the badge as they leave the site.

The school year is traditional, with classes in session from late August through mid-June and a four-week summer session that generally runs from mid-June to mid-July. Student enrollment in February 2002 was about 623 students. Students are typically on campus and in class Monday through Friday between 8:00 a.m. and 2:15 p.m. School buses drop-off students at 7:30 a.m. and pick-up students at 2:30 p.m. An adult supervisor and three students provide safety patrol duties at the school entrance for 1/2-hour in the morning before school and 1/2-hour in the afternoon as school is let-out. This service is only provided during the regular school year and not during summer school.

Commenters described congested traffic conditions at the Maidu Drive/Burlin Way intersection during morning peak hours as children are driven to school and people leave their homes to go

to work. Concerns regarding increased traffic levels and pedestrian safety were expressed in many comment letters. Currently, Skyridge Elementary School does not retain paid or volunteer crossing guards at any intersection in the vicinity of the school. As part of the study conducted for the project, traffic engineers evaluated the extent to which current pedestrian activity at the Maidu Drive/Burlin Way intersection warrants school pedestrian crossing improvements according to CALTRANS Traffic Manual, Chapter 10 guidelines. On-site pedestrian counts were taken during morning school arrival and afternoon school departure hours. These counts indicated approximately 15 pedestrians using the intersection and crossing Maidu Drive in the morning and 10 pedestrians in the afternoon. The CALTRANS Traffic Manual identifies traffic control strategies (i.e., traffic signals, crossing guards, etc.) and provides recommendations for minimum pedestrian and vehicular volumes that would justify each action. In this case, the observed pedestrian volumes are below the minimum thresholds determined to warrant actions such as adult crossing guards (30 pedestrians), warning beacons (40 pedestrians), or traffic signals (70 pedestrians).

Overall, given the relatively secluded location of the school and the limited access, it is unlikely that recreation users traveling along Maidu Drive would notice the presence of the school. Additionally, there are no signs posted near the intersection of Maidu Drive and Burlin Way that indicate the location of the school.

Daily school hours and operations do not coincide with anticipated periods of peak use of the river access facilities. During the week, most river users would access the recreation facilities in the late afternoon or evening and would not interfere with school ingress and egress times. As stated previously, it is expected that peak use of the river access facilities would occur on weekends and holidays during the summer months when the school is not in operation or only open in a limited capacity.

Air Quality

Commenters identified increased emission of air pollutants as a concern relative to vehicle emissions and roadway dust generation.

Project-related vehicular air emission estimates for pollutants of concern were re-evaluated using updated methodologies recommended and provided by the Placer County and El Dorado County air pollution control districts (APCDs). The assessment of project-related trips and air quality emissions is based on the combined total level of travel on a peak river access use day. On a peak day, the lead agencies and CDPR estimate that the 50-space parking lot would fill twice, resulting in a total of 206 trips (trip is one-way travel). Additionally, PCWA personnel would make up to 8 operations and maintenance trips (4 site visits) per day. The total peak day travel to the site would be 214 trips. This value was used to re-assess vehicular air emissions for a peak, or "worst-case" condition. The El Dorado County APCD threshold for reactive organic gases (ROG) and nitrous oxide ($NO_{x)}$ emissions is 82 pounds per day (lb/day). Placer County APCD threshold for ROG and NO_x emissions is 85 lb/day. Placer County uses an emission threshold of 275 lb/day for particulate matter (up to 10 microns in size) (PM_{10}); El Dorado County evaluates PM_{10} based on the likelihood emissions would cause or contribute

significantly to a violation of the applicable state or national ambient air quality standards. The estimated emissions calculated for ROG, NO_x, and PM_{10} are displayed in **Table 3-8**.

Table 3-8
Air Pollutants (pounds per day)

Analysis Year	ROG	NO_x	PM_{10}
2005	5.50	4.13	0.250
2010	3.42	2.41	0.241
2015	2.20	1.43	0.254

As indicated by the results, ROG and NO_x emissions due to project-related vehicular traffic would be well below the 82 lb/day and 85 lb/day significance thresholds for all years evaluated. Additionally, the PM_{10} emissions would be far below the 275 lb/day significance threshold used by Placer County. The PM_{10} emissions would not be expected to result in or contribute significantly to a violation of applicable air quality standards. Generally, because peak travel conditions would only occur on a limited number of days of the year, the expected daily project-related air pollutant emissions would be les than indicated by these results.

The Final EIS/EIR (Chapter 3.0, Section 3.15, Air Quality) describes anticipated fugitive dust emissions and control measures to be implemented during construction. Measures to minimize and control dust emissions include watering construction areas and soil stockpiles, applying soil binders to unpaved roads, covering earth-hauling trucks, sweeping adjacent paved streets daily, and limiting speeds on unpaved roads to 15 miles per hour. These are standard construction dust-control measures recommended by the local air pollution control districts.

Additionally, it is noted that the Proposed Project river access features would be considered minimal improvement to the area generating a limited amount of use, compared to other areas in the Auburn SRA. This information does not alter the conclusions presented in the Draft EIS/EIR.

Noise

Commenters expressed concern about increased noise levels in the Maidu Drive neighborhoods associated with project construction, increased traffic along Maidu Drive, and with public use in the canyon.

The Draft EIS/EIR evaluates the potential noise impacts associated with Proposed Project construction and operation (pages 3-315 through 3-318). Environmental protection measures include compliance with the City of Auburn, Placer County, and El Dorado County noise ordinance requirements for construction activity. As such, construction activities would be limited to certain daytime hours and days (page 3-316 of the Draft EIS/EIR) with tighter restrictions placed upon activities that exceed 95 decibels (dB). During project construction set-up, when heavy construction equipment would be brought to the site, noise levels along Maidu Drive would be greater than existing traffic noise levels. These activities would not result in extreme or sharp, jolting, or disturbing sounds. Similar increases in noise levels would be expected to occur at the end of construction when the heavy equipment is removed from the area. These phases of construction would be expected to be of relatively short duration.

Although such noise will constitute a short-term source of irritation to adjacent land uses, they are not considered to rise to the level of a significant adverse impact due to their temporary character.

Overall, because project activities would be in compliance with local ordinances, the temporary increases in noise levels associated with construction would not be considered significant. However, due to the duration of the construction period (approximately 22 months), the Mitigation Plan (Appendix D to the Final EIS/EIR) includes a public information element to provide the general public with specific details regarding construction activities, anticipated noise levels and duration of certain activities (e.g., blasting). As described in the Mitigation Plan, this program would provide local residents and recreation organizations with specific information regarding the project construction schedule and activities.

Operation of the proposed pump station would generate lower noise levels than the existing seasonal pump station configuration (page 3-317 of the Draft EIS/EIR). Under the Proposed Project, the permanent pump station would result in a reduction in overall noise levels as compared to the current situation because there would no longer be noise impacts associated with the bi-annual assembly and disassembly operations of the seasonal pumps.

The Draft EIS/EIR (page 3-318) addresses potential noise impacts associated with increased public access in the project area. As indicated, CDPR rangers would be responsible for enforcement of recreation area rules and regulations, including excessive noise control. The Proposed Project would not include any facilities that would encourage long-term visitation at the project site. Additionally, motorized boats and jet skis would not be permitted in the area. As stated previously, the objective of these features is to permit safe access to and from the river. Noise associated with these uses would be similar to existing conditions (raised voices and automobiles) and would be intermittent rather than continuous. Rules for the area would prohibit use of alcohol and there would be no picnic tables or other long-term use facilities. These limitations on use within the project area would help minimize inappropriate activities and related noise associated with increased public use. Additionally, the parking area and turnaround where recreation users might congregate are a considerable distance (over one mile as the crow files) from the nearest homes. It is not anticipated that the recreating public will congregate in the vicinity of the adjacent neighborhoods anymore than the current situation, where community members park at the lower end of Maidu Drive to access trails. Factors contributing to traffic noise and increases in related noise levels include: (1) the volume of traffic; (2) the speed of the traffic; and (3) the number of trucks in the flow of the traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds and greater numbers of trucks. Vehicle noise is a combination of the noises produced by the engine, exhaust, and tires. Traffic noise levels are reduced by distance, terrain, vegetation, and natural and manmade barriers.

The Federal Highway Traffic Noise Manual states that a doubling of a noise source (i.e., number of vehicles) produces up to a 3 dB increase in noise levels (sound pressure level). A 3 dB change in noise levels has been shown to be barely detectable by the human ear. Based on the average daily traffic counts along Maidu Drive, which range from 297 to over 3,000, the

Proposed Project would potentially increase traffic levels by less than one-half. This level of increased traffic would occur only on a peak summer day.

The Proposed Project would not significantly increase the volume of traffic on Maidu Drive and the speed limits on roads in the neighborhood would not change as a result of this project. A greater number of trucks would be associated with construction activity; but this would occur over a limited period of time (mobilization and demobilization periods). The homes along Maidu Drive are set back a minimum of 50 feet from the roadway, and all are separated from the road by wooden fencing or brick/stone walls. Additionally, many of the yards have landscaping (trees, shrubs) that provide some reduction in noise levels. Overall, the Proposed Project would not be expected to generate a substantial increase in traffic noise levels, and most likely, any increase that does occur would not be detectable.

Compared to existing conditions, increased traffic-related noise levels along Maidu Drive would not be perceptible

Public Health and Safety Considerations

Litter

Several comments on the Draft EIS/EIR indicated a concern that litter would become a problem associated with increased public use of the project area and related to access of the project site along Maidu Drive.

Reclamation's construction contractor will be responsible for clean-up of litter and other construction debris. Reclamation's construction contractor also will be responsible to ensure that these materials are properly disposed of at approved locations throughout the various phases of construction and before the area is reopened to the public.

The Proposed Project would include installation and maintenance activities for trash containers and restroom facilities. Park staff, rangers and volunteer patrols in the area would provide enforcement of park rules and regulations, including minimizing littering. CDPR would be responsible for ensuring proper maintenance and operation of the river access area facilities.

Local agencies also were contacted to determine how litter along neighborhood roads is and would continue to be addressed. The City of Auburn Public Works Department indicated that it would continue its regular patrols of the neighborhood including street cleaning to clear the streets of small debris. Should larger materials be left within the roadway, the City would make arrangements to remove the objects as quickly as possible after discovery. In the event a vehicle is abandoned, the City of Auburn Police Department would continue its practice of ticketing and eventually towing any vehicle that is not removed or claimed within a standard timeframe.

Illegal and Inappropriate Activities

Commenters expressed concern that increased public use of the project area would result in illegal, inappropriate or criminal activities within the Maidu Drive neighborhoods. These concerns include problems such as drinking, drugs, vandalism, or theft and concern about the potential increased workload on local law enforcement. Operation and management elements of the river access feature would be expected to substantially minimize these concerns. Some key elements include:

- Limited hours of access;
- CDPR presence at the entrance station and patrols;
- CDPR does not currently have reports of problems in the area;
- Lack of attractive nuisance in the area of the neighborhood, the place people will congregate (batch plant and the river) is quite a distance from residences;
- Restrictions on alcohol; and
- Anticipated user group given the design of the access (one-half to three-quarter mile from parking to river), river users, anglers, trail users.

CDPR's restrictions on alcohol would reduce the likelihood of inappropriate activities at the river access facilities. The presence of park aids, park rangers and volunteer patrols near the entrance gate and patrolling the area would further discourage inappropriate activities at the site and in areas immediately adjacent to the project site. Limitations on public vehicular access (hours of operation and parking lot capacity) would further minimize potential for such activities. Additionally, the removal of the 20-car parking area at the river would make the area less attractive for recreation users because of the hike required to reach the water from the batch plant parking lot. Ultimately, should problems arise, CDPR retains the authority to place additional restrictions upon the hours or type of use or to even close the area to vehicular access until the situation can be remedied.

The City of Auburn Police Department would continue regular patrols of the neighborhood and expects to provide the same level of service without experiencing an undue burden upon current staffing.

Some commenters indicated that the existing parking area at the Auburn Dam site access gate on Maidu Drive attracts teenagers who hang-out and may behave inappropriately. CDPR has not received any calls related to such activity.

Maidu Drive Neighborhood Property Values

While the lead agencies acknowledge this comment topic, it is noted that this subject is not considered to be an environmental issue under CEQA, and therefore, does not merit mitigation or preventative measures on the part of those responsible for the Proposed Project. California case law is clear that such impacts are not "environmental" in character (See *Hecton v. People*

of the State of California (1976) 58 Cal. App.3d 653, 656.). Additionally, it should be recognized that there is a wide range of socioeconomic trends that may cause property values and housing markets to fluctuate from time to time. However, proximity to outdoor recreation opportunities generally has not been found to be a detriment to residential areas or their property values.

3.1.7 TAMAROO BAR

The Tamaroo Bar rapid is not a natural river feature, and did not exist prior to river channel alterations at the Auburn Dam Project site. The Tamaroo Bar rapid was created as a result of slope failures along the river canyon walls. Under current conditions, it is estimated that the Tamaroo Bar rapids become inundated when river flows reach 6,000 cfs; at this flow rate, the inflow capacity of the bypass tunnel is reached, and water begins to backup as the water surface elevation rises.

As stated in the Draft EIS/EIR, the design criteria for the Proposed Project (permanent in-river diversion structure) is to not increase water surface elevations upstream of the Tamaroo Bar rapid; however, this criteria would not necessarily preserve the rapid under all conditions. The Proposed Project includes the construction of Class I to Class III rapids in what is now the dewatered section of the river. Overall, the Proposed Project increases the number of rapids, even with the probably reduction in size of the Tamaroo Bar rapid at some flows below 6,000 cfs. Because the existing dewatered portion of the channel will be deepened and widened at the cofferdam, at higher flows, the backwater may be less than it is now.

Thus, the Proposed Project results in an overall improvement of site conditions for boating and for visual/aesthetic value. Therefore, the anticipated reduction in size of the Tamaroo Bar rapids would be considered less than significant.

3.1.8 RALSTON AFTERBAY

The MFP is a multi-purpose project designed to conserve and control waters of the Middle Fork of the American River, the Rubicon River and certain tributaries for irrigation, domestic and commercial purposes and for generation of electric energy. The MFP was developed by PCWA and is currently operated by PG&E, which has the right to control operations for hydropower until 2013. Under these constraints, there are three management objectives for the Middle Fork of the American River prioritized as follows: (1) instream flows for fisheries resources; (2) the consumptive use needs of PCWA; and (3) hydroelectric power generation by PG&E.

Ralston Afterbay, one of five MFP diversion dams, is located about 20 miles east of Auburn and is operated as a re-regulating reservoir for the MFP. Being the most downstream dam in the MFP system, Ralston Afterbay releases flows to the Middle Fork American River upstream of its confluence with the North Fork of the Middle Fork. Downstream of this confluence, Middle Fork flows are a combination of regulated and unregulated flows. Water releases from Ralston Afterbay can vary greatly over the course of a day, month, or year, as well as having seasonal fluctuations in response to hydropower demand and water availability.

Implementation of the Proposed Project would result in minor changes in PCWA's water releases from the MFP at Ralston Afterbay (Section 2.2.2.3), which must divert water from storage in the summer and, therefore, must increase the amount of water released at Oxbow in order to do so. Such changes include an increase (compared to existing conditions) in the amount of water released from Ralston Afterbay to meet the minimum 75 cfs bypass flow at the pump station and to ensure effective operation of the diversion/intake during low-flow conditions. Preliminary design information indicates that a minimum flow of 175 cfs may be required for optimum operation and maintenance of the pump station/intake system under the Proposed Project. The unregulated flows from the North Fork of the American River provide sufficient volume to meet this anticipated project requirement for most of the year, however, it is projected that PCWA may increase the minimum Ralston Afterbay releases in late summer months (June through October), relative to existing conditions.

3.1.9 FIRE MANAGEMENT

Increased Fire Danger Protection Measures and Commitment to Implement a Comprehensive Fire Management Plan

A Comprehensive Fire Management Plan is being prepared through coordination and consultation with local agencies, including Fire Safe Councils for the Auburn Dam and Reservoir Project lands. As part of this effort, CDPR, CDFFP, and Reclamation have prepared an Auburn State Recreation Area Prefire Management Plan (January 2002). This plan is included as Appendix A to the Final EIS/EIR.

The Comprehensive Fire Management Plan will include all aspects of public and firefighter safety and prevention and fire suppression activities. Since the release of the Draft EIS/EIR, a major component of the Comprehensive Fire Management Plan, the Fuels Management Action Plan, has been completed. This element directly affects the interface lands (the areas where public lands adjoin private lands) and lays out a process to implement fire management strategies for the Auburn SRA lands that are a priority interface with the Greater Auburn Area. As a major component of mitigation for the potential of increased fire danger on public lands within the interface areas directly affected by the American River Pump Station Project, ground implementation of the Fuels Management Action Plan is planned to be completed prior to opening the area for public use.

Through coordination and partnerships with local neighborhoods, citizen groups, and others, CDPR and Reclamation, will work to implement appropriate fire management strategies as prescribed in this plan. The interface lands will be divided into priority areas with each having its own site-specific environmental review process.

Fuel modification within interface lands is critical for reducing the potential for a costly and damaging fire. The following prescriptions can be used for fuel management in three distinct geographic areas or zones within the interface areas: (1) Shaded Fuel Break, (2) Defensible Space, and (3) Defensible Landscape.

Shaded fuel breaks will be developed on public lands that interface private lands directly affected by the American River Pump Station Project. The width of the fuel break is usually 100 to 300 feet, depending on site conditions. Creating a shaded fuel break involves carefully planned thinning of dense vegetation, intended to inhibit fire from easily moving from ground into the overhead tree canopy. A shaded fuel break does not involve the removal of all vegetation in a given area.

Fire suppression ground and air resources can use the shaded fuel break area to suppress wildland fires. Any fuel break by itself will not stop a wildland fire. Shaded fuel breaks, to be most effective, must be accomplished in conjunction with the other prescriptions, such as defensible space and defensible landscapes, which would occur largely on adjacent private properties. The managing partners of the comprehensive fire plan are working with local entities and citizen groups to implement the Fuels Management Action Plan.

The Draft EIS/EIR discusses the causes and risk of wildland fire and mitigation actions in Chapter 2.0, Table 2-7 and in Chapter 3.0 at pages 3-322, 323, 329, 330.

Construction-Related Fire Protection and Prevention

Reclamation will ensure that the construction contractor prepare and carry out an effective fire protection and prevention program covering all phases of construction under this contract. The plan shall be submitted to Reclamation, for approval prior to the start of construction operations. At the option of the construction contractor, the fire protection and prevention program may be incorporated into the safety program required in the project's construction specifications.

Representatives of CDFFP and/or other local fire protection agencies will attend the pre-construction conference to explain fire hazards and procedures for protection and prevention. During construction, the contractor will provide a reasonable amount of time in training and other regularly scheduled safety meetings for these local agency representatives to give appropriate training to the construction contractor's personnel.

The construction contractor will provide and maintain in a ready condition near each active work location a fire-tool cache consisting of at least a 5 gallon back pump filled with water, two axes, two McLeod tools, and enough shovels to equip five workers for fire-fighting purposes. A sufficient number of employees familiar with use of the equipment will be available at all times when work is in progress. In the event of a fire resulting from project operations, the local fire-protection agency having jurisdiction shall be notified and the contractor shall take immediate control action with all available equipment and manpower.

In areas where a significant fire hazard exists as determined by Reclamation's Contracting Officer, the contractor will provide a fire patrol for one hour after the shutdown of construction operations each day during the declared fire season.

In areas where grass, brush, or other natural fuels are present and where roads or creek beds will not serve the purpose, the contractor shall establish a firebreak on the uphill side of the project.

The firebreak will be within the right-of-way acquired by the government and shall consist of a 10-foot wide strip with flammable material either cleared or covered with mineral soil.

Wherever normal fire protection services are interrupted by construction operations, the contractor shall provide equivalent temporary services including water supplies and access for fire equipment through the project area.

All construction operations shall be in compliance with Reclamation Construction Safety Standards and the following federal and state codes:

- Subpart H of Department of Labor Occupational Safety and Health Standards 1910.106
- Subpart F of Department of Labor Safety and Health Regulations for Construction 1926.150, 1926.151, 1926.152, and 1926.153.
- State of California PRC 4423, PRC 4427, PRC 4428, PRC 4431, PRC 4442, H&S 13005, and H&SC 13001.

Fire Management and Prevention for Public River Access Features

Many comments were received regarding the potential for an increased risk of fire from additional recreational use in the canyon near Auburn. The perceived causes of the potential increased risk of fire include: increasing the number of public users in the canyon, increasing the possibility for vehicles to ignite fires, the use of barbecues and other open fires in the canyon, and use of cigarettes by the public. The Draft EIS/EIR did recognize the potential for an increased risk of fire due to increased public access and use in the project area. The document noted that Reclamation, CDFFP, and CDPR are working on a Comprehensive Fire Management Plan for the Auburn SRA. The Auburn State Recreation Area Prefire Management Plan introduces the purpose and need for a Comprehensive Fire Management Plan and discusses a Fire Management Planning Strategy that has been developed by CDFFP, CDPR and Reclamation. The Prefire Management Plan is included as Appendix A to the Final EIS/EIR. The Prefire Management Plan includes the Fuel Management Action Plan element described earlier.

The Draft EIS/EIR indicated that shaded fuel breaks would be constructed along the public river access roads and parking areas. These shaded fuel breaks would be 20 to 30 feet wide depending on the site conditions. Shaded fuel breaks are proposed along the main construction road that follows Maidu Drive to the batch plant, and from the batch plant to Oregon Bar and to the river-side turnaround and limited ADA-designated parking area. Shaded fuel breaks also would be constructed around the batch plant parking area and both turnarounds. Road improvements would meet emergency vehicle access needs. Moreover, the proposed prohibition on open fires within the project area would reduce the risk of wildfire potentially related to increased public use.

3.1.10 PROJECT ACCESS

Many comments addressed the use of Maidu Drive as the primary access route for both construction and public river access-related travel. Specifically, many of these comments suggested use of Pacific Avenue and questioned why it was not more fully considered as an alternate project access route. The commenters indicated that the use of Maidu Drive for public river access would result in significant traffic, noise, air quality, litter, and public health and safety, and fire hazard impacts within the neighborhoods along Maidu Drive. Responses to these topics are provided in Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

Comments related to the use of Pacific Avenue as an alternative to Maidu Drive suggest the following arguments for the use of Pacific Avenue rather than Maidu Drive: (1) safer and more logical access route; (2) far fewer residents would be affected; (3) Auburn Recreation District (ARD) campground is not in-place; and (4) closer to Auburn-Folsom Road and commercial establishments.

Commenters also inquired about the difference in costs for improving the roads for project use.

Some comments also were received indicating that Pacific Avenue should not be considered for access to the project area. These comments stated that use of Pacific Avenue would result in secondary traffic-related impacts to Riverview Drive and recognized the greater exposure of residents to roadway traffic along Pacific Avenue than along Maidu Drive.

This Master Response provides additional information supporting the Proposed Project's use of Maidu Drive as the primary construction and project access route over Pacific Avenue or other alternatives suggested by commenters. This information is added to the Final EIS/EIR, Chapter 3.0, Section 3.1, Transportation and Circulation. This supplemental information does not alter the conclusions presented in the Draft EIS/EIR.

Selection of Maidu Drive Versus Pacific Avenue for Project Access

As noted by commenters, and in the Draft EIS/EIR, Maidu Drive is a collector road serving several subdivisions in the southern portion of the City of Auburn. Traffic counts provided for Maidu Drive indicate a high traffic load associated with peak commuter and school arrival and departure hours (please refer to Master Response 3.1.6, Public River Access Features) for the approximately four-tenth-mile segment of roadway between Burlin Drive and Auburn-Folsom Road. For the remaining stretch of Maidu Drive, updated City of Auburn traffic counts indicate a relatively low level of use (i.e., less than 300 vehicles ADT). Pacific Avenue also serves as a residential area collector road. The City of Auburn has unpublished traffic count data that indicate an approximate 900 ADT for Pacific Avenue.

Maidu Drive and Pacific Avenue were both constructed by Reclamation in the early 1960s to support construction and other access to the Auburn Dam Project site. These roads were built to handle heavy construction vehicle loads and a high volume of traffic. Maidu Drive, however, offers a more direct and safer route to the Proposed Project site than Pacific Avenue. There are

no homes or other structures that front toward Maidu Drive nor driveways with direct access to the road along the segment that would be utilized by the Proposed Project, until the route reaches the Reclamation buildings currently occupied by PCWA. Homes along Maidu Drive are mostly oriented such that only side or backyard views of the street exist; all homes along this segment of Maidu Drive are located behind wooden fencing or brick walls of at least five to six feet in height. The set-backs of these homes from the roadway are estimated at greater than 50 feet. In comparison, Pacific Avenue is lined with multi- and single-family residences, a preschool and other public use areas that front and have direct access (i.e., seven driveways) to the road. The homes and apartment areas that face Pacific Avenue are not separated from the roadway by fences, rather front lawn areas are open and exposed to the road. Homes and other structures along Pacific Avenue are setback from the roadway by approximately only 12 to 30 feet. The roadway configuration for Maidu Drive is such that the travel lanes are 12.5 feet wide and the shoulder is 5 feet wide on either side; there is no sidewalk and no parking is permitted along the road. Pacific Avenue lanes are 9 feet wide, and the shoulders are 8 feet wide; roadway parking is permitted and there are sidewalks along some portions of the segment under consideration. Because of these differences in roadway configuration and residence orientation and set-backs, Pacific Avenue would not offer a safer or more logical access route when compared to Maidu Drive. The lack of front yard fencing poses an increased safety hazard to families with children along Pacific Avenue as children have been observed playing in the front yards of these homes; additionally, the soccer park on the northern side of Pacific Avenue attracts weekend crowds; such gatherings do not occur along Maidu Drive.

Both Maidu Drive and Pacific Avenue have intersections with Auburn-Folsom Road, and the distance to travel to commercial establishments is roughly less than one mile from either access point. This is not considered a significant factor in the selection of the route for public river access.

Sacramento Street, also suggested as an alternate route, does not provide direct project site access. Several residences and businesses have direct driveway access along this street as well.

Finally, use of Pacific Avenue for construction and/or public access to the project area would require additional measures to upgrade and widen the road to accommodate heavy construction vehicles and to ensure safe passage for members of the general public. Regardless of the cost associated with such upgrades, these measures would not be required for Maidu Drive.

The Proposed Project, therefore, retains use of Maidu Drive as the primary access route to the project site. However, certain specific mitigation measures regarding the use of this roadway have been incorporated into the Proposed Project. These measures are detailed in Master Response 3.1.6, Public River Access Features and in the Mitigation Plan (Appendix D).

3.1.11 PLACER COUNTY WATER AGENCY'S WATER CONSERVATION PROGRAM

The Draft EIS/EIR provides a summary of PCWA's estimated future water supply needs (Chapter 1.0, Introduction, pages 1-5 to 1-7) as determined by the PCWA Surface Water Supply Update for Western Placer County Discussion Paper (PCWA 2001).

PCWA water supply needs are based upon customer demands, which require that the majority of water supplies be delivered between late-spring and early fall. Water demand projections have been prepared based upon data from several sources as described in the Draft EIS/EIR (pages 3-30 and 3-31). The Draft EIS/EIR (Table 3.4-2) shows incremental projected water demands up to the year 2020. Additionally, county and city general plans contain data regarding population projections and housing units. This information was compared to historical records and used to prepare a range of growth rates. The projected water demands contained within PCWA's water supply master plan are based on a mid-range estimate of probable growth rates. While surface water projections through 2030 indicate an increased demand throughout the service area, these are based upon the assumption of continued support and implementation of water use efficiency measures as identified in the Draft EIS/EIR (page 1-6).

PCWA recognizes the importance of water management and conservation programs and has implemented many conservation measures. PCWA's treated water service customers are 100 percent metered, which is rare in the Sacramento region. Metering allows PCWA to charge its customers based on water use, rather than by a flat fee. The Draft EIS/EIR describes PCWA's water conservation and water shortage contingency planning (page 3-31). Additionally, as a member of the Sacramento Area Water Forum, PCWA has committed to implement a number of additional conservation measures (Best Management Practices) designed to improve water use efficiency. These measures include the following:

- Provide interior and exterior water audits and incentive programs for single-family residential, multi-family residential and institutional customers;
- Offer plumbing retrofit kits to residential customers;
- Provide distribution system water audits, leak detection, and repair;
- Provide non-residential meter retrofit;
- Provide large landscape water audits and incentives for commercial, industrial, institutional, and irrigation accounts;
- Support city/county landscape water conservation requirements for new and existing commercial, industrial, institutional, and multi-family developments;
- Provide a public information program;
- Provide a school education program;
- Provide a commercial and industrial water conservation program;
- Implement conservation pricing;
- Provide a landscape water conservation program for new and existing single-family homes;
- Enact a water waste prohibition ordinance;

- Designate a staff member as a water conservation coordinator; and
- Provide an ultra-low-flush toilet replacement program for non-residential and residential customers.

PCWA also is committed to improving the efficiency of its raw water delivery system and in aiding raw water customers to become more water efficient. Each year, PCWA installs lining along additional sections of the raw water delivery canals and pipelines to minimize water loss.

3.1.12 PROJECT AREA WILDLIFE

Overview of Wildlife Comments and Terrestrial Resources Discussed in the Draft EIS/EIR

Comments received on the Draft EIS/EIR requested an analysis of the short- and long-term effects of the Proposed Project on wildlife resources of the project area. Short-term concerns included the effects of blasting and other construction activities, while long-term concerns included the effects of increased noise and human presence (i.e., recreationists) in the project area. This response utilizes estimates for the length of the construction period and noise generated by construction activities from Section 3.16, Noise, of the Draft EIS/EIR.

As discussed on page 3-315 of the Draft EIS/EIR, blasting would take place over a three- to eight-month period throughout the total construction period, which would occur over approximately 22 months. Other construction-related noise would result from traffic to the project site and general construction activities related to facilities construction, road improvements, and river restoration activities. The Draft EIS/EIR provides estimates of 84 to 89 A-weighted sound level decibels (dBA) for the levels of noise produced by typical construction activities, and states that rock drilling activities (one of the highest noise-generating activities) would generate approximately 98 dB at a distance of 50 feet. The noise impact analysis discusses specific impacts in relation to City of Auburn and Placer County noise ordinances. This Master Response addresses the potential impacts to wildlife within the project area.

Description of Terrestrial Habitats and Wildlife

The terrestrial habitats and wildlife within the project area are described in Section 3.6, Terrestrial Resources, of the Draft EIS/EIR. The plant community composition and most common wildlife species are described for each of the five habitat types found in the project area (see pages 3-141 through 3-145 for specific description). As stated in Section 3.6, much of the land in the project area has been disturbed by Auburn Dam construction activities and breaching of the cofferdam, and continues to be disturbed annually through installation and removal of the seasonal pump station (see Figures 3.6-1 and 3.6-2, pages 3-142 and 3-143 of the Draft EIS/EIR). The disturbed habitat of the project area consists of various non-native annual grasses and forbs, with interspersed patches of native and non-native trees and shrubs. The plant communities of continuously disturbed habitats, such as those within the project area, generally have low vegetative structural diversity, and do not provide high quality wildlife

habitat for a broad range of species. Consequently, species richness is generally low in frequently disturbed habitats. Surrounding the project area are higher quality wildlife habitats of early- and late-stage successional oak woodlands and riparian vegetation (both upstream and downstream of the project area). As described in the Draft EIS/EIR, the impact analysis to terrestrial habitats and wildlife in the project area focused on special-status species. However, in response to comments, additional detail regarding construction, operation, and recreation impacts to non-listed wildlife is provided.

As discussed in the Draft EIS/EIR, non special-status species known to use the project area include species that can utilize urban or disturbed habitats, including wild turkey, Anna's hummingbird, American crow, mourning dove, killdeer, Canada goose, red-tailed hawk, common garter snake, and several species of sparrows and wrens. In addition, the Draft EIS/EIR states that coyote, California ground squirrel, raccoon, California spotted skunk, western toad, western skink, and various bat species, among other species, are common to oak woodland habitats like those surrounding the project area. Further, the background reports for the Placer County (1994) and El Dorado County (1995) General Plans indicate that horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), California thrasher (*Toxostoma redivivum*), California quail (*Callipepla californica*), band-tailed pigeon (*Columba fasciata*), western scrub jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), yellow-billed magpie (*Pica nuttalli*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), red-shouldered hawk (*Buteo lineatus*), wood duck (*Aix sponsa*), great blue heron (*Ardea herodias*), black-crowned night-heron (*Nycticorax nycticorax*), ringtail (*Bassariscus astutus*), striped skunk (*Mephitis mephitis*), long-tailed weasel (*Mustela frenata*), western gray squirrel (*Sciurus griseus*), Botta's pocket gopher (*Thomomys bottae*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and western rattlesnake (*Crotalus viridis*) may utilize habitats similar to those surrounding the project area.

Analysis of Proposed Project Construction and Recreation Noise on Wildlife

Increase in public popularity of outdoor activities (e.g., bird watching, hiking/walking, etc.), loss of wildlife habitat, and military training near or above wildlife areas has prompted a considerable amount of research into the effects of these activities on wildlife, with implications for population viability for areas repeatedly exposed to human activity. The results of typical studies are used in the following analysis to address the impacts of construction, operation, and recreation noise on wildlife in the project area.

Impact of Construction Noise on Wildlife

The proximity of many military training areas to established wildlife reserves and the intense levels of sound created during flight or artillery training activities (e.g., up to 140 dB) have resulted in substantial attention to the effect of such activities on nearby wildlife. Such studies are applicable to the evaluation of construction noise impacts to wildlife because they evaluate the response of wildlife to similar levels of noise expected to be generated during construction of the Proposed Project. In an early study, Weisenberger et al. (1996) found that desert mule deer (*Odocoileus hemionus crooki*) and mountain sheep (*Ovis canadensis mexicana*) became

more tolerant of (i.e., showed habituation to), exposure to simulated aircraft noise at levels of 76 to 112 dB, with greater elevations in heart rate occurring at the beginning of the study and with exposure to louder aircraft simulations. Similarly, Krausman et al. (1998) observed that mountain sheep in large (i.e., 800-acre) enclosures in their natural habitat experienced elevations in heart rate upon exposure to low-flying aircraft overflights of 85 to 105 dB. In this study, elevated heart rates returned to normal levels within several minutes. In addition, Conomy et al. (1998) found that American black ducks (*Anas rubripes*) and, to a lesser degree, wood ducks, rapidly habituated to exposure to both simulated and natural low-flying jet overflights of approximately 85 dB. While black ducks initially reacted to a large proportion of overflights (39 percent), within two weeks the ducks responded to 6 percent of overflights. Further, the black ducks exposed to simulated overflights did not exhibit a loss in body mass (in comparison with control groups), which suggests that while this species altered its behavior in response to noise disturbance, it did not translate into a significant reduction in energy intake during periods of normal behavior.

The three studies described above are important indicators of how wildlife in the project area may respond to construction noise. Collectively, noise levels from 76 to 112 dB did not result in significant alteration of behavior for various bird and mammal species. Given that the high range of construction noise within the project area is estimated to be approximately 98 dB at 50 feet, it is likely that wildlife in the project area would react to construction noise in a similar manner to the species in the above-described studies. Thus, it is expected that wildlife in the project area may be temporarily disturbed by construction activities, but that they would become less responsive to such disturbances over the duration of the construction period, and that such disturbances would not result in significant interruptions to foraging or maintenance behaviors. Further, given the temporary nature of the loudest construction activities, such increases in ambient noise levels are not likely to result in adverse effects to wildlife species on a population level. Therefore, impacts to wildlife resulting from high intensity construction noise under the Proposed Project would be considered less than significant.

Impact of Increased Operational Noise and Recreation Use Within the Project Area

Comments also were received regarding the potential long-term effects to wildlife resulting from the year-round operation of the pump station facility and the increased level of public activity under the Proposed Project. As discussed in the Draft EIS/EIR, the pump station would operate on a year-round basis, relative to a seasonal basis under the existing condition. Consequently, annual construction activities would be eliminated, while noise resulting from maintenance operations would increase. Overall, however, noise would be reduced by construction of permanent pump station housing, which would reduce noise generated by pumping operations, relative to the existing condition. As noise levels would be reduced, it is expected that impacts to wildlife resulting from continuous pump station operations would be less than significant, relative to the existing condition.

Recreationists produce noise and visual stimuli in a different manner from machinery. Motion of hikers, equestrians, and other recreationists can be more erratic than machinery, and distance to nearby wildlife and sound levels may vary rapidly within a short period of time. Consequently, studies on the response of wildlife to human-based disturbances demonstrate that

certain species respond differently to human disturbance than when presented with noise or noise and mechanical stimuli.

In a 1998 study, Burger and Gochfeld examined the impact of pedestrian groups on waterbird species in an established wildlife refuge in southern Florida. They determined that greater than 60 percent of individuals across 5 bird species moved away from pedestrians. Further, they found a correlation between increasing loudness of pedestrian groups with increasing impact of behavioral response (less time spent foraging and more time spent in alert behavior). While there were species-specific responses to human disturbance, the authors state that disturbance by humans may not have a cumulative negative effect if other habitat is available and birds can still obtain food resources. These results suggest that bird species, and potentially other wildlife species in the project area, would move to other readily available habitat within the project area if recreationists cause sufficient disturbance. Grubb and King (1991) found similar results. They observed the response of 40 individual bald eagles over a 3-year period to different categories of disturbance (pedestrian, aquatic, vehicle, noise [without visual stimulus], and aircraft) at varying intensities, frequencies, and durations. They found that terrestrial activities (i.e., hikers, hunters, and anglers) resulted in the greatest response of alarm behavior, with louder and closer groups eliciting stronger changes in behavior. These two studies suggest that proximity to source and volume are two key factors that influence human disturbance of wildlife species, and that the availability of suitable habitat nearby is critical for disturbed animals.

Another study assessing the impact of human-induced disturbances focused on the effect of hunters on white-tailed deer in northern Florida (Kilgo et al. 1998). Hunters provided both visual and noise stimuli. Using radio transmitters, the authors determined that the study animals avoided areas where hunting activity was concentrated (i.e., generally within 200 meters of roads), moving to areas providing higher cover and with less human activity. Deer also increased activity at night when human disturbance was reduced. Outside of the hunting season, deer did not actively select habitats with greater cover or away from roads, which indicates that this mammal species will shift its home range in response to human presence.

Results of these studies suggest that wildlife in the project area would not be adversely affected by increases in public river use that would occur under the Proposed Project. They indicate that wildlife species are more apt to utilize other available habitat when disturbed and can increase activity during periods when people are not present or where there is minimal human interference. Further, because there is already some recreational use (i.e., hiking, mountain biking, and equestrian trail use) in the project area under the existing condition, and because it has been shown that certain wildlife species will move to other habitats when disturbed, the increases in recreational use of the project area would result in less-than-significant impacts to wildlife species in the project area.

Other Wildlife Concerns

The Dewatered Channel

In general, strong support was expressed for the restoration of the dewatered channel under the Proposed Project. However, some concerns were raised regarding the possibility for restoration activities to block the passage of deer or other wildlife that have begun to use the dewatered channel to cross the river canyon. It is the position of the lead agencies that Auburn Dam construction activities, including channel dewatering, had a far greater impact on wildlife habitat than the benefits provided by creating a potential corridor for wildlife passage. In addition, the project area is outside of known deer migration corridors in the region (El Dorado County 1995). While deer or other mammals may utilize the dewatered channel to cross between habitats, it is anticipated that the overall benefits to vegetation and wildlife resources would outweigh any potential adverse effects resulting from restoring flows to this section of the river. Overall, the impacts of rewatering the channel to wildlife are anticipated to be positive, rather than negative.

Neotropical Migratory Birds

Several comments requested the analysis include the effect of construction activities on neotropical migratory birds. As discussed in Section 3.5.1.2 of the Cumulative Report (Appendix D of the Draft EIS/EIR), the American River Canyon provides potential habitat for approximately 90 species of neotropical migratory birds, many of which are considered riparian associates. In California, the majority of riparian habitat utilized by neotropical migratory bird species has been converted by human encroachment and flood control activities, and consequently, any remaining habitat is highly important for these species. Riparian habitat in the project area has been eliminated because of Auburn Dam construction activities. Therefore, it is not expected that neotropical migratory birds would breed in the direct vicinity of the project area. While riparian habitat exists both upstream and downstream of the project site, it is unlikely that construction activities would affect neotropical migratory bird species that may utilize these adjacent habitats. As previously discussed, it is likely that species utilizing habitat upstream and downstream of the project area would become habituated to construction noise. Any species that may have strayed into the construction area and becomes disturbed by construction activities would likely move to the higher quality riparian habitat upstream and downstream of the project site. Additionally, it is noted that construction of shaded fuel breaks would occur outside the nesting season to further minimize potential disturbances to bird species at or near the project site. Therefore, impacts to neotropical migratory bird species under the Proposed Project would be considered less than significant.

3.1.13 AUBURN RAVINE

This Master Response provides an update to the information and analysis of the Proposed Project and its potential effects upon the environmental resources of Auburn Ravine as presented in the Draft EIS/EIR (September 2001). Modifications are also provided in Chapter 2.0, Table 2-7, Chapter 3.0, Table 3.5-3, and Chapter 3.0, Section 3.5.2.4 (Impact Analysis)

under Impacts 3.5-5, 3.5-11, and 3.5-16 of the Final EIS/EIR. These changes do not alter the impact conclusions presented in the Draft EIS/EIR.

The Proposed Project, as described in the Draft EIS/EIR, would have resulted in the conveyance of North Fork American River flows from the proposed pump station to the Auburn Ravine Tunnel. From the Auburn Ravine Tunnel, American River water would be released into Auburn Ravine for delivery to PCWA's retail service Zone 5 in western Placer County. This area receives raw water for irrigation and agricultural purposes.

Delivery of American River water into Auburn Ravine would have been performed as an exchange of Yuba/Bear River system water currently released into the ravine via PG&E's Wise/South Canal. PCWA would have instead routed the PG&E Yuba/Bear River water to its Foothill Water Treatment Plant (WTP) for delivery to meet current and future municipal and industrial customer demand within Service Area Zone 1. Initially, this exchange also potentially would have resulted in higher flows down Auburn Ravine. These conditions were the basis for the Auburn Ravine fisheries analysis presented in the Draft EIS/EIR.

Numerous comments on the Draft EIS/EIR expressed concern over the change in water source composition and flow volume in Auburn Ravine and the potential for impacts upon aquatic resources. In response to these comments, PCWA, in consultation with fisheries resources agencies, devised an alternate water delivery plan for the American River water to be diverted by the Proposed Project such that potential impacts upon Auburn Ravine resources would be avoided.

The information presented in this Master Response summarizes public comment issues related to Auburn Ravine aquatic resources, provides additional detail regarding PCWA's water supply sources and infrastructure, clarifies the Auburn Ravine analysis presented in the Draft EIS/EIR, describes PCWA's revised operational procedures developed to avoid potential Auburn Ravine impacts, explains the Proposed Project's relationship to the City of Lincoln's Wastewater Treatment and Reclamation Facility (WWTRF), and presents additional detailed scientific information regarding olfactory and homing responses/behavior of chinook salmon and steelhead.

In addition, PCWA recognizes the need for a greater knowledge base relating to the Auburn Ravine and North Fork American River ecosystems and has proposed a monitoring program to develop a database of flow and water temperature information. This information will be useful to PCWA and fisheries resources agencies in developing future management strategies for Auburn Ravine. The details of this monitoring effort can be found in Appendix D to the Final EIS/EIR, Mitigation Monitoring and Reporting Program and Environmental Commitments Plan, Section 5.0, Conservation Measures.

An Overview of the Master Response is provided following the Summary of Public Comment Issues Related to Auburn Ravine.

Summary of Public Comment Issues Related to Auburn Ravine

This Master Response provides requested supplemental information and replies to concerns raised by interested parties relating to Auburn Ravine. The key topic areas covered in this comprehensive response include:

- Additional description of PCWA infrastructure;
- Auburn Ravine source water;
- Auburn Ravine water temperatures due to importation of potentially warmer American River water;
- Volume and seasonal variation of water discharge;
- Source water received by the City of Lincoln WWTRF;
- Impacts of flow on terrestrial resources including riparian vegetation, wildlife, and specifically valley elderberry shrubs and longhorn beetle; and
- Potential for increased straying of Central Valley salmonids.

Other comments specific to Auburn Ravine, but not listed above, (i.e., comments regarding splittail) are addressed in responses to individual comment letters in Appendix C, Volume 2, Individual Comment Letters and Responses.

Overview of Master Response to Auburn Ravine Comment Issues

As identified above, comments regarding the discussion of Auburn Ravine in the Draft EIS/EIR stated concern about changes in flow, seasonal flow distribution, and the mix of source water in Auburn Ravine. Additional comments raised the issue that the Proposed Project could reassign the environmental cues which migrating American River salmonids home toward, thereby drawing American River fish into Auburn Ravine. Comments also suggested that Auburn Ravine salmonids may confuse the American River for their natal spawning grounds, due to the existence of American River water in their natal stream. In addition, comments stated the possibility of falsely attracting salmonids from the American River into Auburn Ravine due to the increased discharge of the WWTRF during sensitive migratory months. Attraction of American River fish is of concern because the American River run consists primarily of hatchery stocks. The following section provides an overview of the responses by the lead agencies to these issues. Additional detail, particularly regarding the findings of the technical literature review, is provided following this overview.

In response to the comments, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine as under the existing conditions. Water diverted from the North Fork American River would now be conveyed to the PCWA water supply distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within

the Auburn Ravine Tunnel, and from the tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station (**Figure 3-2**). The water would then flow within the South Canal where it would be delivered to the Foothill WTP (**Figures 3-3** and **3-4**). The formerly proposed American River water increase in Auburn Ravine therefore would be avoided; however, the American River water currently delivered to Auburn Ravine would remain within the limits of recent historical monthly maximum delivery rates.

The double-pumping commitment by PCWA is a more costly method of water conveyance but ensures that the potential impacts resulting from an increase in volume or a change in the seasonal distribution of flow in Auburn Ravine would be avoided. Still, American River water would be delivered to Auburn Ravine as historically conveyed, as well as via the Lincoln WWTRF. Commenters suggest that these actions may still affect salmonid homing. However, a thorough review of the mechanisms that salmonids utilize when homing to natal streams indicates that it is unlikely that the Proposed Project would produce a genetic disruption of Auburn Ravine salmonid stocks primarily due to the acute olfactory homing mechanisms in the salmonid family; the environmental homing cues and the fate of these cues within the study area; the sequential imprinting process; the probable lack of persistent, native Auburn Ravine stocks within the Central Valley Evolutionarily Significant Unit (ESU); and the mitigation programs of other water projects affecting Auburn Ravine . An overview of these findings is provided below, and more detailed information is presented later in this Master Response.

Salmonids have an acute homing mechanism which leads to an uncanny fidelity in returning to natal streams. The homing of migrating salmon likely derives from the processing of olfactory cues found in stream waters. The olfactory homing hypothesis is based on three assumptions. First, streams differ in chemical characteristics that are stable over time. Second, salmonids can distinguish the chemical differences between streams. Third, salmonids learn the chemical characteristics of their natal stream (called imprinting) prior to or during their seaward journey, remember these cues without reinforcement while in the ocean, and respond to them upon returning to freshwater to spawn.

Numerous years of research seem to validate the olfactory hypothesis assumptions. For instance, research indicates that salmonids have the ability to actively differentiate between different stream waters, even when the streams are proximate, using only their olfactory sense. Studies illustrate that the olfactory cue in which salmonids home toward is likely organic in nature. In fact, investigations cite distinct combinations of amino acids as the odor cue utilized in discriminating between stream waters. The distinct cues of each stream may be a result of differences in watershed vegetation and soil. Other research indicates that salmonid adults can sense the unique chemical compounds released by conspecifics (juvenile salmonids rearing in the natal stream during the adult migration period) and respond to the signature of each specific population. Regardless of the exact compound utilized in the homing response, an overwhelming majority of the available research finds that the cue is organic.

The organic nature of the homing cue has an enormous implication for the analysis of potential impacts of the American River Pump Station Project. The American River water delivered for irrigation and municipal use is likely to encounter extreme and odor-altering environments

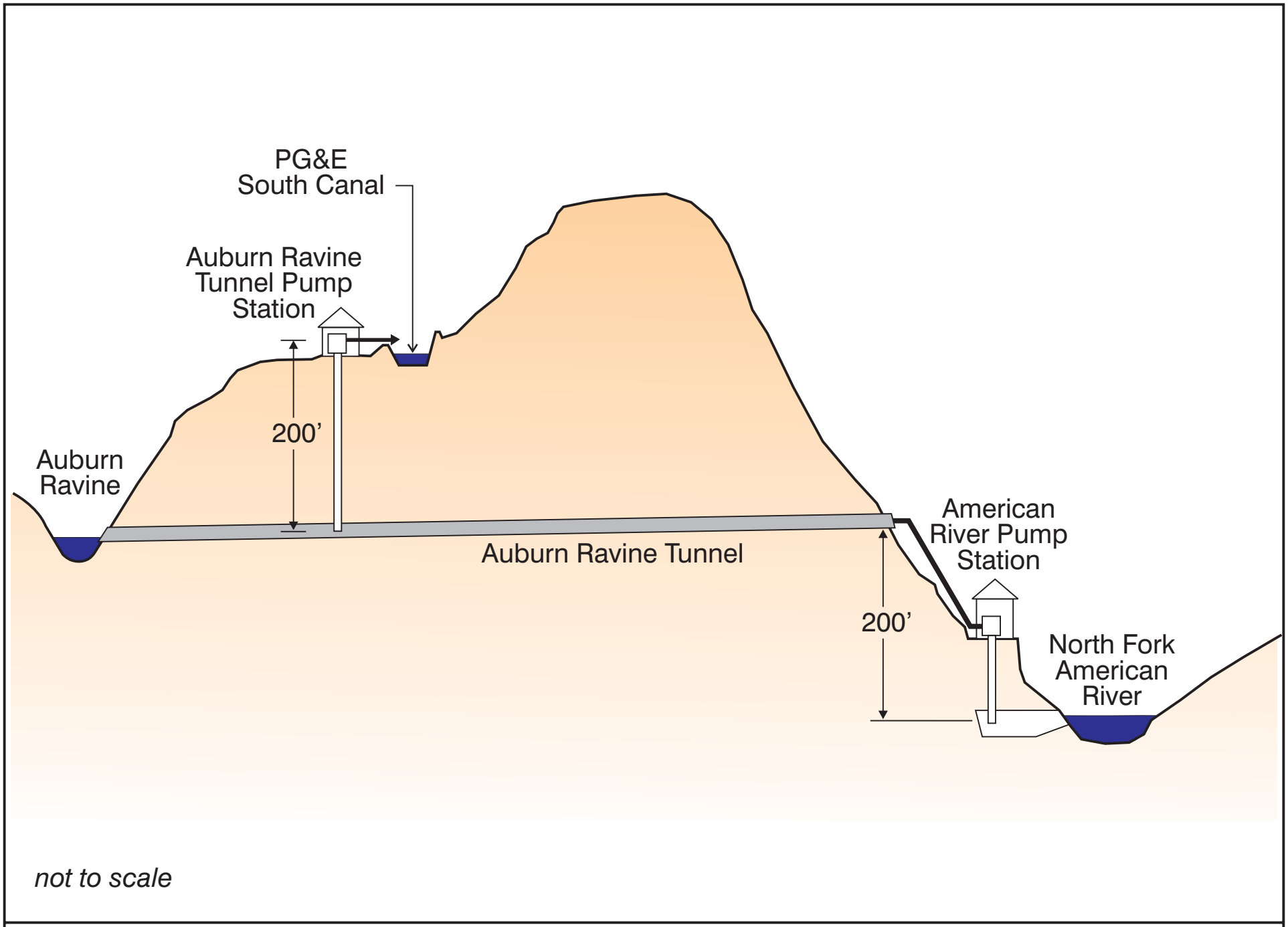


Figure 3-2 Hydraulic Profile of Water Deliveries from the American River Pump Station

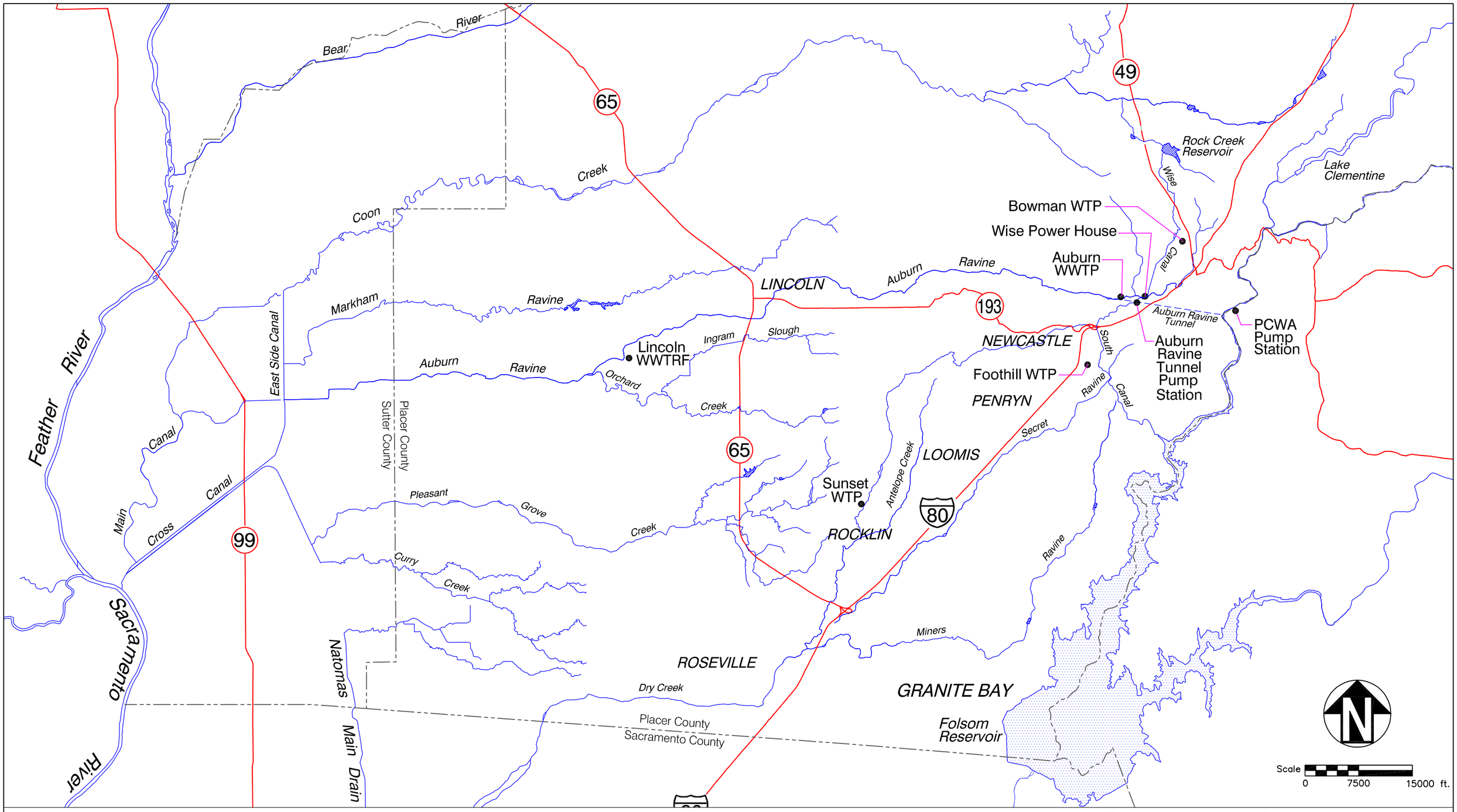


Figure 3-3 Auburn Ravine Watershed and Related Delivery System Infrastructure

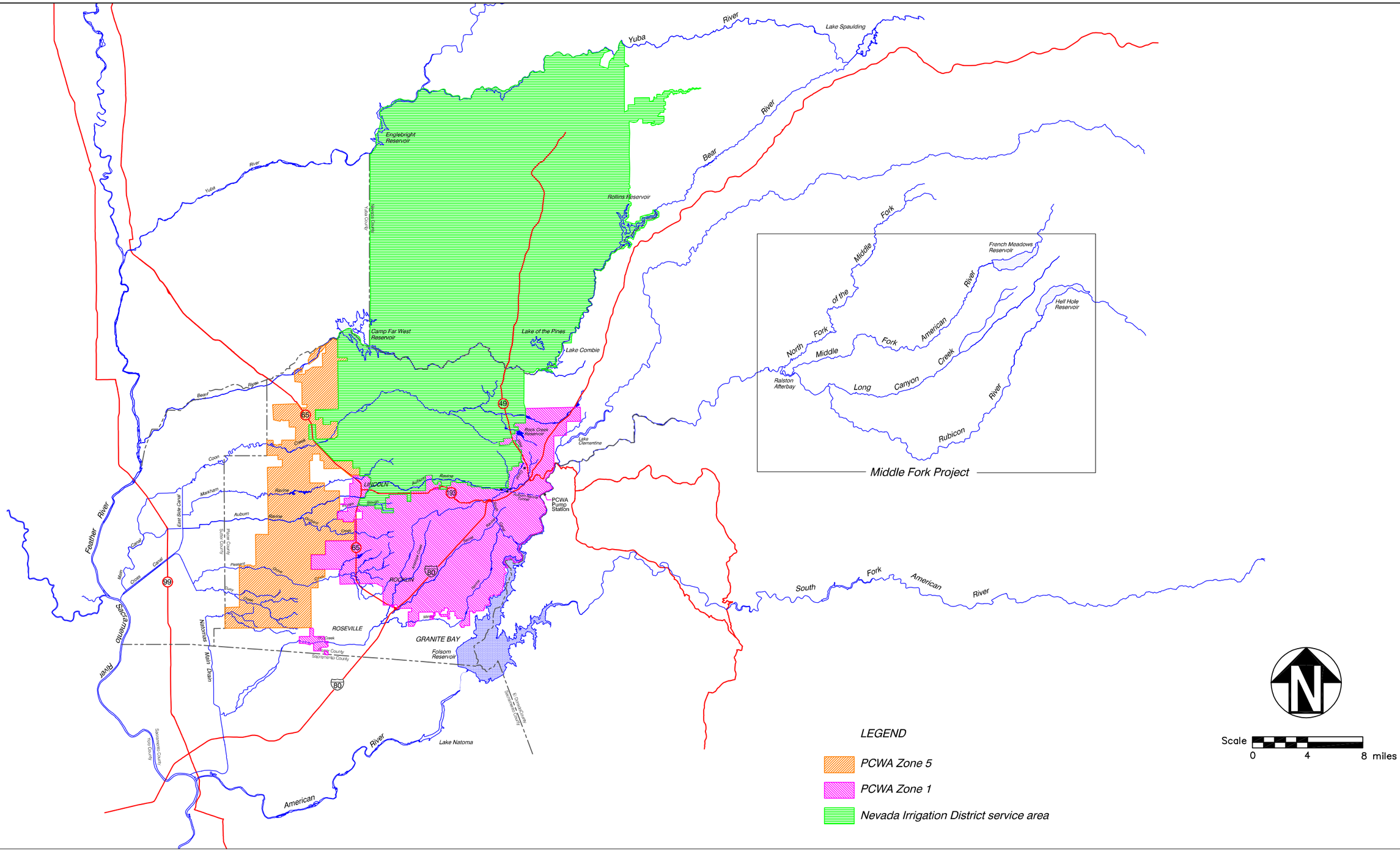


Figure 3-4 Regional View of Auburn Ravine Watershed

before entering Auburn Ravine. The water utilized for irrigation may encounter new sources of organic material such as the vegetation and soil of the agricultural fields and conveyance canals, and the ambient organic signature in the American River water would be subject to decomposition by soil microbes. Similarly, the American River water delivered for municipal use and discharged into Auburn Ravine as storm drain runoff may be subject to lawn vegetation and soil. American River water municipally delivered within the service area of the Lincoln WWTRF and discharged as treated effluent into Auburn Ravine would be treated and likely heavily altered by the secondary wastewater treatment process utilized by the plant, which is designed to remove organic material. Similarly, the municipally delivered Proposed Project water which is distributed to the service areas of Placer County Department of Public Works SMD No. 3 and the two City of Roseville Wastewater Treatment Plants (WWTP) will undergo treatment as well, a process which is likely to drastically alter the homing cues before the effluent is discharged into Dry Creek and Pleasant Grove Creek. Therefore, the homing cues found in the American River water utilized within the PCWA watersheds are likely to be dramatically altered before entering Auburn Ravine, Dry Creek, and Pleasant Grove Creek suggesting that the water reaching these streams would retain low potential for attracting American River fish.

The timing of olfactory imprinting also is a key component to understanding the mechanisms that drive salmonid homing behavior. The majority of the research in this field suggests imprinting of stream odors is most sensitive during a developmental process called the parr-smolt transformation (PST), in which a juvenile salmonid prepares for life in the ocean. However some imprinting must occur before this time, as wild salmon home to their hatching area, not to the area of their PST. Many of the changes that occur in the PST process are related to elevations in thyroid hormones, and it is postulated that these hormones drive the imprinting process. Research reveals that elevations in various thyroid hormones may occur at numerous lifestages including hatching and emergence. Thyroid hormone levels also are particularly sensitive to environmental cues such as exposure to novel water chemistry, and changes in lunar phase, water temperature, photoperiod, water flow rates, and juvenile swimming rates. Migration may actually stimulate an increase in thyroid gland production as well. Hence, it appears that the imprinting process associated with developmental-, environmental-, and migratory-induced surges in hormone levels may serve to provide a sequence of cached odors which adult salmonids use to find their natal streams.

The sequential imprinting process found in salmonids has implications in the analysis of the Proposed Project. The sequential process indicates that as wild-spawned salmon and steelhead in Auburn Ravine emerge, rear, and migrate, they may become imprinted with numerous odors during their downstream journey. To illustrate, a juvenile steelhead migrating from Auburn Ravine toward the ocean may become imprinted at various points along its journey determined by developmental processes and changes in environmental conditions. These imprinting points may include Auburn Ravine itself, the tributary confluence with the Sacramento River and its confluence with the American River, as flow, water temperature, and water composition likely change at these points. Upon returning from the ocean, the adult steelhead may reverse the olfactory memory constructed during the ocean-bound migration. The wild-spawned salmonid will not necessarily seek its natal waters automatically, but instead locate a series of points sequentially until the natal stream, presumably the last point in the sequence, is found. It is

unlikely that an immigrating Auburn Ravine adult would stray into the American River because the immigrating adult will continue to be drawn upstream in the much larger Sacramento River by olfactory cues associated with the next sequential points north of the point at which the American River empties into the Sacramento River. Thereafter, the immigrating adult will continue to follow the Sacramento River northward until the adult reaches a point at which olfactory cues indicate that the adult should follow waters flowing into the Sacramento River from the canals into which Auburn Ravine drains, each of which has its own unique olfactory cues. Thus, the sequential migration of Auburn Ravine salmonids will guide the return to their natal spawning grounds.

Similarly, it is unlikely that an American River fish will stray into Auburn Ravine as a result of the Proposed Project. While the American River salmonids reared in a hatchery may have fewer opportunities to imprint due to the relatively constant environmental conditions within the hatchery environment, American River fish should become imprinted with the smell of the American River as their natal spawning ground during developmental changes. As these fish reach the American River during upstream migration as adults, they will be bombarded with the smell of their natal stream. In some cases, this smell is the only imprinted smell available to them during their juvenile lives. Hence, it is unlikely that salmonids from the American River will disregard the inherent drive to enter this natal stream, simply because a minute amount of diluted American River water may exist in the Sacramento River at their confluence. In addition, the water transferred from the North Fork American River to Auburn Ravine, having been subjected to myriad organic influences associated with the Auburn Ravine watershed, is likely to smell drastically different than the substantial lower American River flows that enter into the Sacramento River at the confluence. Therefore, the Proposed Project would not be expected to increase the straying rates of American River or Auburn Ravine salmonids.

Although a majority of the transferred American River water will end up in Auburn Ravine only after contact with new odor causing agents or extensive treatment, some raw American River water will still be diverted into Auburn Ravine via the Auburn Ravine Tunnel in the historical amount. The majority of the American River raw water diversions associated with implementation of the Proposed Project occur in June, July and August, with a maximum diversion in July. This pattern and volume of water diversion releases to Auburn Ravine is consistent with the existing condition, and would not result in a change in the total volume or seasonal distribution of North Fork American River water to Auburn Ravine.

Although it is not the only stage associated with imprinting, the PST likely represents the most sensitive imprinting period. The initiation of the PST is related to the emigration process of salmonids from natal drainages. Fall-run chinook salmon in the Central Valley emigrate from January through June, peaking in April, while steelhead emigrate from December through possibly June. Hence, the periods of peak emigration of juvenile salmonids do not correlate with periods associated with peak raw water deliveries. Therefore, continuation of historical levels of raw water deliveries is not expected to significantly affect the imprinting of juvenile salmonids in Auburn Ravine.

Similarly, immigrating adult salmonids in Auburn Ravine are not expected to be exposed to the olfactory cues or increased flows associated with the seasonal delivery of raw North Fork

American River water. Adult migrations of chinook salmon begin in September and may extend through January, while adult steelhead typically immigrate November through April, peaking in January. Because relatively small discharges of American River water from the Auburn Ravine Tunnel occur during these times, the continuation of historical levels of raw water deliveries is not expected to affect immigrating adult salmonids. The timing of critical periods of salmonid life history and the timing of water deliveries to Auburn Ravine are temporally inconsistent.

It is not likely that Auburn Ravine historically harbored a persistent native population of salmonids. Low elevation streams like Auburn Ravine may have been essentially dry in summer and fall, at least in the foothill sections. Because of their intermittent nature, these streams were not conducive to significant or consistent fall-run chinook salmon or steelhead populations. The population of salmonids currently residing in Auburn Ravine likely represents a conglomeration of strays from Central Valley drainages, and the genetic characteristics of the Auburn Ravine salmonids are not likely distinct. Furthermore, hatchery stocking records indicate that Auburn Ravine already has been influenced by chinook salmon of American River origin. Additionally, the National Marine Fisheries Service (NMFS) considers Auburn Ravine steelhead to be within the Central Valley ESU, and does not recognize them as genetically distinct from other populations within the ESU.

Considering the overwhelming weight of evidence concerning homing and straying in the salmonid family, it is unlikely that the Proposed Project would cause potentially significant impacts to the salmonids of Auburn Ravine.

While the mitigated diversion plan for the American River Pump Station Project no longer entails a change in the volume or seasonal distribution of American River water diversions into Auburn Ravine, the Lincoln WWTRF discharges will increase the amount of flow in Auburn Ravine, which commenters believe could potentially induce a "false attraction" of salmonids. The potential for the "false attraction" of salmonids was considered by the City of Lincoln in its Draft EIR for the WWTRF (City of Lincoln 1999). The City of Lincoln (1999) concluded that the existing flows in Auburn Ravine during the steelhead spawning season would likely be adequate for migration both upstream and downstream of the WWTRF outfalls. However, the City of Lincoln (1999) determined that the supplementation to existing flows in Auburn Ravine by WWTRF effluent during the fall-run chinook spawning months (October and November) could potentially create a "false attraction" of fall-run chinook. The Draft EIR deemed the potential for fall-run chinook salmon "false attraction" potentially significant. As a result of the potentially significant impact created by the City of Lincoln WWTRF, the city committed to monitoring adult fall-run chinook salmon migrations in Auburn Ravine.

The City of Lincoln (1999) Draft EIR indicated that the WWTRF will have a maximum discharge into Auburn Ravine of 12 million gallons per day (mgd), or 18.6 cfs. The Proposed Project will supply only a fraction of the WWTRF inflows. At maximum buildout, the Proposed Project would contribute an average of 2.0 cfs during the months of October and November, the months of concern regarding "false attraction." Therefore, the Proposed Project would approximate only 11 percent of the total WWTRF discharge. Without any contribution from the Proposed Project, the Lincoln WWTRF discharge would still exceed 16 cfs during

October and November, which may constitute a potentially significant impact. The additional contribution of North Fork American River source water provided by the Proposed Project during October and November would not significantly exacerbate any "false attraction" that may be created by the Lincoln WWTRF discharge into Auburn Ravine. Therefore, the potential for "false attraction" of adult salmonids into Auburn Ravine, more particularly to the Lincoln WWTRF outfall, represents a less-than-significant impact of the Proposed Project.

In addition, the Proposed Project will supply municipally delivered treated water to the service areas of three other WWTPs including Placer County Public Works SMD No. 3, and two City of Roseville WWTPs. During October and November, the Proposed Project-related collective discharge from these three plants would average approximately 2.8 cfs, while the collective planned capacities of the three WWTPs total 65 cfs. Hence, the Proposed Project-related discharge represents less than five percent of the collective planned capacities of three WWTPs. It should also be noted that American River water deliveries to this area would increase independent of the Proposed Project as a result of increased deliveries by Roseville and San Juan Water District (SJWD), both of which supply only American River water. Overall, the distribution of water from the Proposed Project to the service areas of the Placer County Department of Public Works SMD No. 3 and the two City of Roseville facilities represents a less-than-significant impact.

Placer County Water Agency Water Service Area, Water Supply Entitlements, Facilities, and Water Demands

The following sections provide an update and clarification of information contained in the Draft EIS/EIR that describes PCWA's water supply service zones, conveyance infrastructure and water supply sources. This information is included Chapter 3.0, Section 3.4.1.3, Water Supply System and Water Service Area, of the Final EIS/EIR. These changes do not alter the conclusions presented in the Draft EIS/EIR.

PCWA Service Area and Retail Service Zones

PCWA's service area boundaries coincide with the boundaries of Placer County. Within the county, PCWA provides raw and treated water service to five retail service zones. PCWA currently provides American River water to Zones 1 and 5. Under the Proposed Project, PCWA would continue to provide American River water to these zones. No other zones would be provided American River water; therefore, this discussion focuses on the water supply and infrastructure for these two service area zones.

The communities of Auburn, Newcastle, Penryn, Loomis, Rocklin, Lincoln, small portions of Roseville, and vast unincorporated areas are all within PCWA Zone 1. These lands are under the planning authority and jurisdiction of the cities of Auburn, Rocklin, Lincoln, Roseville, the Town of Loomis, and Placer County. Zone 5 consists of commercial agricultural lands in the western-most portion of Placer County (west of Highway 65). PCWA provides both treated and raw water to Zone 1, while only raw water is delivered to Zone 5 customers (Figure 3-4).

PCWA Water Supply and Infrastructure

PCWA currently has three surface water supply sources to meet current and future demands: (1) the PG&E Drum-Spaulding Project on the Yuba/Bear River system; (2) its own MFP water rights entitlements; and (3) Reclamation's Central Valley Project (CVP) water contract supply on the American River. The principal facilities utilized to deliver these water supplies include the PG&E Drum-Spaulding Project features, the seasonal American River pump station, and the Auburn Ravine Tunnel and Pump Station, as described below.

Pacific Gas and Electric Company Drum-Spaulding Project Water Supply and Infrastructure

PCWA signed a water supply contract with PG&E in 1968 for water supply to Zone 1. The maximum amount of water available under this contract is 100,400 acre-feet per year (AFA). The water is available at designated delivery points at a total combined rate of flow not to exceed 244.8 cfs. This contract terminates in 2013 and is renewable subject to price revisions.

The primary PG&E-owned conveyance facility through PCWA Zone 1 is the Wise/South Canal. This canal has a capacity, at its upper end, of 450 cfs and is used to supply water in Placer County to PCWA Zone 1 and to Nevada Irrigation District (NID). PCWA is able to divert water from the Wise/South Canal at 10 separate delivery points, as specified in the PG&E water supply contract.

Middle Fork American River Project Water Supply and Infrastructure

PCWA constructed the MFP. The MFP supply is currently limited to a maximum of 120,000 AFA. This water is available to PCWA from the American River either at Auburn or at Folsom Dam. Currently, PCWA obtains its MFP water from the seasonal American River pump station near Auburn.

Reclamation constructed the seasonal American River pump station in 1977 to replace the original 50 cfs capacity PCWA pump station that was removed in preparation for construction of Auburn Dam. This pump station consists of four, 400-horsepower pumps located on the American River just upstream of Reclamation’s Auburn Dam diversion bypass tunnel. The seasonal pump station and discharge piping is capable of delivering 50 cfs of water to the inlet of the Auburn Ravine Tunnel.

Reclamation removes the pumps, motors, all electrical equipment, and a portion of the discharge piping before winter each year to avoid damage due to inundation from high river flows. Reclamation then reinstalls the pumping equipment each spring after the threat of flooding has passed.

In 1977, PCWA relied upon the seasonal pump station and pumped approximately 8,500 acre-feet (AF) of water at a maximum rate of 50 cfs into Auburn Ravine, through the Auburn Ravine Tunnel, for use in Placer County. From 1990 to present, PCWA has required the use of the seasonal pump station in order to meet the ever-increasing water demands of Placer County.

Auburn Ravine Tunnel and Auburn Ravine Tunnel Pump Station

The Auburn Ravine Tunnel is a three-mile long tunnel that extends from the American River Canyon to Auburn Ravine. The tunnel inlet is at an elevation of 700 feet, which is approximately 200 feet higher than the American River channel. Built in 1964-1965 by PCWA, the tunnel was part of the MFP. The tunnel outfall discharges into Auburn Ravine near the community of Ophir.

In 1990, PCWA constructed the Auburn Ravine Tunnel Pump Station. This pump station is located adjacent to PG&E's South Canal near the Auburn WWTP directly above the Auburn Ravine Tunnel. Eight pumps extend from the surface and intercept the Auburn Ravine Tunnel approximately 200 feet directly below the pump station. These pumps are able to lift approximately 50 cfs of water from the tunnel to PG&E's South Canal. Once within the South Canal, North Fork American River water flows by gravity toward Newcastle where it can be diverted to PCWA's system to be used to supply water treatment plants or the raw water system.

The Auburn Ravine Tunnel Pump Station has been used infrequently during the past due to the high cost of double-pumping the water from the North Fork American River.

During the annual PG&E canal maintenance outage, when the upper Drum-Spalding Project is taken out of service, no water is available from PG&E. During these outages, typically October 15 to November 15, PCWA must double-pump North Fork American River water to supply the Foothill and Sunset WTPs and its treated water customers within the lower portion of PCWA Zone 1.

Central Valley Project Water Supply and Infrastructure

PCWA entered into a CVP water supply contract with Reclamation on September 18, 1970. The original contract allowed for a maximum water allotment of 117,000 AFA. In February 2002, the contract was amended, limiting the amount of water available to PCWA from this source to 35,000 AFA prior to the completion of the Auburn Dam.

PCWA Water Delivery Facilities in Zones 1 and 5

The water supply system that provides water to PCWA Zones 1 and 5 is a complex system of canals, tunnels, flumes, pump stations, storage reservoirs, and pipelines.

Zone 1 Raw Water Canals

PCWA maintains an extensive network of raw water canals throughout its Zone 1 service area. These canals branch out to provide raw water service to large areas throughout Zone 1. There are approximately 127 miles of raw water canals within Zone 1.

Zone 1 Water Treatment Facilities

There are four water treatment plants that provide treated water to the Zone 1 service area. Two of the plants, Bowman (7 mgd/10.9 cfs capacity) and Auburn (5 mgd/11.6 cfs capacity) provide service to the Bowman, Auburn, and Newcastle areas. These plants are supplied with raw water from the PG&E Drum-Spaulding Project supply. The remaining plants, Foothill (55 mgd/85.3 cfs capacity) and Sunset (5 mgd/11.6 cfs capacity) provide service to the balance of the Zone 1 area that includes Penryn, Loomis, Rocklin, Lincoln, a portion of Granite Bay, and surrounding areas. The source of raw water for these plants is from PG&E's Drum-Spaulding Project and from the North Fork American River (MFP) seasonal pump station.

Throughout the Zone 1 service area, there is an extensive network of treated water storage and distribution system facilities. These facilities extend from the Bowman area, where the Bowman WTP is located, and branch out to cover most of the Zone 1 service area. There are approximately 370 miles of treated water pipelines within the Zone 1 service area.

Zone 5 Raw Water Canals

PCWA facilitates the distribution of water to users in Zone 5, but this is the extent of its involvement in this area. The infrastructure of Zone 5 (i.e., canals) is owned and operated by other entities.

PCWA Water Demands

Existing water demands within Zone 1 equal approximately 90,000 AFA. Of that amount, nearly 28,000 AF, or 31 percent, is provided as treated water service. The remaining 62,000 AF provide raw water service to customers throughout Zone 1.

Existing raw water demands within Zone 5 equal approximately 16,500 AFA. Demands for raw water deliveries in Zones 1 and 5 are not expected to rise substantially over the planning horizon (2030).

Update to the Draft EIS/EIR Description of Auburn Ravine

The Draft EIS/EIR provided a description of the estimated natural flow pattern for Auburn Ravine as well as details regarding other flows that, under existing conditions, supplement and modify Auburn Ravine streamflows from the natural condition. This information is revised and presented below with additional detail regarding the source of flows that supplement the natural streamflow. Figure 3-3 shows the Auburn Ravine watershed and related water conveyance system features described below.

Estimated Natural Flow Conditions in Auburn Ravine

Natural flows estimated for Auburn Ravine exhibit significant monthly variations. Relatively high flows associated with storm runoff occur during winter months, particularly January, and flows decline to very low levels during spring months, with no natural flow during summer

months. Estimated mean monthly natural streamflows in Auburn Ravine at the Highway 65 Bridge in the City of Lincoln range from approximately 70 cfs in January to 0 cfs in summer and early fall months (City of Auburn 1997 *in* City of Lincoln 1999).

Existing Flow Conditions and Supplemental Source Waters of Auburn Ravine

Historically, Auburn Ravine has been used to convey water from multiple sources. Under existing conditions, the natural streamflow of Auburn Ravine is supplemented by four primary sources: (1) PG&E Drum-Spaulding Project source water (Yuba/Bear River system); (2) PCWA deliveries from the North Fork American River through the Auburn Ravine Tunnel; (3) City of Auburn treated effluent discharges from its WWTP; and (4) Auburn Ravine watershed stormwater runoff.

These supplemental sources result in streamflows that vary considerably from estimated natural flow conditions in Auburn Ravine. Without the influence of these supplemental water sources, Auburn Ravine would remain an intermittent stream carrying only flow originating at its headwaters and surface runoff from the watershed. Although Auburn Ravine flows can vary substantially on a daily and monthly basis, in general, these supplemental flows significantly augment the estimated natural late-summer and early-fall streamflows. Therefore, in contrast to the estimated natural flows, existing condition flows in Auburn Ravine are highest in summer months and lowest during fall months.

Pacific Gas and Electric Company Drum-Spaulding Project Source Water

PG&E's Drum-Spaulding Project and NID's Upper Yuba River system are integrated to meet the water demands of western Placer and Nevada counties, while at the same time maximizing hydroelectric power production. This joint system is one of the oldest and most complex water systems in the state, with storage reservoirs and canals that can capture runoff from the north, middle and south forks of the Yuba River, the Bear River, and the Upper North Fork of the American River, and route that water through a series of hydroelectric plants and to customers all the way to Folsom Reservoir.

Much of the water supply provided by the Drum-Spaulding Project is delivered either to NID or PCWA to meet the consumptive demands of their customers. Consumptive deliveries to NID and PCWA made into Auburn Ravine occur during the "irrigation season" (April 15 to October 15). Most of the consumptive demand satisfied through deliveries to Auburn Ravine is for irrigated commercial agriculture in Zone 5 (primarily rice and pasture), most of which occurs on land between Highway 65 and the Sacramento River. Over the course of the current planning horizon (2030) it is not anticipated that the consumptive demand for irrigation water deliveries via the Auburn Ravine will change.

In addition to these consumptive use deliveries to PCWA and NID during the irrigation season, PG&E often spills substantial amounts of hydroelectric system water to Auburn Ravine. PG&E's Drum-Spaulding Project originally terminated at its Wise Powerhouse in Auburn Ravine, and all of the water that ran through the hydroelectric system that was not delivered for consumptive use at other locations was spilled into the Auburn Ravine. A lawsuit by

downstream landowners on the Auburn Ravine to prevent flooding by these spills forced PG&E to construct the South Canal in 1931. Since then, the South Canal delivers most of the spill water into Folsom Reservoir. However, the capacity of the South Canal is less than the Wise Canal, which delivers water into Auburn Ravine upstream of the Wise Powerhouse. The result is that, in winter and spring, when demand for consumptive deliveries from the Wise Canal is low and the Wise Canal is running at full capacity for hydroelectric power production, a substantial amount of water is still spilled into Auburn Ravine.

Today, the South Canal is also used for consumptive delivery at a capacity of about 450 cfs, of which PCWA has a contractual entitlement to 244.8 cfs, with NID entitled to the remainder. The South Canal is at about elevation 900 feet at its point of discharge to Auburn Ravine. At the peak of the summer delivery season, 100 percent of the capacity of the PG&E canal system below Rollins Reservoir is used to meet consumptive deliveries to NID and PCWA. During these periods the hydroelectric operation becomes secondary to the water delivery requirements, and there is no excess spill water in Auburn Ravine.

PG&E operates the Wise Powerhouse with flows from the Yuba/Bear River system to generate power year-round, with the exception of the four to six weeks in the late fall when it shuts down the hydroelectric system for maintenance. As indicated above, PG&E powerhouse releases to the South Canal are conveyed to Auburn Ravine for use by NID and PCWA deliveries to irrigation customers within their respective service areas. These releases are made over the course of the entire irrigation season. Additionally, throughout much of the summer, PG&E continuously releases flows of approximately 31 cfs (20 mgd) from the Wise Powerhouse South Canal into Auburn Ravine, thereby providing supplemental streamflows when Auburn Ravine would naturally become dry.

PCWA North Fork American River Source Water

PCWA currently has the ability to pump approximately 50 cfs of American River water to Auburn Ravine during the irrigation season. The transferred water is pumped through the Auburn Ravine Tunnel using the seasonal pump station.

When PCWA's consumptive water demands increase beyond the amount available from PG&E (244.8 cfs), PCWA operates the seasonal pump station and delivers water into Auburn Ravine via the Auburn Ravine Tunnel. This water is delivered to PCWA customers along Auburn Ravine west of Highway 65.

The seasonal pump station has been used at times to deliver the full capacity (50 cfs) of North Fork American River water to Auburn Ravine. For instance, during the 1977 drought event, the seasonal pump station was used to supply Auburn Ravine with 8,500 AF of North Fork American River water and an exchange of water took place with NID. North Fork American River water was delivered to NID via the Auburn Ravine Tunnel and PG&E water that normally would have been delivered to NID via Auburn Ravine was instead delivered to PCWA's water treatment plants and canals within the Auburn, Newcastle, Penryn, Loomis, Rocklin, and Lincoln areas.

In more recent years, the seasonal pump station has provided a maximum annual delivery of approximately 2,900 AF of North Fork American River water to Auburn Ravine. The American River supply is used to meet peak irrigation demands, primarily during summer months. Agricultural return flows also contribute to the streamflow conditions of Auburn Ravine from April through September/October.

In addition to being able to supply water to Auburn Ravine from the American River, PCWA also has the ability to pump approximately 50 cfs of water directly from the Auburn Ravine Tunnel to PG&E's South Canal. In 1990, PCWA constructed the Auburn Ravine Tunnel Pump Station. This pump station is located directly above the Auburn Ravine Tunnel and is able to lift water approximately 200 feet from the tunnel to PG&E's South Canal. Once within the South Canal, this water flows by gravity toward the Foothill WTP. The Auburn Ravine Tunnel Pump Station has been used infrequently in the past, due to the high cost of double-pumping the American River water.

Water pumped from the American River has historically been delivered into Auburn Ravine. When American River water has been needed, PCWA orders a cutback in its PG&E deliveries to Auburn Ravine and reassigns the water to delivery at other, higher elevation locations. By exchanging American River water for PG&E's Drum-Spaulding Project water in this fashion, PCWA has been able to save half the energy cost that would otherwise be incurred in double-pumping the American River water from the 500-foot elevation of the American River to the 700-foot elevation of the Auburn Ravine Tunnel, and then pumped again to the 900-foot elevation of the South Canal.

While the water exchange has been effective during the irrigation seasons of past years in reducing double-pumping costs, PCWA has still been required to double-pump water during the annual PG&E canal maintenance outage in late October and early November. During these outages, water is not available from PG&E, and PCWA must double-pump American River water to supply the Foothill WTP and treated water customers.

City of Auburn Wastewater Treatment Plant Discharges

The City of Auburn's WWTP lies along the Auburn Ravine approximately one-half mile below PG&E's Wise Powerhouse South Canal crossing and one-half mile above the outlet of the Auburn Ravine Tunnel. The city continuously releases approximately 3.9 cfs of treated effluent into Auburn Ravine year-round. The City of Auburn WWTP service area water supply source is imported from the Drum-Spaulding Project (Yuba/Bear River system) and delivered by PCWA. The treated wastewater effluent releases are a function of the WWTP inflow and are unrelated to other sources of water released into Auburn Ravine. Likewise, direct releases to Auburn Ravine from other source waters are independent of the City's WWTP.

Auburn Ravine Watershed - Stormwater Runoff

The Auburn Ravine headwaters lie within the City of Auburn. Urban stormwater runoff occurs in response to rainfall and due to over-watering of landscaped areas.

Proposed Project Operations and Auburn Ravine Impact Avoidance Measures

In response to written comments received on the Draft EIS/EIR and additional concerns expressed at public stakeholder sessions, PCWA has revised its proposed water delivery operations to avoid impacts upon Auburn Ravine aquatic resources. By adopting the revised operational scheme (i.e., the double-pumping procedure described below), PCWA would incur substantially higher operational costs associated with delivery of its MFP water entitlements from the North Fork American River pump station to the Foothill WTP than it would if the water was conveyed to Auburn Ravine.

Draft EIS/EIR Description of the Proposed Project

The Draft EIS/EIR includes a description of the Proposed Project which formed the basis for the impact analysis regarding Auburn Ravine. This section reiterates the description of the Proposed Project provided in the Draft EIS/EIR.

Implementation of the Proposed Project would provide PCWA with year-round ability to pump water from the North Fork American River near Auburn. As described previously, the source for this water comes from PCWA's MFP water entitlements. The Proposed Project would increase PCWA's diversion capacity from 50 cfs to 100 cfs; increases in diversion amounts from the Proposed Project would occur gradually over time. Annually, PCWA's water supply from this location would increase from the existing 8,500 AF up to 35,500 AF. Under the No Action/No Project Alternative, PCWA would potentially obtain up to 19,300 AFA.

PCWA would have modified its current water delivery operation practices to redirect its Drum-Spaulding Project (Yuba/Bear River system) entitlement (normally release into Auburn Ravine) to the Foothill WTP for delivery of treated water within its retail Service Area Zone 1.

The majority of the American River diversions would occur in May, June, July, and August. The maximum diversion would be expected to occur in July.

Under the proposal described and evaluated in the Draft EIS/EIR, PCWA would have conveyed its MFP water entitlements diverted from the North Fork American River pump station via pipeline to the Auburn Ravine Tunnel directly to Auburn Ravine for delivery to irrigation customers in service area Zone 5. These proposed operations would have resulted in a change of flow volume and water source composition in Auburn Ravine relative to the existing condition. The new American River water supply would then have been delivered via the Auburn Ravine Tunnel directly into Auburn Ravine to continue raw water delivery services to PCWA's irrigation customers within retail service Zone 5. Although not identified as such in the Draft EIS/EIR, these operational changes are referred to by the lead agency representatives as "replacement" or "exchange" of Yuba/Bear River system water with American River water in the ravine.

Draft EIS/EIR Evaluation of Auburn Ravine

During public scoping meetings held prior to completion of the Draft EIS/EIR, interested parties expressed concern regarding the potential for the Proposed Project to result in increased straying of American River salmonids into Auburn Ravine. The concern was that the release of American River water into Auburn Ravine would potentially transfer olfactory cues, which drive salmonid homing behavior, thereby increasing straying of American River salmonids from the American River into Auburn Ravine. In its analysis, the Draft EIS/EIR suggested that genetic heredity, in addition to olfactory response/odor imprinting, might play a role in salmonid homing behavior. The analysis indicated, "*...the hereditary predilection for natal sites may ameliorate the possibility of increased straying as a direct result of changing the proportion of American River water discharged into Auburn Ravine…*".

Additionally, the Draft EIS/EIR indicated that even if salmonid straying were to occur as a result of the Proposed Project, there is no evidence to suggest a negative effect on the Auburn Ravine salmonid population. As discussed in the Draft EIS/EIR, straying is known to occur in natural river systems, and potentially aids salmonid populations by colonizing new habitats, avoiding adverse natal stream conditions and increasing genetic heterogeneity. Coded-wire tag studies of Central Valley chinook salmon indicate that straying among salmonids in this region may be very common. Additionally, the Draft EIS/EIR indicated that genetic differences between American River salmonids and Auburn Ravine salmonids may be negligible. This discussion was based on hatchery stocking reports that indicate American River salmonids historically have been planted in Auburn Ravine.

The Draft EIS/EIR indicated that the anticipated increase of flows in Auburn Ravine, regardless of the source, would increase habitat availability for salmonids in Auburn Ravine. The evaluation concluded that the potential impacts of the Proposed Project upon Auburn Ravine salmonids would be expected to be less than significant.

Public Comments on the Draft EIS/EIR Auburn Ravine Impact Evaluation

As described earlier under Summary of Public Comment Issues Related to Auburn Ravine Fish, interested parties expressed concern over the analysis and conclusions reached in the Draft EIS/EIR evaluation of Auburn Ravine aquatic resources. In response to these comments, PCWA has proposed operational changes to avoid potential impacts within Auburn Ravine, as described below.

PCWA's Operational Changes to Avoid Impacts to Auburn Ravine

In an effort to avoid creating an increased potential for American River salmonid straying into Auburn Ravine, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine as under the existing conditions. The Proposed Project would be operated such that no changes to the existing quantity, seasonal distribution, or source composition of PCWA's releases would be made in the future without first completing additional environmental studies of the Auburn Ravine system.

The diversion of 8,500 AF in 1977 represents the maximum historical yearly diversion from the seasonal American River pump station. While this number could have been used to define the existing condition, as it represents what could occur again in the near future during a similarly dry year, the lead agencies instead adopted a more conservative approach. Under the proposed operational change, PCWA would continue to convey North Fork American River water from the Auburn Ravine Tunnel into Auburn Ravine within the limits of the recent historical monthly maximum delivery rate (**Table 3-9**). The years 1998 through 2001 most closely represent the existing condition, as they are temporally proximate and characteristic of current operational scenarios. In addition, the 1998 through 2001 years encompass a variety of water year types, including dry and wet. Pursuant to the operational change, PCWA will ensure that direct diversions into Auburn Ravine will not exceed the maximum monthly levels shown in Table 3-9. Maximum monthly levels, rather than average levels, were chosen in order to allow PCWA the flexibility to continue to meet the needs of agricultural users along Auburn Ravine under varied and unpredictable hydrological and climatic conditions, as PCWA has done in the past four years. The use of average figures would create artificial constraints, as precipitation levels in California are seldom "average," but rather tend to be dry or wet.

Table 3-9
Seasonal American River Pump Station Deliveries to Auburn Ravine (AF)

Month	1998	1999	2000	2001	Maximum
May	89.0	0	0	0	89.0
June	0	391.0	543.0	180.0	543.0
July	238.0	1,581.0	1,015.0	668.0	1,581.0
August	238.0	772.0	441.3	74.0	772.0
September	4.5	87.0	0	0	87.0
October	49.7	31.0	63.0	27.0	63.0
November	56.5	30.0	47.0	62.0	62.0

While the amount of North Fork American River water directly reaching Auburn Ravine will not change from the existing condition, total deliveries to the Auburn Ravine Tunnel will increase under the Proposed Project conditions. The existing condition will initially be supplemented with an additional 50 cfs of American River water into the Auburn Ravine Tunnel, but the additional water will be conveyed directly to the PCWA distribution system through "double-pumping," without ever reaching Auburn Ravine. Essentially, double-pumping refers to the conveyance method of first pumping the water at the Proposed Project pump station and then pumping it a second time into the South Canal, using the 50 cfs capacity of the Auburn Ravine Tunnel Pump Station. Once in the South Canal, the American River water will flow by gravity to the Foothill WTP. Any American River water diverted under the Proposed Project in excess of current maximum monthly deliveries to Auburn Ravine would be double-pumped and conveyed directly to PCWA's distribution system. Therefore, the additional 50 cfs of water would never be in contact with Auburn Ravine.

In 1999, PCWA completed and certified environmental documentation for a separate conveyance pipeline from the Auburn Ravine Tunnel Pump Station to the Foothill WTP. Eventually the PCWA pipeline would be utilized instead of PG&E's South Canal. Once construction is completed (within the next five years), the pipeline will allow the North Fork

American River water to be delivered independent of PG&E's South Canal. Furthermore, the pipeline will still convey the additional Proposed Project-related American River water without any contact with Auburn Ravine.

Double-pumping the North Fork American River water is substantially more costly than the original proposal of supplying the Foothill WTP by exchanging upstream water for American River water releases from the Auburn Ravine Tunnel. It is estimated that this process would result in additional ongoing costs of approximately $950,000 annually.

Potential Impact Considerations and Conclusions

The Proposed Project would have the capacity to divert up to 100 cfs from the American River. However, under the revised operational procedure, PCWA would double-pump up to 50 cfs to its water supply distribution system, due to capacity limitations at the Auburn Ravine Tunnel Pump Station. PCWA has estimated that within approximately 5 to 10 years, increasing water demands would require changes to the system to enable it to obtain up to the full 100 cfs from the American River pump station. These changes possibly include expansion of the Auburn Ravine Tunnel Pump Station facilities to enable double-pumping of the additional water supply and continued avoidance of flow or water composition changes to Auburn Ravine. Should PCWA pursue expansion of the Auburn Ravine Tunnel facilities, additional environmental evaluation and documentation, including opportunities for public input and review, would be required.

PCWA's commitment to double-pump any North Fork American River water deliveries in excess of recent historical monthly amounts would address public and agency concerns regarding previously anticipated changes in Auburn Ravine flow volumes and source water composition. For instance, the potential for disruption of terrestrial resources, including elderberry shrubs, riparian vegetation, and associated fauna, due to an increase in flow in Auburn Ravine is no longer relevant. In addition, since diversion rates of American River water will not change from the existing condition, the Proposed Project would not raise Auburn Ravine water temperatures. The potential for such impacts would therefore be less than significant.

The potential for American River salmonids straying into Auburn Ravine related to the increased proportion of American River water within the PCWA service area Zone 1 and subsequent treatment of this "imported" source water at the Lincoln WWTRF with eventual discharge into Auburn Ravine is addressed in greater detail in the following sections.

Response to Comments Regarding Salmonid Straying

The following evaluation is based on review of technical literature on the subjects of salmonid homing and straying, olfactory cues, imprinting and "false attraction."

Salmonid Homing and Straying

Biologists have long recognized that the family Salmonidae (chars, trout, and salmon) is characterized by a strong tendency to home to natal streams for reproduction. In 1874, a report prepared by the U.S. Commission of Fish and Fisheries determined…"*it is an established fact that adult [salmon] will always return to the place where they first made acquaintance with the water, passing directly by the mouths of streams or tributaries better adapted to their purpose, to gain their original home*" (Quinn 1997). Although the homing theory remained contentious, by the late 1930s the homing tendency was a generally accepted phenomenon (Quinn 1997) when Scheer (1939) stated... *"salmon or trout hatched and reared in a particular region will, upon returning to fresh water, return in the majority of cases to the same region, even from considerable distances*" (*in* Hasler and Wisby 1951).

Salmonid homing migrations begin in the ocean, potentially thousands of kilometers from the natal river drainage. Once in freshwater, the salmonid spawning journey may be just as long. Despite the vast distances involved, spawning salmon return to their natal stream with a high degree of fidelity (Dittman and Quinn 1996). For instance, Foerster (1968) summarizes one of the earliest comprehensive homing studies in Cultus Lake, British Columbia. Most homing sockeye salmon of the study drainage must pass through Cultus Lake to return to their natal streams. All of the sockeye salmon smolts leaving the lake in 1931 and 1936 were marked with fin clips. Marked adults comprised 99.4 percent and 98.5 percent, respectively, of the returning sockeye to Cultus Lake in the corresponding spawning runs, indicating that very few sockeyes from other drainages or tributaries entered the lake. Unfortunately, the number of Cultus Lake salmon spawning in non-natal streams was not determined (*in* Quinn 1993). Still, because comprehensive studies of spawning return rates among wild salmon populations are limited, and the results available illustrate a large range, the determination of a natural homing rate would be very difficult (Quinn 1993).

The homing fidelity of the salmonid family results in highly distinguishable stocks of similar phenotypic and genetic characteristics, which aids in establishing and maintaining a locally adapted population (reviewed by Pascual et al. 1995; Utter 1991). For instance, as Bodznick (1975) summarizes, sockeye salmon in the Fraser River drainage are divided into several distinct populations determined by the spatial location of their spawning sites within the watershed. Each stock is characterized by the size of spawning adults and the timing of spawning returns. Due to the differences in rearing habitat between populations, the growth rates of individual fish can be used to differentiate between populations. Hence, even closely distributed salmonids can segregate into distinct populations.

Although a high degree of fidelity is the norm in a salmon population, some fish do not home to their natal stream. These fish, called strays, are an integral part of salmon behavior under natural conditions. For instance, Milner and Bailey (1989) found newly unglaciated streams in Alaska to be initially colonized by coho and sockeye salmon strays. Straying behavior also may allow salmonids to avoid adverse local conditions (Leider 1989) and increase genetic heterogeneity (Utter 1991). Still, an increase in the level of staying may have detrimental effects to locally adapted populations.

While straying is a natural phenomenon in wild anadromous salmonid stocks, concern exists about the straying of hatchery fish into wild populations. An Interagency Ecological Program (IEP) Steelhead Work Team Report (1999) claims artificially produced steelhead may be a potential stressor for the recovery of steelhead populations. The reported potential detrimental ecological effects to wild fish produced by interactions with hatchery stocks include competition, displacement, increased disease and predation rates, and non-sustainable harvest by anglers due to over-estimation of salmonid runs. Additionally, the introgression, or transplanting of genes between native and hatchery stocks, may reduce genetic variability, reduce fitness, and eliminate rare alleles in wild populations. A summary conducted by Quinn (1997) also determines that most of the concern about hatchery/native interactions focuses on an opinion that the genes from hatchery fish may dilute the locally adapted wild gene pool or disrupt adaptive gene complexes. Based on the high number of hatchery fish planted in many hatchery influenced aquatic systems, even a very low straying rate among hatchery fish could potentially produce a large number of strays and result in adverse genetic effects.

Management actions may influence the rate of straying in hatchery systems. While studying fall-run chinook salmon in the Columbia River Basin, Pascual et al. (1995) determined that hatchery rearing and release techniques can potentially increase straying, thereby enhancing the potential for interactions between hatchery and wild fish. Numerous studies indicate that hatchery fish of local progeny released into the local drainage stray much less than those released into other drainages. In addition, releasing salmonid smolts directly into the ocean rather than allowing for the typical downstream migration may increase straying (Schroeder et al. 2001). However, it is difficult to determine whether straying rates differ between hatchery and wild fish because study conclusions are mixed and quantifying stray rates in natural populations is difficult (Quinn 1997; IEP 1999).

Although straying of hatchery fish into wild populations is a potential dilemma for natural resource managers to consider, the occurrence of straying may not always result in the identified adverse genetic effects. The genetically distinct structure of anadromous salmonid populations suggest that under natural conditions, the spawning success of strayed individuals may be quite low (Reisenbichler 1992 *in* Schroeder et al. 2001). In addition, studies indicate that salmon of hatchery origin may be less productive than wild fish during natural spawning (Chilcote 1986 *in* Pascual et al. 1995; Leider et al. 1990). The differential spawning success may be attributed to differences in reproductive behavior between hatchery and wild fish (Jonsson et al. 1991; Fleming and Gross 1992 *in* Pascual et al. 1995). Furthermore, some fish may be classified as strays while exhibiting exploratory behavior (actively seeking different sites and comparing their attributes) and wandering behavior (searching in the absence of stimuli) (Griffith et al. 1999). The existence of these findings and behaviors illustrate that a portion of the salmon that enter a non-natal tributary will not attempt or succeed in reproducing. Obviously, the effect that stray fish will have on the genotypic composition of the local population is determined by the degree of successful mating and the survival differential of their offspring (Quinn 1993), not just the physical presence of a strayed fish in a drainage.

Comments Regarding Straying Due to the American River Pump Station Project

Expressed concerns over the American River Pump Station Project seem to center around the potential for the Proposed Project to increase straying rates and genetic introgression between Auburn Ravine and American River salmonids. Local landowners and those who use the drainage for recreation indicated concern regarding the effects potential increases in genetic mixing could have on what they believe to be native, indigenous stocks of steelhead and chinook salmon in Auburn Ravine.

As explained earlier, because PCWA has modified the proposed operation of the Proposed Project so that it will not involve an increase in the amounts of raw American River water placed directly within Auburn Ravine, the only manner Auburn Ravine may receive North Fork American River water would be as: (1) irrigation return flow; (2) stormwater discharge; (3) Lincoln WWTRF effluent; and (4) raw water discharged from the Auburn Ravine Tunnel in historical amounts. Comments on the American River Pump Station Project raised the issue that the project may reassign the environmental cues in which migrating American River salmonids home toward, thereby drawing American River fish into Auburn Ravine. Essentially, this comment raises speculation that anadromous salmonids of American River origin, particularly hatchery salmonids, will travel upstream in the Sacramento River past the American River, where large volumes (generally 1,250 to 2,500 cfs during October and November) of American River water discharges into the Sacramento River. These comments suggest that the American River salmonids will swim past the American River in search of a small amount (generally 2 cfs during October and November) of water that originated from the American River and has been treated, delivered, used, returned to the Lincoln WWTRF, treated and discharged into Auburn Ravine, subsequently into the Natomas Cross Canal, and thereafter into the Sacramento River. This concern appears to be essentially unfounded, as demonstrated in the following technical review and analysis.

Additional comments on the Draft EIS/EIR also suggest that Auburn Ravine salmonids may confuse the American River for their natal spawning grounds, due to the existence of American River water in their natal stream. In addition, comments were received regarding the possibility of "falsely attracting" salmonids from the American River into Auburn Ravine due to the increased discharge of the Lincoln WWTRF during sensitive migratory months.

Because the Nimbus National Fish Hatchery Program influences the American River ecosystem, concern has been expressed that interbreeding between the two populations would affect the local physiologic and genetic adaptation of the Auburn Ravine steelhead and chinook salmon populations. Further concern stems from the founding history of the Nimbus Hatchery steelhead, as they appear to be most genetically similar to steelhead from coastal populations, particularly Eel River stocks (NMFS 1997 *in* McEwan 2001; IEP 1999). Comments have raised the issue that the distinctiveness of and distances between the coastal ecosystems and the Central Valley may serve to increase the likelihood of introducing foreign, maladapted alleles into the Auburn Ravine stock.

However, it is unlikely that the Proposed Project would produce a genetic disruption of Auburn Ravine salmonid stocks primarily due to the following reasons: (1) the acute olfactory homing

mechanisms in the salmonid family; (2) the environmental homing cues and the fate of these cues within the project area; (3) the sequential imprinting process; (4) the probable lack of persistent, native Auburn Ravine stocks within the Central Valley ESU; and (5) the mitigation programs of previous water projects affecting Auburn Ravine.

The Olfactory Homing Mechanism

The Olfactory Hypothesis

Numerous years of study seem to implicate olfaction as the primary sense driving the acute homing ability of salmonids. The pioneering work of Hasler and Wisby (1951) reports three assumptions upon which the olfactory hypothesis is based. First, streams differ in chemical characteristics that are stable over time. Second, salmonids can distinguish the chemical differences between streams. Third, salmonids learn the chemical characteristics of their natal stream (called imprinting) prior to or during their seaward journey, remember these cues without reinforcement while in the ocean, and respond to them upon returning to freshwater to spawn.

In an attempt to illustrate their hypothesis, Hasler and Wisby (1951) trained bluntnose minnows using a conditioned response program. These researchers created two flow-segregated areas within a seven-gallon aquarium where they delivered two distinct stream waters. Each stream of distinct water was related to either reception of food or punishment by mild electrical shock. After two months of training, the minnows did learn to associate each of the stream waters to the corresponding food and punishment. Results of the test did not change based on the seasons in which the test waters were obtained, indicating that the environmental cue the minnows were using persisted over changing seasons. The researchers then repeated the experiment after destroying the olfactory receptors of the minnows with heat cautery. The minnows were no longer able to associate the streams with reward or punishment. These data suggested that the bluntnose minnow used olfaction as the sole means of identifying the test water, indicating that each stream must have a characteristic odor in which the fish can learn. Preliminary tests by Hasler and Wisby (1951) on salmonids showed similar results.

Further experimental evidence for the olfactory hypothesis is provided by artificial imprinting studies. For instance, Cooper et al. (1976) exposed juvenile coho salmon to low concentrations of an odorous synthetic compound called morpholine. These fish, along with an equal number of controls, were stocked directly into Lake Michigan near Oak Creek, in Wisconsin. Another paired experimental treatment was stocked into Lake Michigan 13 kilometers north of Oak Creek. During the salmon spawning runs 18 months later, morpholine was continuously dripped into Oak Creek. Results of the four experiments over two years of studies showed 1,739 morpholine-exposed fish and 197 control fish returned to Oak Creek to spawn, indicating a highly significant ($P < 0.001$) difference in return rates. A third year of study in which morpholine was not dripped into Oak Creek produced equally low numbers of salmon in the spawning run (51 morpholine-exposed vs. 55 control fish). Cooper et al. (1976) determined the olfactory response to morpholine resulted in the high return to Oak Creek.

Similar to the behavioral studies, physiological activity investigations lend credence to the olfactory hypothesis. For instance, Hara et al. (1965) used an electroencephalograph (EEG) to study the manner in which central nervous activity correlates with the chemosensitive discriminatory behavior of homing salmonids. They captured adult salmon entering their natal grounds at the end of their spawning migrations. The fish were prepared for the EEG study and water was continually streamed over their gills. The central nervous regions of the spawning salmon were found to be nearly electrically inactive, except for those regions that control the olfactory senses (i.e., olfactory bulbs and posterior cerebellum). Of particular importance, Hara et al. (1965) found the optical lobe EEG readings to be electrically silent, possibly illustrating a minimal reliance on vision by adult migrating fish. Stream water from various sources was then infused into the naval cavity of the salmon. Stream water from nearby sources other than the home grounds had little to no effect on the EEG measurements, while natal water elicited a vigorous response of high amplitude, which only disappeared upon a 90 percent dilution. Each of the test waters presumably contained odors recognizable by the olfactory system, yet only water from the home stream elicited an EEG response. Hara et al. (1965) illustrated a heavy reliance on olfactory senses during adult salmonid migrations.

While Hara et al. (1965) demonstrated a direct relationship between home stream waters and EEG response, Bodznick (1975) found considerable variability in EEG responses in migrating adult salmon. The variability of response could not be attributed to stimulus conditions, as Bodznick (1975) was unable to correlate the EEG outputs with the presumed behavioral responses (i.e., spawning, continued migration) to a series of waters. Still, Bodznick (1975) concluded that the olfactory-evoked EEG response of migrating salmon has sufficient quantitative relation to odorants to illustrate discrimination between stream waters, including waters encountered at migratory points, natal grounds, and other known spawning drainages. Although EEG responses in the olfactory processors occur for a variety of stream waters, Bodznick (1975) appears to illustrate that the processing of olfactory cues is sufficient for the recognition of stream water during salmonid homing journeys. To summarize, although salmonids may smell and process all the water they encounter, they can actively discriminate between waters, which eventually leads them to their proper natal grounds.

The overwhelming majority of available literature concerning salmonid homing seems to indicate that olfaction is the primary sense guiding homing behavior upon entry to fresh water. Documents provided by commenters on the Draft EIS/EIR indicate much the same (Reclamation 1997a; Healy 1991; Myers et al. 1998). Hence, in order for the Proposed Project to negatively impact the homing behavior of salmonids in the American River and Auburn Ravine, the project must have a significant effect on the odor of the natal stream water or the ability of the salmonids to process odors. However, as will be explained in detail below, the Proposed Project is not likely to encourage additional straying of American River anadromous salmonids into Auburn Ravine, due to the nature of the chemical migration cues and the conditions the American River water may encounter before its discharge into Auburn Ravine.

The Nature of the Chemical Homing Cue

Upon recognition of the importance of the olfactory chemosensory process to salmonid imprinting, research was initiated to identify the exact compounds to which the olfactory

receptors were responding. The original olfactory hypothesis presented by Hasler and Wisby (1951) proposed that the unique stream odors were due to characteristic chemical combinations derived from variation in soil and vegetation between watersheds. At least partially, Hasler and Wisby (1951) based their assumption on earlier studies by Walker and Hasler (1949), which showed that bluntnosed minnows were able to discriminate between the rinses of various aquatic plant species after 2-1/2 months of conditioned response training [i.e., experimentation similar to the previously explained training used by Hasler and Wisby (1951)]. The minnows were unable to differentiate between plant rinses upon having their olfactory epithelium destroyed by heat cautery, suggesting that olfaction was the primary sense driving the recognition. Amazingly, after a 1:10,000 dilution was further diluted into a flow-segregated, seven-gallon aquarium, minnows still were able to discriminate between water rinses of aquatic plant sprigs. These data indicate a tremendous sensitivity to the rinses of vegetation.

After proposing and illustrating the olfactory hypothesis, Hasler and Wisby (1951) also endeavored to characterize the nature of the stream odor. Their experiment was designed to test whether the cue is organic or inorganic in nature. Hasler and Wisby (1951) produced ash residue from the water samples used in the conditioned response tests. Because the organic portion of the water sample incinerates during the ash residue production, the ash represents only the inorganic portions of the water chemistry. The ash was then dissolved in distilled water and tested on the trained minnows exactly as before. Although the minnows previously discriminated between stream waters, the ash residue rendered them unable to differentiate the test waters. The ash residue experiment indicates that the chemical cues in which fish use for migration have an organic constituent, either as a dissolved organic mixture or an organic-inorganic chemical complex. In addition, chemical analysis of the stream waters used by Hasler and Wisby (1951) suggest marked differences in total organic nitrogen. Hasler and Wisby (1951) postulate that the elements detected by the minnows in their study may have been located in the nitrogenous organic fraction.

Shoji et al. (2000) also studied organic nitrogen in relation to home stream odorants and the possible migration cues of masu salmon in Japan. Investigators tested the relative responses of amino acids, bile acids, and inorganic ions of home stream water samples on the EEG results of the salmon. They identified the concentration of each of the three constituents in water from three streams and then reconstituted test solutions based on the determined concentrations. Shoji et al. (2000) tested each chemical constituent individually as well as in mixtures. The resulting solutions were tested for an EEG response and compared to the EEG responses elicited by natal stream water. The EEG responses of the salmon profiles containing reconstituted amino acids and the amino acid/inorganic salts mixture closely mimicked the EEG response to natal stream water. Because the inorganic salts-only reconstitution achieved a minimal response, amino acids were determined as the major contributor of the EEG response in the amino acid/salt mixture. Therefore, Shoji et al. (2000) concluded that the salmon discriminate between stream waters by sensing differences in amino acid compositions. Water chemistry analysis illustrated enormous differences in amino acid compositions of the three tested streams, even though the streams are proximate and flow into the same lake. The researchers speculate that the characteristic amino acid mixtures within stream drainages are likely derived from living organisms including plants. Research relating to human taste discrimination suggests that the characteristic taste of many food products, which humans can easily distinguish, may be due

to distinct combinations of amino acids (Fuke and Knoosu 1991 *in* Shoji et al. 2000). Hence, the odor discrimination methods of salmonids using amino acid compositions described by Shoji et al. (2000) is consistent with Hasler and Wisby (1951), Walker and Hasler (1949), and research relating to methods of sensing by other vertebrate species.

In addition to organic nitrogen, some research suggests that population-specific chemical signals (i.e., pheromones) produced by conspecifics (e.g., juvenile salmonids rearing in the natal stream during the adult migration period) serve as the organic homing cues for salmonid migration. For instance, reports from Stabell (1992) and Courtenay et al. (2001) demonstrate recognition of conspecific odors by salmonids. The pheromone hypothesis suggests bile acids (Nordeng 1971; Doving et al. 1974, 1980 *in* Shoji et al. 2000) or skin mucus (Nordeng 1977) may play a role in pheromone recognition by the olfactory receptors. While Shoji et al. (2000) found bile acids did not elicit an EEG response similar to natal stream water in masu salmon, the pheromone hypothesis is certainly plausible. However, since the pheromones used for recognition of natal streams are presumably organic in nature, the difference in olfactory hypotheses does not change the fate of the American River odorants as described in the following sections.

Regardless of the specific organic compounds involved in salmonid homing, field and lab studies have illustrated a preference by hatchery fish to the water from hatchery facilities. For instance, Sutterlin and Gray (1973) investigated the Atlantic salmon returns of wild and hatchery fish. The study system included a hydroelectric dam and a hatchery located 1,500 meters downstream. During the fall spawning runs of 1971 and 1972, 97 percent of the wild Atlantic salmon returned to the dam, while 3 percent were recovered at the hatchery. By contrast, 67 percent of the hatchery-reared fish returned to the hatchery, while 33 percent returned to the dam. Considering that hatchery effluent contributes only 0.001 percent of the stream flow below the dam, these data illustrate an active discrimination between the hatchery effluent and upstream flows. In addition, Sutterlin and Gray (1973) tested salmon in the laboratory, and again, hatchery adults demonstrated a clear-cut preference for hatchery effluent. Both hatchery and wild fish avoided well water, which forms the base of hatchery effluent flows.

The preference by hatchery fish for hatchery effluent may have important consequences for the American River Pump Station Project. The results of Sutterlin and Gray (1973) suggest that the hatchery environment must contribute something to downstream flow to which hatchery adults respond. Perhaps the waste organic material produced by the rearing fish or pheromones released by the conspecifics draw migrating adult hatchery fish towards the facilities. At any rate, the Nimbus Hatchery on the American River is likely to change the water chemistry downstream of the facilities. Assuming the Sutterlin and Gray (1973) findings apply to the American River ecosystem, the Nimbus Hatchery-reared adults may be able to discriminate between hatchery effluent and flows from upstream. Because the American River Pump Station Project would divert water from the North Fork American River, miles upstream of the Nimbus Hatchery, the water Auburn Ravine would receive is likely to have very different chemical cues than the flow below the Nimbus Hatchery. Therefore, the American River Pump Station Project would not be likely to transfer the migratory cues that could potentially draw American River salmonids into Auburn Ravine.

As discussed, a considerable wealth of studies suggest stream olfactory cues drive the salmonid homing process, and combinations of organic material (i.e., amino acids) appear to control the odor cues. The distinct odor cues likely result from differences in watershed soils, vegetation, or possibly conspecifics. In addition, hatchery effluent could potentially change the ambient stream chemistry as well. Therefore, it is not likely that the water transferred from the North Fork of the American River to Auburn Ravine will contain the same odor qualities as the water downstream of the Nimbus Hatchery that migrating American River salmonids may have imprinted. Still, comparable organic signatures could exist between the North Fork of the American River and the downstream stretches. In this case, in order for the Proposed Project to adversely impact the homing behavior of the salmonids in the American River and Auburn Ravine, the project must alter the organic signature of Auburn Ravine. In addition, the transferred American River water must retain its organic signature. Given the chemical changing process the American River water would likely undergo, it is not likely that the odor-producing qualities of Auburn Ravine would be altered by the Proposed Project.

The Fate of the American River Odorants

The Proposed Project would distribute water from the American River for municipal and agricultural use. Auburn Ravine may eventually receive a portion of the original American River water as agricultural runoff, storm drain runoff and as effluent discharge after passing through the City of Lincoln WWTRF. Commenters on the Draft EIS/EIR suggest that the American River water entering Auburn Ravine from these sources may retain its characteristic odor qualities, thereby disrupting the natural homing process of the salmonids inhabiting Auburn Ravine and the American River. However, the American River water transferred into Auburn Ravine is not likely to retain its homing cues indefinitely due to the exposure of the water to new odor-causing agents and the extreme water processing procedure.

Irrigation water delivered from the American River to PCWA's service area likely would be exposed to different odor-causing agents than those existing in the lower American River (i.e., below Nimbus Dam). The irrigation water would be in contact with new sources of organic material, including amino acids sources, as it contacts and percolates through soil and rinses vegetation during its conveyance and release to agricultural fields. In addition, the ambient organic component in the American River water may be subject to decomposition by soil microbes. Hence, the water that Auburn Ravine and other PCWA zone watersheds (i.e., Dry Creek) may receive as agricultural return flow would be drastically different in its chemical characteristics than the original American River water delivered to the irrigated fields. Therefore, the irrigation water delivered to the PCWA service zones is not likely to attract American River salmonids.

Similarly, American River water delivered to Auburn Ravine through storm drains likely would not retain its original chemical characteristics. Municipally distributed water may contribute to storm drain flows through such processes as excessive lawn watering. If the lawn water survives gutter evaporation and reaches Auburn Ravine, it will likely have been leached through, or in contact with, soil and vegetation, chemically altering the water. Since the vegetation and soil of the lawns is a characteristic of the drainage, the resulting water would not

likely be much different from storm drain water currently delivered to Auburn Ravine during a storm event. Hence, municipally delivered storm drain water would not be likely to contribute to an increase in salmonid straying.

The final identified fate of the American River water is distribution throughout the municipal system. The American River water would be treated by flocculation (to remove impurities) and chemical addition (to ensure digestive safety), and then distributed to homes, businesses, and industries throughout PCWA's service area (Zone 1). The water would leave these facilities mixed with organic and inorganic wastes through sewer lines. The Lincoln WWTRF, to be complete by the spring of 2003 (R. Cambell, pers comm. 2002), will receive the American River water, and at this point, another intensive treatment process will be initiated. The updated WWTRF system will treat its inflow with secondary and tertiary treatment procedures. Secondary treatment procedures are designed to remove organic compounds from the sewer inflow, while tertiary treatment removes nutrients, such as phosphorus and nitrogen, which can be harmful to aquatic ecosystems (City of Lincoln 1999). An analysis of the treatment process efficiency appropriately illustrates the fate of the American River odorants.

Biochemical oxygen demand (BOD) requirements can be used to evaluate the fate of the organic homing cues in the American River water after wastewater treatment. BOD is defined as the amount of oxygen required by bacteria to oxidize the decomposable organic matter in a water sample (Sawyer et al. 1994). Studies of secondary treatment facilities generally indicate removal efficiencies of 75 percent to 99 percent for many organic compounds (EPA 1977, 1982, 1986 *in* City of Lincoln 1999). More specifically, for planning purposes, the Lincoln WWTRF utilizes a BOD estimate of 250 milligrams per liter (mg/L) for the inflow received at the sewer facilities, though actual BOD values may vary. Waste discharge requirements for the Lincoln WWTRF dictate a BOD of no greater than 10 mg/L for the effluent discharged into Auburn Ravine, while the design criteria of the treatment facility attempts to achieve a BOD level of no more than 3 mg/L. Because BOD is an indicator of total organic material, a conservative estimate illustrates that approximately 4 percent of the total organic material that enters the Lincoln WWTRF will be discharged into Auburn Ravine. Assuming a homogenous mixture of organic material in the treatment facilities and equivalent treatment efficiencies between all types of organic material, the organic homing cues used by migrating salmon found in the wastewater plant inflow will be drastically altered by the secondary treatment process at the Lincoln WWTRF. Furthermore, the potential cues remaining in the effluent will be a mixture of the various organics delivered to the WWTRF, which combined will give Auburn Ravine its own characteristic odor components. Thus, water originating from the American River discharged via the Lincoln WWTRF is not likely to retain its original odor and, therefore, is not likely to adversely impact salmonid homing behavior.

Sequential Olfactory Imprinting

The timing of olfactory imprinting is a key component to understanding the mechanisms that drive salmonid homing behavior. The majority of the research in this field suggests imprinting of stream odors is most sensitive during the PST process (Dittman et al. 1996). The PST is characterized by physiological and behavioral changes that prepare freshwater salmon (parr) for their ocean lifestage. Although the PST appears to be a particularly sensitive period of time,

some imprinting must occur before this time, as wild salmon home to their hatching areas, not to the area of their PST (Quinn et al. 1996). For instance, coho and chinook salmon often make extensive migrations in freshwater before their PST (Peterson 1982; Murray and Rosenau 1989; Scrivener et al. 1994), yet still home to their natal sites. Hence, the PST may be a critical imprinting stage, but some other factor must control the actual imprinting process.

Many of the changes that occur in the PST are related to elevations in a thyroid hormone called thyroxine (Dickhoff et al. 1978; Dickhoff and Sullivan 1987 *in* Dittman and Quinn 1996). Dittman and Quinn (1996) postulate the imprinting process may be associated with surges in thyroid hormones. While major surges in thyroxine levels occur during the PST, a review by Dittman and Quinn (1996) reveals elevations in various thyroid hormones may occur at numerous lifestages due to a variety of factors. For instance, peaks in thyroid hormone levels can occur during the hatching and emergence phases (Dickhoff and Sullivan 1987; Tilson et al. 1994, 1995). In addition, thyroid hormone levels are particularly sensitive to environmental cues such as exposure to novel water chemistry (Dickoff et al. 1982; Hoffnagle and Fivizzani 1990) and changes in lunar phase (Grau et al. 1981), water temperature (Iwamoto 1982; Lin et al. 1985), photoperiod (Hoar 1976; Iwamoto 1982), and water flow rates (Youngson and Simpson 1984; Lin et al. 1985).

The review by Dittman and Quinn (1996) also found that thyroid gland production may be associated with migration. For instance, increased swimming rates may stimulate thyroid hormone production (Dickhoff et al. 1982; Nishioka et al. 1985). Furthermore, migrating juvenile salmon show higher levels of plasma thyroxine than non-migrants (Youngson et al. 1989; Fujioka et al. 1990; McCormick and Bjoernsson 1994), and kokanee salmon can be induced to migrate by artificially elevating thyroxine levels (Iwata and Tagawa 1991). Hence, the imprinting process associated with developmental-, environmental-, and migratory-induced surges in hormone levels may serve to provide a sequence of cached smells which adults salmonids use to find their natal streams (Harden Jones 1968; Brannon 1982 *in* Dittman et al. 1996).

According to Dittman and Quinn (1996), their imprinting review may reveal a fundamental difference in how wild and hatchery salmon become imprinted as juveniles and home as adults. They report that imprinting in wild fish likely occurs during various lifestages such as hatching, emergence, and the PST. As wild salmon migrate through freshwater they encounter various environmental cues, which elevate thyroid hormone levels. If the cues are significant, the imprinting threshold is exceeded and the salmon remember the smell as a key point in their migration. In addition, migratory behavior and increased swimming rates may elevate hormone levels to a point where imprinting occurs at fairly random points along their freshwater journey. Hence, in wild salmon, a full sequence of smells learned as juveniles may serve as a roadmap for returning adults later in life.

Conversely, hatchery salmonids may not experience the same sequential imprinting as their wild counterparts. Dittman et al. (1996) suggest that the lack of environmental variation in the controlled hatchery environment may inhibit a portion of the imprinting process. Depending on where juvenile hatchery salmon are outplanted, much of their migratory behavior may be limited. For instance, hatchery practices often include raising salmon in the hatchery until the

smoltification stage and outplanting salmon directly into an ocean bay. While these salmon likely would be imprinted during various lifestages with the smell of the hatchery source water, they may have a limited opportunity to become imprinted with a full sequence of cues. Therefore, the roadmap for immigrating hatchery salmonids may contain a reduction in imprinted points. These conclusions are supported by findings that suggest releases of hatchery fish directly into saltwater may tend to increase straying (Quinn 1993).

The differential imprinting mechanism revealed by Dittman and Quinn (1996) may have extremely important implications concerning the American River Pump Station Project. For instance, as the wild-spawned salmon and steelhead in Auburn Ravine emerge, rear, and migrate, they may become imprinted with numerous smells during their downstream journey. Theoretically, imprinting also should occur at points of change in environmental parameters, such as water temperature, flow, or water source. To illustrate, a juvenile steelhead migrating from Auburn Ravine toward the ocean may become imprinted at various points along its journey. These imprinting points may include Auburn Ravine itself, the tributary confluence with the Sacramento River and its confluence with the American River, as flow, water temperature, and water composition likely change at these points. Upon returning from the ocean, the adult steelhead may reverse the olfactory memory constructed during the ocean-bound migration. The wild-spawned salmonid will not necessarily seek its natal waters automatically, but instead locate a series of points sequentially until the natal stream, presumably the last point in the sequence, is found. It is unlikely that an immigrating Auburn Ravine adult would stray into the American River because the immigrating adult will continue to be drawn upstream in the much larger Sacramento River by olfactory cues associated with the next sequential points north of the point at which the American River empties into the Sacramento River. Thereafter, the immigrating adult will continue to follow the Sacramento River northward until the adult reaches a point at which olfactory cues indicate that the adult should follow waters flowing into the Sacramento River from the canals into which Auburn Ravine drains, each of which has its own unique olfactory cues. Thus, the sequential migration of Auburn Ravine salmonids will guide the return the their natal spawning grounds.

Similarly, it is unlikely that an American River fish will stray into Auburn Ravine as a result of the Proposed Project. Salmonids in the American River have distinct lifehistory patterns, and as such, may differ in their imprinting mechanisms. First, some American River salmonids spawn naturally in the American River just below Nimbus Dam (SWRI 2001). The returning adults from this naturally spawned population should behave similarly to Auburn Ravine adults by re-tracing their sequence of imprints until their natal stream is found. Second, Nimbus Hatchery salmonids generally are released into the American River as juveniles (SWRI 2001). These salmonids have limited opportunities for imprinting (perhaps only during developmental changes at the hatchery) because environmental parameters are held fairly constant and the migration is inhibited in a hatchery environment. Still, these fish should become imprinted with the smell of the American River as their natal spawning ground during developmental changes. In both cases, as these fish reach the American River during upstream migration as adults, they will be bombarded with the smell of their natal stream. In some cases, this smell is the only imprinted smell available to them during their juvenile lives. Hence, it is unlikely that salmonids from the American River will disregard the inherent drive to enter this natal stream, simply because a minute amount of diluted American River water may exist in the Sacramento

River at their confluence. In addition, the water transferred from the North Fork American River to Auburn Ravine, having been subjected to myriad organic influences associated with the Auburn Ravine watershed, is likely to smell drastically different than the substantial lower American River flows that enter into the Sacramento at the confluence. The differential imprinting theory presented in Dittman and Quinn (1996) suggests that the straying rates exhibited by the salmonids of Auburn Ravine and the American River are not likely to increase due to the Proposed Project.

In addition to olfactory imprinting, homing may have an additional genetic component. For instance, salmon that are reared and released at different locations than their ancestors may occasionally return to their ancestral place of origin, even if they have never experienced its waters (McIsaac and Quinn 1988). Quinn (1993) suggests this behavior may be a result of innate preferences for physical habitat characteristics, including substrate composition, water temperature, or flow. Considering that the Proposed Project is not likely to alter the current genetic attributes of populations of Auburn Ravine salmonids, the genetic component of homing is not likely to be significantly impacted by the Proposed Project.

Seasonal Imprinting and the Homing Response

Although a majority of the transferred American River water will be discharged into Auburn Ravine only after contact with new odor causing agents or extensive treatment, raw American River water will still be diverted into Auburn Ravine via the Auburn Ravine Tunnel in the historical, pre-existing amounts. As previously discussed, a majority of the American River raw water diversions associated with implementation of the Proposed Project would occur in June, July and August, with a maximum diversion in July. This pattern and volume of water diversion releases to Auburn Ravine is consistent with the existing/historical condition, and would not result in a change in the total volume or seasonal distribution of North Fork American River water to Auburn Ravine.

Although it is not the only stage associated with imprinting, the PST likely represents the most sensitive imprinting period. The initiation of the PST likely is related to the emigration process of salmonids from natal drainages. While emigration data for Auburn Ravine fish is limited, American River fisheries data is well-documented (SWRI 2001). American River chinook salmon emigrate from January through June, peaking in April. Steelhead from the American River typically emigrate as yearlings (SWRI 2001), and yearlings normally begin showing up in rotary screw traps between December and March, however, some studies indicate steelhead immigration may occur through June. Assuming that American River emigration data also applies to Auburn Ravine, the periods of peak emigration of juvenile salmonids may not correlate with periods associated with peak raw water deliveries. Therefore, raw water deliveries may not dramatically affect the imprinting of juvenile salmonids in Auburn Ravine.

Similarly, immigrating adult salmonids in Auburn Ravine may not be exposed to the olfactory cues or increased flows associated with the seasonal delivery of North Fork American River water. Adult migrations of chinook salmon in the American River can occur as early as September and extend through January, while adult steelhead immigration typically begins in November and extends through April, peaking in January (CDFG unpublished data; SWRI

2001). Because relatively small discharges of American River water from the Auburn Ravine Tunnel occur during these times, the raw water deliveries are not expected to affect immigrating adult salmonids.

The timing of critical periods in salmonid life histories and the timing of water deliveries to Auburn Ravine are temporally inconsistent. In addition, the raw water delivery occurs under existing conditions. Therefore, the delivery of raw American River water in the historical amount from the Auburn Ravine Tunnel represents a less than significant potential impact.

The Origin of Auburn Ravine Salmonids

Historically, low elevation streams such as Auburn Ravine may have been essentially dry in summer and fall, at least in the foothill sections. Because of their intermittent nature, these streams were not conducive to significant or consistent fall run chinook salmon or steelhead populations. To the extent that such anadromous fisheries existed in Auburn Ravine, an important component of the population would have been strays from nearby and far more productive and reliable river systems (R. Stork, pers. comm. 2002). In fact, reports from IEP (1999), CDFG (1999), and McEwan (2001) suggest source populations from stable Central Valley habitats, such as the American, Feather, Yuba and Sacramento rivers historically provided for recolonization of, and gene flow between, sink populations in less persistent and hydrologically unstable stream systems (i.e., streams similar to Auburn Ravine). The source populations may have been beneficially affected by the diversity and variability of the small tributary communities.

Because the salmonids currently in Auburn Ravine likely did not originate as a persistent native population, the genetic characteristics of Auburn Ravine salmonids are not likely distinct. It is probable that the salmonids of Auburn Ravine are a conglomeration of many different stocks. Although straying information for steelhead is limited, coded wire tag studies for chinook salmon indicate that straying is not infrequent in Central Valley streams. These results suggest that straying into Auburn Ravine may occur irrespective of the increasing discharges of water from the Lincoln WWTRF. In addition, hatchery stocking records indicate that Auburn Ravine has been influenced by chinook salmon of American River origin. Chinook salmon from Nimbus Salmon and Steelhead Hatchery have also been stocked in Auburn Ravine as recently as 1997 (SWRI 2001). Hatchery-stocking records also indicate that rainbow trout have been historically placed into Auburn Ravine, and continue to be planted in connected water bodies (City of Lincoln 1999).

Additionally, NMFS considers Auburn Ravine steelhead to be within the Central Valley ESU and does not recognize them as genetically distinct from other populations within the ESU. NMFS concludes, "*...steelhead in the Sacramento and San Joaquin River Basins (Central Valley) should be considered a single ESU until additional information becomes available*" (63 FR 13354; March 19, 1998). Furthermore, CDFG currently considers all Central Valley steelhead to be winter-run steelhead (63 FR 13354; March 19, 1998).

Response to Comments Concerning the Potential for False Attraction of Salmonids Due to Increased Discharges

While the mitigated diversion plan for the American River Pump Station Project no longer entails a change in the volume or seasonal distribution of American River water diversions into Auburn Ravine, future Lincoln WWTRF discharges will increase the amount of flow in Auburn Ravine. Because the Lincoln WWTRF will receive a portion of the water diverted by the Proposed Project, comments on the Draft EIS/EIR addressed the potential for "false attraction" of fall-run chinook salmon and steelhead into Auburn Ravine. Specifically, commenters expressed concern about drawing immigrating salmonids into Auburn Ravine during a time when adequate migratory flows and water temperatures exist downstream of the WWTRF outfall(s), while flows and water temperatures above the outfall(s) will be simultaneously inadequate for migratory passage to upstream spawning habitat.

The migration of adult salmonids to their spawning tributaries is a seasonal phenomenon occurring at roughly the same general time each year. For instance, fall-run chinook salmon normally spawn from approximately October through December, while steelhead spawn from approximately December through March. Locally, upstream migration timing may ultimately be influenced by the combination of increasing flows and decreasing water temperatures. Therefore, attraction into Auburn Ravine when temperatures are still relatively high or flows still relatively low above the WWTRF outfall could potentially adversely affect salmonid spawning success by inhibiting movement of adults to spawning grounds above the WWTRF outfall. However, as stated in the City of Lincoln (1999) Draft EIR for the WWTRF, *"...Adult salmon would not necessarily lose the opportunity to spawn just because they were 'falsely attracted' or drawn to the WWTRF effluent prior to the occurrence of conditions needed for spawning..."*

The City of Lincoln WWTRF, when operational, will release its treated effluent directly into Auburn Ravine. At full buildout of the project area, the discharge is expected to be 12 mgd, or approximately 18.6 cfs. The City of Lincoln (1999) describes the existing average monthly flows in Auburn Ravine during the steelhead spawning months of December through March as heavily influenced by winter precipitation and ranging from 54 mgd (83.7 cfs) to 85 mgd (131.8 cfs), respectively. Therefore, the Draft EIR for the Lincoln WWTRF concludes that the 12 mgd addition from the WWTRF would not represent a significant potential impact to spawning steelhead, since adequate flow should exist both upstream and downstream of the WWTRF outfalls for adult steelhead migration. The lead agencies concur in this conclusion, and find that "false attraction" of steelhead is not a significant impact of the Proposed Project.

However, because existing flows in Auburn Ravine during the months of October and November average 19 mgd (29.5 cfs) and 25 mgd (38.8 cfs), respectively, the City of Lincoln (1999) determines that the 12 mgd (18.6 cfs) addition during the fall-run chinook spawning months could potentially create a "false attraction" of fall-run chinook, and concludes that this represents a potentially significant impact. Due to a lack of data, the City of Lincoln (1999) could not conclude that sufficient migratory flows would exist above the WWTRF outfalls at times when fall-run chinook may be able to access the remainder of Auburn Ravine.

As a result of the potentially significant impact created by the City of Lincoln WWTRF, the City of Lincoln committed to monitoring adult fall-run chinook salmon migrations during October and November and reporting the results to NMFS and CDFG. The monitoring is designed to determine whether the fish congregate at the WWTRF outfall, delay migration to their spawning grounds further upstream, or are otherwise potentially adversely affected by the City of Lincoln WWTRF discharge. Implementation of various potential mitigation strategies was suggested if such congregation of fall-run chinook salmon was detected.

The City of Lincoln WWTRF Mitigation and Monitoring Program (2000), provides "*...The City will develop and implement a plan, in cooperation with DFG and NMFS, to monitor the occurrence of adult chinook salmon in Auburn Ravine at and immediately downstream of the treatment plant discharge(s). The plan will include criteria for evaluating attraction and delay and will require reporting of monitoring results to DFG and NMFS. If such monitoring demonstrates that salmon are congregating near the WWTRF outfall(s), the City could, for example, implement a discharge control plan that temporarily terminates discharge until the salmon have dispersed. Other options that could be developed include using multiple outfalls; routing effluent to a top outfall and then, if fish congregate there, rerouting to a lower outfall so the fish will continue upstream; designing the physical outfall configuration to minimize attraction to outfall itself; and using diurnal timing of discharge…"* In order to implement the mitigation measure "*...the City will hire a qualified fish biologist to develop the plan and periodically monitor discharge(s) to the creek...*" (City of Lincoln 2000).

Based on current general plans and assuming uniform buildout across the various planning areas, the Foothill and Sunset WTPs will deliver up to 43 percent of their total planned capacities to the Lincoln WWTRF service area. Based on a range of growth estimates, the full utilization of the Foothill and Sunset WTP capacities should occur between 2010 and 2020. Upon realization of the full treatment plant deliveries, the City of Lincoln could receive as much as 16,000 AF of treated water per year from the PCWA water treatment plants, of which approximately 4,100 AF of water will have been supplied annually by the Proposed Project.

Historically, the Foothill and Sunset WTP treated water deliveries are lowest during the month of February, when little water is utilized for outdoor uses. Therefore, the treated water deliveries during February most accurately reflect the amount of water delivered to the Lincoln service area that is utilized for household uses and ultimately becomes sewer inflow. Assuming that February treated water demands represent the baseline project-related inflows for the WWTRF, approximately 1,800 AFA of North Fork American River water provided by the Proposed Project will go to the Lincoln WWTRF and ultimately be discharged into Auburn Ravine. The project-related discharge will range from a maximum monthly average of approximately 3.4 cfs during April and May to a minimum monthly average of 1.8 cfs in December. During October and November, the months of concern regarding chinook salmon "false attraction," the Proposed Project-related discharge would average approximately 2.0 cfs.

As previously stated, the City of Lincoln (1999) EIR indicates that the WWTRF will have a maximum discharge into Auburn Ravine of 12 mgd, or 18.6 cfs. At maximum buildout, the Proposed Project would provide an average of 2.0 cfs during October and November, or approximately 11 percent, of the total WWTRF discharge. Water originating from the Proposed

Project would contribute only 4.2 percent and 3.5 percent of the total flow in the Auburn Ravine during these months. The remaining 89 percent of the total WWTRF discharge would be provided by other sources. Hence, without any contribution from the Proposed Project, the Lincoln WWTRF discharge during October and November would still approximate 16.6 cfs, which may still represent a potentially significant impact. The additional contribution of 2.0 cfs of North Fork American River source water provided by the Proposed Project would not significantly exacerbate any "false attraction" that may be created by the Lincoln WWTRF discharge into Auburn Ravine. Discussions with NMFS supports this conclusion. Therefore, the potential for "false attraction" of adult salmonids to Auburn Ravine, more particularly to the Lincoln WWTRF outfall, represents a less-than-significant impact of the Proposed Project.

In any event, despite the lack of any significant impact due to increases in treated WWTRF effluent attributable solely to the Proposed Project, it is noteworthy that, as discussed earlier, the City of Lincoln has committed itself to monitor the effects of its total effluent flows on chinook salmon, and to consider specific steps that could address any problems that might arise. According to a mitigation measure adopted by the city, as quoted earlier, possible responses might "*include using multiple outfalls; routing effluent to a top outfall and then, if fish congregate there, rerouting to a lower outfall so the fish will continue upstream; designing the physical outfall configuration to minimize attraction to outfall itself; and using diurnal timing of discharge[.]*" Any such steps will be formulated by "a qualified fish biologist" who will be required to cooperate with both NMFS and CDFG.

In short, although the American River Pump Station Project's contribution to total effluent levels will be too minor to significantly exacerbate any "false attraction" problem that might arise at the WWTRF, any potential problem that does arise will be addressed by the city, its hired fish biologist, and the experts at NMFS and CDFG who, working together, can identify the best strategy for resolving the potential problem.

Response to Comments Regarding Other Wastewater Treatment Plants Associated With the Proposed Project

In addition to increased deliveries to the service area of the City of Lincoln WWTRF, the Proposed Project will allow for additional treated water deliveries to the service areas of other wastewater treatment plants including Placer County Department of Public Works SMD No. 3, and two City of Roseville facilities. These plants deliver treated wastewater effluent directly into Dry Creek and Pleasant Grove Creek, both of which flow into the Natomas East Main Drainage Canal, ultimately to be discharged into the Sacramento River.

The collective service area of these plants includes the Cities of Rocklin and Roseville, the Town of Loomis, and areas under the land use control of Placer County including Horseshoe Bar, Penryn, Newcastle, Ophir, Granite Bay, and the Sunset Industrial area. PCWA, the City of Roseville, and SJWD all provide treated water service to this collective area. The current source of treated water for this area is a combination of water from the Yuba/Bear River system (delivered by PCWA) and the American River (delivered by Roseville, SJWD, and PCWA).

The water delivered to the collective service areas of these three WWTPs will have been treated, delivered to consumers, used, returned to the respective WWTP, and treated again before discharge into either Dry Creek or Pleasant Grove Creek. This process is analogous to the Lincoln WWTRF effluent discharge into Auburn Ravine. As such, the analysis and conclusions presented in the Response to Comments Regarding Salmonid Straying section of this Master Response apply directly to the possibility of attracting stray salmonids into Dry Creek and Pleasant Grove Creek. Therefore, a less-than-significant impact is expected regarding olfactory-induced attraction of salmonids into Dry Creek and Pleasant Grove Creek due to the Proposed Project.

In addition to concern regarding olfactory attraction, comments have been received concerning the potential for "false attraction" of salmonids due to increased discharges from the three WWTPs. Based on current general plans, the three collective service areas will receive approximately 57 percent of the planned ultimate capacity of the Foothill and Sunset WTPs, which may result in an approximate addition of 21,200 AF of treated water per year being supplied to the service area. Of that amount, the Proposed Project will have supplied approximately 6,500 AFA of North Fork American River water. Using February water demands as an indicator of the amount of water delivered to a service area that is utilized for household uses (as described in the previous section), approximately 2,700 AFA will ultimately become sewer inflow. This amount equates to a maximum monthly average of approximately 4.8 cfs during April and May to a minimum average of 2.4 cfs during December. During October and November, the months of concern regarding the potential for chinook salmon "false attraction," the Proposed Project-related discharge would average approximately 2.8 cfs. The current collective planned maximum capacities of the three WWTPs totals 65 cfs (42 mgd). Hence, the Proposed Project-related discharge represents less than five percent of the collective planned maximum capacities of the three WWTPs. It should also be noted that American River water deliveries to this area would increase independent of the Proposed Project as a result of increased deliveries by Roseville and SJWD, both of which supply only American River water. Overall, the distribution of water from the Proposed Project to the service areas of the Placer County Department of Public Works SMD No. 3 and the two City of Roseville facilities represents a less-than-significant impact.

3.1.14 CUMULATIVE IMPACT ANALYSIS

Planning Aid Memorandum for the Cumulative Report

As noted in the comment letter (L-244), USFWS and Reclamation participated in several coordination meetings to discuss and determine the scope of the cumulative impact analysis for the American River Pump Station Project and other Reclamation actions in the American River Basin. As part of this coordination, USFWS prepared a Planning Aid Memorandum identifying the types of analyses and considerations recommended for inclusion in the Cumulative Report (Appendix D of the Draft EIS/EIR).

The stated purpose of the Cumulative Report is to serve as an integral component to NEPA, CEQA, and federal Endangered Species Act (ESA) compliance documentation for the American River Pump Station Project and to supplement the analyses of other Reclamation

future actions within the American River Basin for these same purposes. As such, the Cumulative Report provides a broad assessment of potential environmental consequences that may occur under future conditions (2030) based on the best available information at the time the analysis was prepared.

The analyses performed and presented in the Cumulative Report go beyond the environmental analyses requirements of both NEPA and CEQA. The evaluation of an ESA baseline condition provides an assessment specifically developed, in consultation with USFWS personnel, to provide an assessment of the reasonably foreseeable future actions that had not completed ESA consultations at the time of the analysis. Reclamation recognizes that not all of the specific analyses requested by USFWS in the Planning Aid Memorandum have been included in the Cumulative Report. We have, however, addressed some of these issues in the Final EIS/EIR.

The lead agencies have considered the specific recommendations made in the December 13, 2001 USFWS Planning Aid Memorandum for the Cumulative Impact Analysis. As indicated below, the lead agencies have already complied with some of the recommendations or have programs in place that address the recommendations. Additionally, some of the recommendations regarding Reclamation's programs and activities will more appropriately be addressed in the upcoming CVP Operations Criteria and Plan (CVP-OCAP) consultation.

In the discussion of the Cumulative Analysis Content (Letter 244, page 3), USFWS identifies the absence of a bed load movement analysis in the Cumulative Report. The following discussion is added to the Final EIS/EIR, Chapter 3.0, Section 3.5, Fish Resources and Aquatic Habitat. This information does not change the conclusions presented in the Draft EIS/EIR. This information also will be included in the Final Cumulative Report.

The bed load in a stream system consists of sand, gravel, and rocks that are transported along the stream bed by high energy flows (Brooks et al. 1997). Bed load recruitment into the lower American River system is limited by Folsom Dam, which slows lower American River flows, resulting in the sedimentation and trapping of bed load materials (Ayres and Associates 1997). Therefore, below Folsom and Nimbus dams, only existing bed load could potentially be affected by changes in flows under the cumulative condition. Recruitment of bed load would remain constant, as bed load would continue to be trapped behind Folsom Dam under the cumulative condition, independent of potential changes in flow.

Based on their work in preparing *Two-Dimensional Modeling and Analysis of Spawning Bed Mobilization* (Ayres and Associates 2001), Ayres and Associates have determined that little bed load movement occurs in the lower American River until flows of 50,000 cfs are reached (T. Smith, pers. comm. 2002). Throughout the initial planning stages of the project, it was assumed that flow values obtained using the PROSIM 2000 model, utilized to conduct all water resource-related impact analyses, could be applied to conduct an analysis of bed load movement in the lower American River. However, as discussed on page 3-18 of the Draft EIS/EIR, PROSIM 2000 operates on a monthly time step. Consequently, extreme values sufficient to result in the movement of existing bed load (i.e., 50,000 cfs) cannot be determined from monthly mean flow values. For example, on the lower American River at Watt Avenue, the highest monthly mean flow value out of 840 months modeled would be 32,894 cfs (February)

under the cumulative condition, relative to 32,975 cfs under the existing condition. Obviously, according to Ayres and Associates, the rate of flow required for significant bed load movement is not captured in the monthly time step model. Nevertheless, it can be reasonably assumed that bed load movement results from episodic events and the cumulative condition would not be expected to significantly alter the magnitude or frequency of episodic events. Thus, extreme events that may occur on a daily or hourly basis become absorbed into the monthly mean values produced by PROSIM 2000. However, the slight changes in the highest monthly mean flows (e.g., 0.2 percent for the above example) suggest that extreme events would not be altered sufficiently to result in changes in bed load movement under the cumulative condition, relative to the existing condition.

Recommendation 1 requests that the lead agencies keep USFWS informed of new information for the American River Pump Station Project. Reclamation has coordinated with USFWS on the American River Pump Station Project since 1997. PCWA participated in the meetings and made certain specific agreements with USFWS to assist in the protection of endangered species and habitat within the project and water service areas. In several of these meetings, PCWA has provided maps and details regarding its operations. Additionally, in correspondence with USFWS, PCWA has agreed to keep USFWS informed of American River Pump Station Project activities.

PCWA also recently agreed to not supply retail treated water service to new developments within environmentally sensitive areas of western Placer County until USFWS has certified that the new development is consistent with the interim conservation strategies of the Placer County Habitat Conservation Plan, that is to be prepared at a later date. Environmentally sensitive areas within western Placer County as used above refers to that area within Placer County west of Highway 65, south of the proposed Highway 65 Lincoln Bypass, and north of Pleasant Grove Creek.

Recommendation 2 suggests a qualitative assessment of potential short-term adverse conditions related to implementation of the American River reasonably foreseeable actions. Reclamation anticipates that short-term adverse conditions that exist today would likely continue into the future, although Reclamation is striving to minimize the frequency and magnitude of these events. In particular, the American River Operations Work Group, who's membership includes representatives of Reclamation, USFWS, NMFS, CDFG, and others, meets about every two weeks to discuss these issues as they relate to the lower American River, and provides guidance on how to minimize adverse effects. One significant short-term condition is flow fluctuation brought upon by flood control operations and the meeting of water quality requirements in the Sacramento-San Joaquin River Delta (Delta). Also, Reclamation presently manages temperatures in the lower American River to avoid short-term effects to the extent that cold water is available in Folsom Reservoir. Once the temperature control devices are completed on the municipal and industrial diversions, the amount of cold water available should increase, rather than decrease.

Recommendation 3 requests an estimate of the threshold amount of water diversions that would adversely affect the environment in an effort to determine a maximum amount of "new water" that could be diverted without affecting the environmental baseline. Estimating threshold

amounts of water diversions is very difficult, at best, due to the complexity of the CVP and the fact that diversions are reduced in the dryer years. Also, Reclamation conducts its operations to meet biological opinions and water quality requirements that are protective of aquatic resources and these operations take precedence over diversions. Finally, and perhaps most importantly, it is not presently anticipated that new water would be diverted from the American River, because the SWRCB has designated the American River system as a Fully Appropriated Stream during the sensitive summer through early fall period, July 1 through October 31 (SWRCB Orders WR 89-25, WR 98-08).

Recommendation 4 requests further supporting information to substantiate conclusions on the significance of impacts. The Draft EIS/EIR provides significance criteria to evaluate each potential impact. For instance, the following excerpt from Table 3.5-4 of the Draft EIS/EIR (page 3-79) describes the impact indicators and significance criteria utilized for the evaluation of the Delta resource parameters described in the comment letter.

Impact Indicator	Significance Criteria
Monthly mean Delta outflow (cfs) for all months of the year.	Decrease in Delta outflow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect Delta fish resources over the 70-year period of record.
Monthly mean location of X2 and Delta export/inflow ratios for all months of the year, with an emphasis on the February through June period.	Change in position of X2 and Delta export/inflow ratio, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect spawning and rearing habitat and downstream transport flows over the 70-year period of record.

In addition to the criteria described in the table, the Draft EIS/EIR Assessment Methodologies section (page 3-70) outlines more specific standards involving the analysis of potential impacts to Delta resources. For example, changes in monthly mean Delta outflow for the 70-year period of record under the Proposed Project and the cumulative condition were determined for each month of the year and were compared to monthly mean Delta outflow under the basis of comparison. The frequency and magnitude of differences in Delta outflow were evaluated relative to life history requirements for fish species of priority management concern in the Delta. Furthermore, changes in monthly mean X2 position were determined for all months of each year, with an emphasis on the February through June period, due to the potential effects on spawning and rearing habitat and downstream transport flows for delta smelt, longfin smelt, splittail, striped bass, salmonids, and other aquatic species in the Delta.

Impacts to Delta smelt, splittail, striped bass, and other Delta fish resources were considered adverse if hydrology under the Proposed Project and the cumulative condition showed a substantial decrease in monthly mean Delta outflow, relative to hydrology under the basis of comparison, during one or more months of the February through June period, if a substantial shift in the long-term monthly mean X2 position occurred, or if Delta export/inflow ratios were increased to where allowable export limits would be exceeded.

Using the indicated significance criteria, the Draft EIS/EIR (page 3-102) and the Final EIS/EIR revisions (Chapter 3.0, Section 3.5.2.4, Impact 3.5-34: Impacts to Delta Fish Populations) describe the potential diversion-related impacts of the Proposed Project relative to the existing condition. The model outputs do not exceed the values and qualifications identified by the

significance criteria. The model simulations conducted for the Action Alternatives also included conformance with X2 requirements set forth in the SWRCB Interim Water Quality Control Plan. The Delta export-to-inflow ratios under the Action Alternatives would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. The Draft EIS/EIR deemed these impacts less than significant.

The significance criteria utilized in the American River Pump Station Project Draft EIS/EIR to determine potentially significant impacts to Delta fish populations is very conservative (rigorous) relative to the significance criteria utilized by resource agencies in previous documents. The USFWS, in their Comment D in Letter 244, request additional potential impact significance determination substantiation regarding indicators (e.g., X2) that USFWS uses for impact evaluations. The USFWS participated in the preparation of three important, relatively recent NEPA compliance documents including the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), and the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999). For each of these three documents, USFWS has utilized various significance criteria, particularly regarding evaluation of potential Delta (e.g., X2) impacts. The various approaches and significance criteria utilized in these three documents are briefly described below, for comparative purposes relative to this EIS/EIR.

In the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the USFWS does not definitively state significance criteria. Instead, the evaluation of potential impacts relies on qualitative narrative descriptions based on the relationship between potential CVPIA actions and potential changes to environmental conditions. These assessment relationships are used to describe the manner in which environmental conditions lead to responses by representative species (page IV-80). The impact analysis performed in the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), although apparently somewhat more rigorous than the CVPIA analysis, also lacks definitive quantification of impacts to Delta water quality parameters (e.g., movement in X2) and relies on qualitative and potentially subjective judgments to address potentially adverse impacts. The CVPIA significance criteria states (page 7.1-30) *"An effect is found to be significant if it substantially degrades aquatic ecosystem processes; substantially reduces structural characteristics of the aquatic ecosystem; substantially degrades conditions affecting or potentially affecting the abundance or range of a rare, threatened, and endangered species or a species having economic or social value; or has considerable effects when viewed with past, current, and reasonably foreseeable future projects."* Most recently, in the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999), the USFWS defined quantitative significance criteria to be used in the fisheries impact analysis. The *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* utilized criteria which considered impacts to Delta fisheries resources significant if the project created a *"…10 percent modeled exceedance in the ratio of Delta inflows to exports, Delta outflows, and changes in X2 position during the February through June period…over the 69-year simulation period…."* The USFWS "*judged [the 10 percent exceedance criteria] to be conservative given it would be applied over the entire analysis period"* (pg. 3-182). The USFWS Trinity River Biological Opinion (pg. 30) states that the error of the model used in their analysis is +/- 3 percent.

The Proposed Project caused none of the 70 modeled years to result in a greater than 10 percent change (relative to the existing condition) in Delta outflow during the months of February through June (**Table 3-10**). In fact, the 10 percent threshold utilized by USFWS was never exceeded during any month for the 70 modeled years. In addition, the maximum upstream movement of X2 during the February through June period for any individual month was 0.2 kilometers (km), representing a maximum change of 0.3 percent, far below the 10 percent threshold. Finally, the Proposed Project did not result in a difference in the export/import ratio of 10 percent relative to the existing condition in any year for the February through June period.

Table 3-10
Comparison of Proposed Project to Existing Condition (Baseline)

	Number of Years with a Difference in Delta Outflow of 10% or More	Number of Years with a Difference in Delta Outflow of 3% or More	Maximum Upstream Movement for any Individual Month (Out of 70 Years) of X2 (km)	Maximum Percent Change in Upstream Movement of X2	Number of Years with a Difference in Export/Import Ratio of 10% or More
Feb	0	0	0.1	0.2%	0
Mar	0	0	0.2	0.3%	0
Apr	0	0	0.1	0.2%	0
May	0	0	0.1	0.2%	0
Jun	0	0	0.2	0.3%	0

The impacts on Delta resources were deemed less than significant in the American River Pump Station Project Draft EIS/EIR data analysis. The USFWS criteria utilized in the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), and the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999) further substantiates the significance criteria outlined in the American River Pump Station Project Draft EIS/EIR and the conclusion of less-than-significant impact. Therefore, overall impacts to Delta fish populations would be less than significant.

Recommendation 5 suggests further substantiation of impact significance conclusions regarding riparian vegetation (cottonwoods) along the lower American River. Recommendation 5 also contends that the Draft EIS/EIR provided *"no supporting biological data"* regarding the analysis and significance conclusions. The following response addresses these two major issues.

Contrary to the suggestion that no supporting biological data was provided in the analysis and significance conclusion in the Draft EIS/EIR, numerous reference and supporting materials regarding flow recommendations for existing cottonwood growth and maintenance rates were considered and utilized in developing significance criteria and in making the concluding determinations that are presented in the Draft EIS/EIR. These supporting environmental documents and scientific investigations included, but were not limited to the *Water Forum Proposal* (CCOMWP 1999), the *American River Water Resources Investigation*, *Draft Fish and Wildlife Coordination Act Report: A Detailed Report on Fish and Wildlife Resources* (USFWS 1996), *Fremont Cottonwood Growth in Relation to American River Stream Flow and Groundwater Depth* (Stromberg 1995), and a USFWS-approved integrated model entitled RIPVEG (Caicco 1996), which was used to predict the effects of upstream flow scenarios on the wildlife habitat provided by Fremont cottonwood forests along the Lower American River

Parkway. These materials are cited within the section of text found under the heading of "*Lower American River Riparian Vegetation and Associated Special-Status Species,*" which is located in Section 3.6.2, Environmental Consequences/Impact Analysis, Methodology, Diversion-Related Analysis Approach of the Draft EIS/EIR.

Based upon the conclusions and recommendations identified in the aforementioned documents and studies, the cumulative impacts analysis was performed against three separate flow indices (1,765 cfs, 2,000 cfs and 3,000 cfs), which were used as indicators regarding the ecological components of cottonwood forests and, therefore, riparian ecosystem health. The criteria used to determine potentially significant impacts to cottonwoods and associated special-status species and habitats along the lower American River focused on monthly occurrences of modeled flow reductions below Nimbus Dam and H Street Bridge that would be below the indices for "maintenance of radial growth" (1,765 cfs), "some growth" (2,000 cfs), and "reasonable growth and maintenance" of existing cottonwoods (3,000 cfs), during the growing season months of March through October over the 70-year period of record, compared to existing and ESA baseline conditions. Additionally, these occurrences were further examined to determine the frequency they would occur in two or more consecutive months, and whether these consecutive months would occur during the critical growing season months of April to July (CCOMWP 1999). Moreover, in an effort to thoroughly evaluate the potential changes that could occur as a result of the Proposed Project, output from computer simulation hydrologic models was then compared to applicable reference material and known relationships (discussed above), which were used as quantitative interpretive measures of the modeling results.

Moreover, the significance criteria and quantitative evaluation utilized in this EIS/EIR appear to be far more specific, quantitative and definitive than the significance criteria utilized by resource agencies in recently completed environmental documents. For example, regarding riparian vegetation, the USFWS does not definitively state significance criteria in the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997). The *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998) utilizes as significance criteria for evaluation of impacts to vegetation and wildlife resources the *"...Temporary or permanent removal, filling, grading, or disturbance of wetlands and riparian communities..."* In the *Draft Trinity River Fishery Restoration Draft EIS/EIR* (1999), USFWS relies on qualitative and potentially subjective judgments to assess potential flow-related impacts to riparian vegetation. For riparian vegetation the EIR/EIS states: *"...Impacts on vegetation would be significant if implementation [of the project] would result in any of the following:... Substantial adverse effect on any riparian habitat or other sensitive natural community identified in the local or regional plans*." An explanation of the meaning of the term "substantial" is not further provided in the document. Quantification of flow-related changes and potential effects on riparian vegetation either was not included in these documents, or did not begin to approach the rigor or application to stated significance criteria, where such criteria were stated, that is included in this EIS/EIR.

Recommendation 5 further suggests that "*…no supporting biological data is provided for some conclusions that magnitudes of effects are too small to be significant..."* Because only one specific example was provided by the commenter (i.e., flows in the lower American River of at least 2,000 cfs during the cottonwood growing season decrease under the cumulative condition

by 6.4 percent at H Street Bridge), all subsequent discussion herein will focus solely upon that issue in an effort to provide further clarification. For this analysis, it is essential to understand that when considering potential impacts to a riparian system, the interplay of many separate factors regarding the magnitude and frequency of potential effects can have varying degrees of influence upon individual and/or multiple lifestages of these riparian communities. Given the high degree of complexity associated with these interactions, it would neither be accurate nor appropriate to limit the extent of the analysis to only an isolated criterion or value. Thus, it should be pointed out that this 6.4 percent increase in the frequency that monthly mean flows below H Street Bridge would fall below 2,000 cfs under cumulative conditions, relative to the existing conditions, is the outcome of simulated monthly mean flows falling below 2,000 cfs in an additional 36 months out of 560 months included in this comparison. Of these 36 additional occurrences, 25 are outside of the critical growing period of April through July. Thus, under cumulative conditions, there would only be an approximate two percent increase in the frequency that monthly mean flows below H Street Bridge would fall below 2,000 cfs during the critical growing period of April through July, relative to the existing conditions. In addition, the commenter overlooked the subsequent paragraph of this discussion in the Draft EIS/EIR, which states that for flows below H Street Bridge that are at or above 2,000 cfs under the existing condition, there would be only four occurrences of two or more consecutive months, over the 70-year period of record, in which the cumulative condition would reduce these flows below the index. None of these occurrences would occur during the critical growing period of April through July. Because of all the above discussed findings, it is concluded that these flow reductions would not occur with sufficient magnitude and frequency under the cumulative condition relative to the existing condition to significantly affect some growth (i.e., the 2,000 cfs index criterion) in cottonwoods.

In consideration of: (1) the numerous reference and supporting materials regarding flow indices for cottonwood that were considered and utilized in making the concluding determinations that are presented in the Draft EIS/EIR; (2) the reliance upon the best available scientific information and thorough interpretation of hydrologic modeling results; (3) previous environmental documents recently prepared by resource agencies, including USFWS, were examined and significance criteria and effect determinations in them were built upon to define, conduct and disclose a more comprehensive assessment approach; and (4) the recognition of the interplay of many separate factors regarding the magnitude and frequency of potential effects, which can have varying degrees of influence upon individual and/or multiple lifestages of these riparian communities, the conclusion of less-than-significant impacts is further substantiated.

Recommendation 6 requests the evaluation of the American River-related reasonable foreseeable actions in a programmatic EIS, and development of a programmatic Record of Decision on both terrestrial and aquatic resources that isolates and considers, as a whole, the effects of Reclamation-specific cumulative impacts, as well as all other cumulative impacts, on the American River, Delta, water service areas, and other affected locations. Reclamation and the USFWS have discussed this issue for several years and Reclamation has concluded that it will not prepare a programmatic EIS for its American River Basin future actions for the following reasons.

Reclamation has prepared a comprehensive cumulative impact analysis and report (Appendix D to the Draft EIS/EIR) which takes into account not only Reclamation's anticipated future actions and operations, but the actions of others as well. Based on this report, Reclamation is well aware of the cumulative consequences of its future actions and the actions of others.

Reclamation is presently evaluating the consequences of the delivery of water under its American River CVP water contracts in a comprehensive EIS for long-term contract renewal. Based on needs projected for 25 years in the future (the term of the contracts), Reclamation is proposing to renew the contracts in the American River Division for the same or less quantity of water that is in the existing contracts. Except for a proposed contract with the El Dorado County Water Agency for 15,000 AFA, no new contracts for CVP water are anticipated. These actions are included in the Cumulative Report. The Record of Decision for long-term contract renewals will be both contract-specific and basin-wide in nature.

The Water Forum Agreement is a comprehensive package of linked actions that will achieve two coequal objectives: (1) provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

Although Reclamation is not a signatory to the agreement, it is presently very active in implementing portions of the agreement, especially in taking actions that address the cumulative effects of water development in the basin. These actions include:

- Negotiating upstream diversion agreements to make water available to the fishery of the lower American River during low water years. The effects of these agreements were included in the Cumulative Report and are being evaluated in further detail in the EIS for long-term contract renewals.

- Constructing temperature control devices on the M&I intake on Folsom Dam and El Dorado Irrigation District's intake to conserve cold water in Folsom Reservoir for later release down the lower American River for the protection of salmon and steelhead.

- Refining its operation of the temperature shutters on the Folsom Dam penstocks to most efficiently manage the use of the cold water in Folsom Reservoir. This includes more frequent shutter changes, blending of water from different elevations in the reservoir, and using the river outlets to reach the lowest parts of the reservoir, which requires bypassing the penstocks.

- Utilizing its flexibility associated with flood control operations to minimize flow fluctuations and to conserve storage.

- Utilizing water available pursuant to the CVPIA and the CALFED Environmental Water Account.

- Convening the American River Operations Work Group on a bimonthly basis to evaluate and provide information to protect fisheries of the lower American River on an adaptive management basis.

- Conducting studies to determine ways to more efficiently transport cold water from Folsom Reservoir to the lower American River.

- Conducting studies to determine ways to minimize the frequency and magnitude of flow fluctuations and their effects.

Reclamation is also reinitiating consultation on the CVP-OCAP.

Recommendation 7 requests that Reclamation develop a water resources management plan for the American River Basin based on a programmatic Record of Decision. Reclamation believes that the Water Forum has essentially developed a water management plan for the basin, and Reclamation is actively participating in the implementation of that plan.

Recommendation 8 suggests the preparation of a mitigation plan to address historical and new CVP impacts to aquatic and terrestrial resources. Reclamation disagrees that a separate mitigation plan is needed to address CVP resource protection needs. Reclamation is involved in several programs or activities, which specifically mitigate for historical CVP impacts upon aquatic and terrestrial resources. Additionally, Water Forum mitigation elements are fully supported by Reclamation, and address the concerns for the American River Basin.

Recommendation 9 requests a planning effort to develop an ecosystem-based, programmatic ESA consultation for the American River actions. Reclamation considers the upcoming CVP-OCAP ESA consultation the appropriate process for addressing these issues, rather than the American River Pump Station Project process.

U.S. Fish and Wildlife Service Coordination Act Report for the American River Pump Station Project

USFWS provided a draft Coordination Act Report for the American River Pump Station Project including several recommendations for project mitigation (L-244). Individual comment responses for most of the recommendations are included with the comment letter in Appendix C, Volume 2.

Comment L-244.O requests identification of the amount of vegetation and habitat that would be disturbed by construction of the Proposed Project. These values are provided in **Table 3-11** and have been added to the Final EIS/EIR, Chapter 3.0, Section 3.6, Terrestrial Resources. The acres displayed below would be affected either by construction or by permanent placement of project facilities. These estimates include the location of the facility or improvements plus a 50-foot wide area on either side of the feature.

Table 3-11 Construction Impacts on Habitat Types (acres)	
Urban	0
Potential Wetlands	0.01
Riparian Vegetation	1.06
Early Successional Oak Woodlands	2.08
Late Successional Oak Woodlands	0.20
Disturbed	37

The Mitigation Plan requires the lead agencies to comply with permitting agency terms and conditions to mitigate for the loss of sensitive habitats, including wetland areas. Overall, however, restoration of the river channel will result in creation of new additional habitat at the project site. Because the course the restored river will take remains unknown until after flows are returned to the channel, it is considered premature to develop a detailed revegetation plan at this time. Instead, Reclamation will implement an adaptive management strategy and monitor natural revegetation over the course of 10 years following completion of project construction. Please see Master Response 3.1.5, Project Area River Restoration Plan and the Mitigation Plan (Appendix D to the Final EIS/EIR).



American River Pump Station Project

Final Environmental Impact Statement/
Environmental Impact Report

Appendix C - Volume 2
Responses to Comments on the Draft Environmental Impact Statement/Environmental Impact Report

Individual Comment Letters and Responses

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

June 2002

SCH# 1999062089

American River Pump Station Project

Final
Environmental Impact Statement/
Environmental Impact Report

Appendix C

Responses to Comments on the
Draft Environmental Impact Statement/
Environmental Impact Report

Volume 2
Individual Comment Letters and Responses

U.S. Bureau of Reclamation

Placer County Water Agency

Placer County
Water Agency

June 2002

L-1

October 1, 2001

Surface Water Resources, Inc.
2031 Howe Avenue, Suite Ca 110
Sacramento, CA 95825

RE: American River lo-Pump Station Project
Draft EIS/EIR
Especially Northern CA Rider's Recreationists

My sister lives in Newcastle and I live in Garden Valley. For many years we have ridden our horses on the trails that connect Auburn to Cool, California that go over the diversion tunnel over the American River. These trails are very important to us and we beg of you to please keep them available for horse riders like ourselves. We have also notices many other horse riders using these trails as well as mountain bikers. This is a very important trail to many Americans and should we loose it, would cause a hardship to us.

A

Sincerely,

Bonnie Borovich
JayDeen Killian

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-2

San Juan Water District
P.O. Box 2157 • Granite Bay, California 95746 • 916.791.0115
9935 Auburn Folsom Road • Granite Bay, California 95746
FAX 916.791.7361 • www.sjwd.org

General Manager
James R. English

Directors
Dorothy Kilgore, President
Edward J. "Ted" Costa, Vice President
Lyle N. Hoag
Glenn A. Miller
Kenneth H. Miller

October 2, 2001

American River Pumping Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: Draft EIR/EIS Comments

San Juan Water District appreciates the opportunity to provide comments on the proposed PCWA American River Pump Station Project. Our comments are brief and related to Chapter 3.0, page 3-11, next to last paragraph.

A

The paragraph is intended to explain the Placer County Water Agency/Northridge Water District Long-Term Stabilization Project, and includes a statement as follows "NWD intends to also serve McClellan Air Force Base and perhaps provide water to portions of the service areas of Arcade Water District, Citizens Utility Company of California, Rio Linda/Elverta Community Water District, and the San Juan Water District (SJWD) (including Fair Oaks Water District, Citrus Heights Water District, Orange Vale Water Company, and a portion of the City of Folsom served by SJWD) with part of this newly acquired surface water supply."

The San Juan Water District family of agencies which includes Fair Oaks Water District, Citrus Heights Water District, Orange Vale Water Company, the San Juan Retail District and a portion of the City of Folsom served by San Juan has an adequate water supply for its customers and has, in fact, already contributed significantly to the health of the groundwater basin within the family of agencies boundaries.

Once again, I appreciate the opportunity to comment on the Draft EIR/EIS.

Sincerely,

Jim English
General Manager

A. Commenter provides correction to description of the Placer County Water Agency and Northridge Water District (recently renamed Sacramento Suburban Water District) Long-term Groundwater Stabilization Project. This correction is reflected in Chapter 3.0, Section 3.3.1.2, Placer County Water Agency/Northridge Water District Groundwater Stabilization Project. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-3

Mountain Bike Trail Advocates
www.fatrac.org info@fatrac.org
501(c)(3) non-profit

FATRAC
Box 6356
Auburn, CA 95601

An IMBA Affiliated Club

October 8, 2001

American River Pump Station Project
Draft EIS/EIR comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

To Whom It May Concern:

Folsom Auburn Trail Riders Action Coalition [FATRAC] submits the following comments in connection with the draft EIS/EIR for the Pump Station Project.

FATRAC is the local mountain bicycle advocacy organization that has volunteered thousands of hours to the Auburn and Folsom Lake State Recreation Area. Volunteer projects includes working with State Parks staff on designing, building and maintaining multiple use trails as well as participating in a bicycle trail patrol. FATRAC has reviewed the Executive Summary of the draft EIS/EIR and wishes to have mountain bicyclists included more specifically in the recreation elements. Please note:

A

- Page 32, RECREATION. Please include mountain bikers in the first paragraph under Recreation, as follows: "The Proposed Project would result in improved trail conditions and river access near Oregon Bar. Project design includes measures to minimize mixed-use conflicts so that equestrians, boaters, *mountain bicyclists*, and pedestrians can safely enjoy the area." The Auburn State Recreation Area is committed to multiple use trails wherever possible, that include mountain biking. The EIS/EIR notes that the impacts of the Proposed Project to mountain bikers are greater than any other user. This may be reflected by the closure of the Auburn-to-Cool Trail. However, trails and improved access for boaters, pedestrians and equestrians is clearly specified in the Proposed Project. Including mountain bicycling wherever boaters, pedestrians and equestrians are mentioned may mitigate this impact. This would more accurately reflect current usage in the ASRA. Not only are mountain bikers the largest user group, they tend to volunteer more than other user groups for trailwork projects supervised by State Parks. Faced with budget constraints, the ASRA would continue to rely on this user group for assistance.

A. As described in the Draft EIS/EIR (p. 3-210), the public river access trail improvements would be designed to minimize user conflicts among pedestrians, equestrians and vehicles. The recreation use designations for existing trails would not be changed as a result of the Proposed Project. The Proposed Project would not include development or designation of additional trails for mountain bike use. The Pioneer Express Trail and Cardiac Hill Bypass Trail would remain designated for equestrian/pedestrian use. To the extent that alternate trail routes would be provided as part of the Proposed Project (i.e., during construction) the alternate routes would retain the designations of the existing trails. Therefore, as described in the Draft EIS/EIR, the bifurcation of the Auburn-to-Cool Trail would be considered a significant impact upon mountain bikers. However, comprehensive recreation planning for the Auburn SRA will be undertaken by CDPR and Reclamation in the near future. These efforts would include public participation opportunities to assess recreation user and facility needs including consideration of mountain bike access through the Auburn SRA.

Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.3, Recreation Trail Access During Construction.

L-3, pg. 2

- Page 81, FACILITIES RELATED IMPACTS. It is noted that the Auburn-to-Cool trail would be impacted by the river restoration. It would not be an unavoidable impact to mountain bikers if this user group had access to a river crossing. FATRAC believes crossing at the Mountain Quarries Bridge and access to the Western States Trail would completely mitigate this impact. Mountain bicyclists could either use the existing Western States trail or work could include improvements to the old railroad grade from the river (at Mtn. Quarries bridge) to Auburn. On the Cool side of the river, either a new trail could be constructed from the Mtn. Quarries bridge to Cool, or improvements could be made to the Western States trail to allow bikes. Funding for this work should be part of the project. **B**

- Page 113, INCREASE IN OZONE PRECURSOR CONCENTRATIONS, Public River Access. The EIS/EIR discusses the generation of emissions by increased recreation related trips to the site. It also indicates that no mitigation measures are proposed apparently because it deems Public River Access impacts to be less than significant. This should be more thoroughly reviewed. Recreation user groups should take responsibility for the impacts they cause to the environment especially because of increased vehicle trips. Mitigation measures might include decreasing the size of the parking lot at Oregon Bar. Another option would be to prohibit private motor vehicle access to the river at this point. It is ludicrous to create a 50-car parking lot in a beautiful river canyon; that impact should be considered significant. Recreation users should be required to carpool and vanpool, hike or ride bikes or horses to the rivers as much as possible. **C**

- Page 20, et seq. The Proposed Project contemplates management of certain elements by the California Department of Parks and Recreation [CDPR]. FATRAC has been working with staff for years as volunteers on trail design and maintenance project and knows first hand the budget constraints they have to deal with. Existing projects have been difficult if not impossible to fund and manage because of lack of funding. This Proposed Project appears to create a significant budget item(s). Is funding available to staff and manage this project? Long term funding for staff should be included. **D**

Thank you for this opportunity to comment on the draft EIS/EIR. If you have any questions, please call me at (916) 663-4626. If you have any questions about FATRAC's work with State Parks, please contact Jill Dampier at (530) 885-4527.

Sincerely,

J Haagen-Smit

Jim Haagen-Smit
Advocacy Director, FATRAC

B. Please refer to Response L-3.A and Master Response 3.1.1, Auburn-to-Cool Trail.

C. The proposed public river access features would generate a relatively limited level of activity within the project area, when compared to other river access areas within the Auburn SRA. However, in response to public comments regarding river access feature design, the lead agencies and CDPR reduced the total number of parking spaces that would be provided in the project area (from 70 to 53) by reducing the riverside parking lot (formerly 20 spaces) to provide only a turnaround area and 3 handicap accessible spaces. Please see Master Response 3.1.6, Public River Access Features for additional description.

Additionally, project-related vehicular air emission estimates for pollutants of concern were re-evaluated using updated methodologies recommended and provided by the Placer County and El Dorado County air pollution control districts (APCDs). The assessment of project-related trips and air quality emissions is based on the combined total level of travel on a peak river access use day. On a peak day, the lead agencies and CDPR estimate that the 50-space parking lot would fill twice (3 handicap spaces once), resulting in a total of 206 trips (trip is one-way travel). Additionally, PCWA personnel would make up to 8 operations and maintenance trips (4 site visits) per day. The total peak day travel to the site would be 214 trips. This value was used to re-assess vehicular air emissions for a peak, or "worst-case" condition. The El Dorado County APCD threshold of significance for ROG and NO_x emissions is 82 pounds per day (lbs/day); Placer County's threshold is 85 lbs/day. El Dorado County APCD evaluates PM_{10} emissions on the likelihood such emissions would cause or contribute significantly to a violation of the applicable state or national ambient air quality standards. Placer County uses a threshold of 275 lbs/day. The results for ROG, NO_x and PM_{10} emission assessment are displayed below.

Estimated Daily Air Emissions for 2005, 2010 and 2015
Associated With Peak Public River Access Trips[1] to the American River Near Auburn

	Air Pollutant (pounds per day)		
Analysis Year	ROG	NOx	PM_{10}
2005	5.5	4.13	0.25
2010	3.42	2.41	0.241
2015	2.2	1.43	0.254

Source: El Dorado County APCD - CEQA Guide, First Edition, February 2002

[1] The 214 trips are determined by adding the 8 daily project operations trips to the peak 206 river access trips. See Final EIS/EIR Air Quality discussion.

As indicated by the results, ROG and NO_x emissions would be well below the more restrictive El Dorado County APCD 82 lbs/day significance threshold for all years evaluated. The estimated peak day or "worst-case" PM_{10} emission levels also would be quite low, well below the Placer County threshold, and would not result in or contribute significantly to a violation of applicable air quality standards. Generally, because peak travel conditions would only occur on a limited number of days of the year, the expected daily project-related air pollutant emissions would be less than indicated by these results. This updated evaluation is included in the Final EIS/EIR, Chapter 3.0, Section 3.15, Air Quality. This information does not alter the conclusions presented in the Draft EIS/EIR.

D. Please see Master Response 3.1.2, American River Pump Station Project Funding.

L-4



9 October 2001

PCWA American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Room 110
Sacramento, CA 95825

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Greetings:

The following comments are submitted in behalf of the Western States Endurance Run Foundation, which exists to promote, maintain, and improve the Western States Trail and its environs, and annually present the 100-mile Western States Endurance Run from Squaw Valley to Auburn. These comments represent our preliminary remarks in time for the Placer County Water Agency public hearing of 11 October, and may be supplemented by additional comments after we have had an opportunity to digest the entire EIS/EIR and its appendices.

Our comments focus on recreational impacts, and in particular impacts of the project on the Western States Trail, the Auburn-to-Cool Trail that presently runs through the cofferdam area, our Western States Endurance Run, the American River 50 Mile Endurance Run, and general recreational running in the American River Canyon.

A

We strongly endorse the project proposed by the U.S. Bureau of Reclamation and Placer County Water Agency. This project represents the environmentally preferable way of fulfilling water rights held by the Agency to deliver supplies to western Placer County, and also meeting public trust requirements to restore the navigability of the American River, its fishery, and other ecological, scenic, and recreational values. The sponsoring agencies deserve credit for arriving at a consensus solution that meets public needs without destruction of the American River Canyon -- now proven to be an avoidable impact that would have taken the last 30 miles of the Western States Trail and run course.

c/o Antonio Rossmann, 380 Hayes Street, San Francisco, CA 94102 (415) 861-1401

A. Project support noted.

L-4, pg. 2

B

First, we apprehend from the draft EIS/EIR that the project would have NO direct impact on the Western States Trail from the Auburn Overlook easterly toward and beyond No Hands Bridge, and therefore no impact on the conduct of the Western States Endurance Run or our progenitor event the Tevis Cup Western States Trail Ride. We ask that in response to this comment the project sponsors affirm that this is the case and that no use will be made, or restrictions imposed upon, the Western States Trail, either temporary or permanent.

The endurance run tracks from No Hands Bridge westerly up to Robie Point, and then onto Auburn city streets at the end of Robie Drive; and the trail ride tracks from No Hands Bridge up to Robie Point and along the trail to the Auburn Overlook and then onto Auburn city streets near the fairgrounds. If the project would contrary to our expectations impact either event, we request that mitigation measures be designed to remove such impacts.

Second, we apprehend that the project does produce two unnecessary and avoidable impacts: temporary closure of trail access from the Oregon Bar area to the Overlook, and permanent closure of the Auburn-to-Cool Trail at the present site of the cofferdam.

C

We agree that the second permanent impact is significant; and assert that the first temporary impact is also significant in that it would disable for a time the annual presentation of the American River 50 Mile Endurance Run, which tracks easterly from Sacramento, past Rattlesnake Bar and Manhattan Bar along the Pioneer Express Trail, and up the canyon near Oregon Bar to the Overlook. The American River 50 was founded by the Western States Endurance Run to provide a qualifying run for Western States, and has grown to the point where in many recent years it has become the largest ultramarathon in the United States, with more than 500 competitors.

The short-term impact on Pioneer Express Trail access near Oregon Bar to the Auburn Overlook can be eliminated by providing alternative trail access from downstream of Oregon Bar up to the Overlook during the construction period. The existing access road has sufficient width to enable a temporary protected shoulder to provide foot and equestrian use during the construction period. Furthermore, construction activity could be avoided on the annual running of the American River 50 (a Saturday) to enable use of the full roadway width one day a year. We request the sponsoring agencies to adopt these two mitigation measures.

D

The permanent adverse impact on the Auburn-to-Cool Trail can also be eliminated; we strongly disagree with the draft EIS/EIR conclusion that the permanent closure of this trail is unavoidable under the proposed project.

As the draft EIS/EIR correctly observes, an ironic outcome of the temporary closure of No Hands Bridge has been the discovery by the recreational community of the Auburn-to-Cool Trail. This route provides expanded area for runners and horseback riders; additionally, because of restrictions on mountain biking on the steep Western

2

B. The Commenter is correct, construction and operation of the Proposed Project would not directly affect the conduct of the Western States Endurance Run or the Tevis Cup Western States Trail Ride. Clarification of the Proposed Project and Upstream Diversion Alternative impacts upon these trail events is provided in the Final EIS/EIR, Chapter 3.0, Section 3.8, Recreation. These changes do not alter the conclusions presented in the Draft EIS/EIR.

C. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction.

D. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-4, pg. 3

D (cont.)

States Trail approaches to No Hands Bridge, the Auburn-to-Cool Trail provides unique trans-river access for mountain bikers. Not only do we agree that the direct impact of trail closure would be significant on the Auburn-to-Cool Trail; we assert that this permanent closure could also indirectly and adversely affect the Western States Trail, by increasing the risk that mountain bikers would demand access to Western States near No Hands Bridge. While bikers appear capable of accommodation on the Auburn-to Cool Trail, State Parks has correctly determined that the Western States Trail's steepness and topography preclude acceptable trail bike use there.

The project sponsors have available to them as a mitigation measure the construction of a pedestrian, equestrian, and cycling bridge across the American River at the Auburn-to-Cool Trail alignment. The feasibility of such construction is demonstrated in the Interim Resource Management Plan for the Auburn State Recreation Area prepared in September 1992 by California State Parks for the Bureau of Reclamation. That plan included a bridge, of the type proposed here, at the Greenwood Crossing (Rucky-Chucky) of the Western States Trail upstream from the site of the presently proposed project. Cost was estimated in 1992 at $100,000. A copy of the relevant pages of the 1992 Bureau/State Parks management plan is attached to these comments.

Even allowing for inflation in the intervening decade and the greater width of the river at the present cofferdam site, construction of a bridge to preserve the Auburn-to-Cool Trail seems assured for a sum in six figures. As with the restoration of No Hands Bridge, inclusion of that cost in a special Congressional appropriation can be expected if the project sponsors commit to that mitigation measure as part of their project approval. We request the sponsoring agencies to adopt this mitigation measure as part of their project approval.

The Western States Endurance Run Foundation thanks the sponsors for this initial opportunity to comment on their draft EIS/EIR and underlying project proposal.

Respectfully,

Counsellor

cc: Jill Dampier, California State Parks
Western States Trail Foundation
American River Coalition
Protect American River Canyons
Ed Tiedemann and Jan Goldsmith

3

L-5

L-5

Emmett Cartier
952 Campbell Circle
Woodland, CA 95776

October 11, 2001

To: Placer County Water Agency and U.S. Bureau of Reclamation

Subject: Comments on the EIS/EIR, American River Pump Station Project

Thank you for the opportunity to comment on the Draft EIS/EIR for the American River Pump Station Project (Auburn Dam Diversion Site. It proposes to install permanent pumps to divert up to 50 cubic feet per second (cfs), expandable to 200 cfs, of North Fork American River water to western Placer County. The preferred project would close the Auburn Dam tunnel for pump installation and re-divert the remainder of the river flow to its natural channel. Unfortunately this would cut existing popular uses across the former dam site, such as hiking, biking, and horse riding. The river is currently Class I for boating through the tunnel. We recreationists support the No Project Alternative with full restoration of the site to proper ecological functions. Some general and specific comments are provided below to assist in preparation of the final EIS/EIR.

General Comments on the EIR:

A · **NO HAZARD EXISTS.** The stated hazard to recreationists at the tunnel site has not been demonstrated in fact. In fact, the tunnel reach of the lower North Fork is the least difficult for boating on the Forks of the American River. There has been no history of incidents or accidents leading to injury at the tunnel site, despite more than 25 years of popular use. Safety should not be used in this case as a project purpose.

B · **PRESERVE RIVER CROSSING.** Cross-river travel should be preserved by installing a footbridge as part of the project. Merely closing the tunnel eliminates many current uses of the Auburn-Cool Trail (ACT), such as for hiking, biking, horse riding. The tunnel site is now the only bridge across the canyons between Folsom Dam and No Hands Bridge near Highway 49, and the ACT provides the shortest route between Auburn and Cool. The substitute bridge must be part of the minimum requirements for mitigation in the loss of access across the North Fork.

C · **PROVIDE ACCESS.** Access for boating and other river recreation should be fully provided in the reach as part of the minimum requirements for mitigation of loss of recreation access, or regardless of the actions for this project. The entire site cannot be considered a construction zone. Access should be clearly provided in a revision of the contract for management by California Department of Parks and Recreation and revision of closure rules.

D · **RESTORE THE CANYON.** Restoration should be undertaken for the entire Auburn Dam site, not just the river channel. Native vegetation should be replaced and ecosystem functions should be restored.

A. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.3, Recreation Trail Access During Construction.

D. Please refer to Master Response 3.1.5, Project Area River Restoration.

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Specific Comments on the Draft EIS/EIR:

E **Boating Impacts.** The 'significant and unavoidable' impacts to whitewater boating on the Middle Fork are opposed by boaters (3-214). Even eight hours of reduced flow per month could adversely affect commercial boating operations in terms of trip logistics, congestion, safety, and marketability. Commercial boating on the North Fork below the confluence would not be feasible due to lack of significant rapids or whitewater, and cannot be considered a substitute for the Middle Fork runs from Oxbow to Greenwood Bridge, or to Greenwood Bridge to Mammoth Bar/Highway 49. If commercial boaters had been interested in boating the river below the confluence, they would have pursued permitting there. The net impact of the proposed action is clearly negative rather than beneficial to boating recreation and should be expressed as such in the EIR.

F **Ralston Reoperation.** Please describe further in the EIR how the Ralston Afterbay would be re-operated to obtain minimum flows of 300 cfs rather than 75 cfs. Why do higher daily minimum require reducing flows from the peaks used for whitewater boating on the Middle Fork?

G Impacts to recreation and the environment of the Middle Fork should be addressed in this EIR as part of the project area (P. 2-28). Apparently, the duration of flows will be reduced, especially in July, during the primary boating season.

H **Tunnel Safety.** The description of boating opportunities within the project area excludes the boating below the confluence of the Middle Fork with the North Fork (3-201). This reach was excluded from some guidebooks that describe only whitewater because it is considered too easy for serious use by some whitewater enthusiasts. Nevertheless, it was listed in Sierra Whitewater by Charles Martin as an easy run to Rattlesnake Bar. Michael Jenkinson, in Wild Rivers of North America (1981, page 306) states, "The North Fork American is rated a Class II voyage from Highway 49 to Folsom Lake". Similarly, Peter Wood in Running the Rivers of North America (1978) states on page 233, "The North Fork is also a Class II from Highway 49 and [sic] Folsom Lake. Take out is at Rattlesnake Bar". The American River Recreation Area map (Jenrick-Krage, 1988) maps rapids and hazards on the North and Middle Forks but shows only river in the project area. The Topographic Trail Map for Hiking, Equestrian and Whitewater Routes (Sowarwe-Werhner, 1998) shows the tunnel but no rapids or hazards at the project site. None of these sources identifies the tunnel as a hazard yet all of them identify hazards on open reaches of the North and Middle Forks. There is no mention of incidents at the project site in the comprehensive River Safety Reports of the American Canoe Association.

I A mention of rapids at Tamaroo Bar in the EIS/EIR does not describe their nature or value for recreation (3-211). The EIS/EIR should note that the flow does not typically stop at Oregon Bar since Folsom Lake is seldom completely full. Rather, the boater may often continue downstream up to nine miles through the project site from the confluence.

H (cont) Even when the lake is completely full, the boater may continue to access points on Folsom Lake. There are no named rapids or major obstacles in this reach except when the tunnel is full but the river is not spilling into the natural channel. Any restrictions imposed on outfitters by the managing agencies should not reflect potential use by commercial boaters, nor existing use by noncommercial boaters, of the river below the confluence. Boaters are only likely to begin trips when the river is within

E. Comment noted. As the commenter points out, the Draft EIS/EIR recognizes that the changes in MFP operations potentially result in significant and unavoidable impacts to whitewater boating on the Middle Fork American River. The impact call recognizes that the up to 8 hours of reduced boatable flows significantly affects whitewater enthusiasts who use the Middle Fork and potentially results in effects upon commercial rafting opportunities. These impacts, however, are considered unavoidable as the reduction in peak flow duration is necessary to enable PCWA to obtain its needed water supply. It is noted, however, that the evaluation of Proposed Project impacts upon boating opportunities of the Middle Fork American River is considered a conservative assessment due to the nature of the assumptions required to perform the hydrologic modeling. It is likely that, even under full build-out of the Proposed Project (diversion of up to 100 cfs), the reduction in the number of boatable hours would be less than reported in the Draft EIS/EIR.

The analysis of potential changes to instream river flows and impacts upon whitewater boating opportunities was based on a nine-year period of record, extending from October 1, 1978 through September 30, 1996. This data represented the best available and complete information at the time the analysis was performed. This period of record, however, is, on average, drier than the approximately 30-year average of impaired flows with the MFP in place. Use of this data set, therefore, provides a more conservative result, as the reduced duration of peak hydropower releases would have a greater impact during dry water years as compared to wet or average years. It is considered likely that if the data set was not skewed toward dry or drier year conditions that the results would have indicated fewer hours of reduced recreation boating opportunity.

Additionally, the modeling analysis did not incorporate system flow gains or losses. The results therefore potentially reflect a higher need to re-operate to meet minimum instream flow requirements than may actually occur. Additionally, due to the speculative nature of gains/losses for the analysis period of record, a contingency factor of 10 percent was assumed to evaluate minimum instream flow conditions. Use of the contingency factor increased the modeled instream flow requirement, ensuring the minimum instream flow would be met. The combination of these assumptions potentially result in the model indicating a greater need for re-operation to meet minimum instream flows, thereby reducing the duration of peak hydropower releases more frequently than may actually occur.

The Draft EIS/EIR also notes that restoration of the North Fork American River in the vicinity of Auburn Dam would provide additional public boating opportunities which would be considered a beneficial aspect of the Proposed Project relative to the existing condition, No Action/No Project or Upstream Diversion alternatives. The commenter correctly notes that the restoration of this opportunity in the project area would provide a different type of boating experience (ranging from Class I to easy Class III, suitable for beginners) and would not be considered a replacement for the loss of more challenging whitewater boating opportunities described for the Middle Fork American River. Boating miles for commercial rafting would not increase as a result of this project nor is it the intent of the lead agencies or CDPR to open this section of river up to commercial boating; but rather, to provide more boatable river miles and greater public accessibility. The section of river upstream of the Proposed Project area is more suitable to slightly inexperienced or family orientated rafters seeking boating opportunities on a manageable stretch of river appropriate to their skill level. The Final EIS/EIR, Chapter 3.0, Section 3.8, Recreation, includes changes to clarify the nature of the analysis assumptions and to distinguish between the different types of boating opportunities. These changes do not alter the conclusions presented in the Draft EIS/EIR.

Letter 5, page 2 responses continued.

Response F
Please refer to Master Response 3.1.8, Ralston Afterbay.

Response G
The Draft EIS/EIR includes the Middle Fork American River from below Ralston Afterbay to the confluence with the North Fork American River within the direct effects project study area (Section 3.3.3 Project Area Setting at page 3-6 and Figure 2-2, Project Area Setting at page 2-3). The evaluation of potential impacts of the Proposed Project and alternatives upon the environmental resources of the Middle Fork American River are described in each of the resource sections of Chapter 3, Affected Environment and Environmental Consequences (Sections 3.4 through 3.17) as determined relevant to the individual topic. Please also refer to Master Response 3.1.6, Public River Access Features and Response L-5.E.

Response H
Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

Response I
The American River Pump Station Project Draft EIS/EIR describes boating conditions of the North Fork American River in Section 3.8.1.2, Project Area Setting, under the subheadings North Fork American River and Project Area River Use (page 3-202). The stretch above the dam site is an easy class I to class II river trip through a narrow canyon appropriate for novice boaters, families and unguided trips. The trip begins with a little warm up directly into a fairly long cobble bar type rapids with swift water and a tricky left turn against a rock face near the bottom. This rapid would give novices trouble. This section is called Tamaroo Bar. The water flow is considered a class II rapid caused by a bedrock constriction in the river. This information is included in the Final EIS/EIR, Chapter 3.0, Section 3.8, Recreation. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-5, pg. 3

H(cont) normal stages as described on page 3-202, and therefore the tunnel filling constitutes no hazard to boating. The river is shown not to fill the tunnel during peak boating months, June through September. River-borne debris can be a hazard in any reach of the river but does not require the reach be closed. Boating is nowhere limited to daylight hours, and night-time boating occurs in this reach in summer. Curiously, the EIR states that boating, fishing and swimming are known to occur in the area, but no incidents or accidents with the tunnel are noted. Claims of hazardous conditions are unjustified.

J **Boating Miles.** Action alternatives will not significantly increase the number of river miles (2-88) available for boating. Current conditions allow rafting during the seasons when rafting is popular, with the only possible closures during flood flows in the tunnel before the river overflows into its natural channel. Boaters are well aware of these readily visible conditions and have not had problems with the tunnel.

K **Lake and River Levels.** Decreases in flows of the Lower American River and lower levels in Folsom Lake would create significant impacts to water-based recreation in the region. Both the river and lake resources serve vast numbers of visitors who depend on water levels for suitability of recreation activities.

L **Recreation Plans.** Recreation development plans should be included in this EIR as necessary and proposed part of the project. The vehicle access route will be shared with

M maintenance vehicles, resulting in conflicts. Alternative roads in the area including Highway 49 are not developed or maintained to standards for existing uses in ASRA.

N **Parking at River Access.** Problems with 20-car parking lot at river end of gravel road include congestion, dust, noise, spinouts due to steepness, inadequate space to pass on narrow road, and lack of shade for parking. Parking should be provided for 200 cars based on usage at the confluence and Upper Clementine. The proposed river access site would likely receive even more demand for recreation due to its proximity to urban development and location within the city limits of Auburn. As stated on page 3-212, the Confluence typically "...does not have sufficient parking to accommodate users." In

O addition, there is an apparent inconsistency with the statement on 2-81 that 70 vehicles at one time would be accommodated at the access parking.

P **Slopes.** Slopes for the tunnel closures should be reduced from 2:1 to at most 3:1 to allow

Q maximum revegetation and improve slope stability and aesthetics. Revegetation of disturbed areas should be included in the plan and EIS/EIR.

R **Closures.** Closure of the large project area over the period from 2002 to 2004 is a highly significant impact on recreation for the proposed project. (2-35 and 3-211) In addition, the closures will likely result in additional environmental impacts from overcrowding due to artificial concentrations of visitation at the confluence area. These impacts should be addressed in detail. Any closures should be strictly limited to the immediate area of active construction and associated hazards. Many management alternatives are available to preclude the necessity of total closure for recreation use. The acreage of the closure should be stated in the EIS/EIR. The reference to Order #318-02-91 should reflect more

J. Boating activities below the Middle Fork/North Fork American River confluence are limited; CDPR's posted order (No. 318-02-91) prohibits boating ½ mile above and ½ mile below the Auburn Dam construction site. Further, until recently, CDPR had a posted sign noting no boating beyond the Highway 49 Bridge at the North Fork/Middle Fork American River confluence due to limited availability of suitable boating take-out locations between the confluence and Auburn Dam site. Therefore, implementation of the Proposed Project including rewatering of the North Fork American River near Auburn and official opening of the stretch of river from the Middle Fork/North Fork confluence through the project site and to Folsom Reservoir would substantially increase the total number of boatable miles for public recreationists. It is recognized that the boating miles for commercial rafting would not increase as CDPR would not issue commercial boating permits as part of this project.

Please also refer to Response L-5.E.

K. The American River Pump Station Project Draft EIS/EIR evaluates the potential for the Proposed Project and alternatives to impact lower American River and Folsom Reservoir recreation activities (3.8, Recreation, Section 3.8.2.3, Impact Analysis) and describes the degree of such impacts, including cumulative conditions, using established thresholds and significance criteria.

L. It is unclear what is meant by "recreation development plans." The Proposed Project includes public river access features to mitigate for anticipated increased North Fork American River use in the project area. These features are proposed to be consistent with the goals and design considerations of the Auburn State Recreation Area (SRA) Interim Resources Management Plan (1992), and would fall under the management responsibility of CDPR through it's contractual arrangement with Reclamation. Reclamation and CDPR are responsible for providing long-range planning for the Auburn SRA including preparation of a comprehensive study public participation, and environmental review. Reclamation recently appropriated funding for the update to the Auburn SRA IRMP. Initial study efforts are expected to be underway in 2002.

M. Please refer to Master Response 3.1.6, Public River Access Features. It is noted that project area roadway design considerations include anticipated multiple users and incorporate means of reducing user conflicts through provision of separate parallel trails where needed and permitted use signage.

Letter 5, page 3 responses continued.

Response N
In response to public comments received on the Draft EIS/EIR, the lead agencies and CDPR have modified the proposed public river access parking lot design. The 20-car river-side parking area has been redesigned. A vehicle turnaround area and three handicap accessible (including one sized for vans) would be created instead. This change minimizes potential congestion, noise, and dust concerns. The access road would be designed to adequately accommodate these uses. These changes are described the Final EIS/EIR, Chapter 3.0, Section 3.15.2.4, Impact Analysis, Operation. These modifications do not alter the conclusions presented in the Draft EIS/EIR. Please refer to Master Response 3.1.6, Public River Access Features.

Response O
The preliminary parking lot design described and evaluated in the Draft EIS/EIR (page 2-81) included two separate parking areas with space for up to 70 vehicles. As described on page 2-26 in Section 2.2.2.1, the preliminary proposal included a 20-space lot adjacent to the river, and a 50-space lot in the flat area above Oregon Bar (former Auburn Dam concrete batch plant site).

Response P
The final design of the tunnel closure features remains under development. These efforts include consideration of slope stability and project area aesthetics as they relate to the overall project river restoration design objectives. Please also refer to Master Response 3.1.5, Project Area River Restoration and Response L-5.Q.

Response Q
Vegetation is expected to grow on the slopes and benches over time, much as has already occurred in the existing disturbed reach. Reclamation would be responsible for the long-term monitoring of natural vegetation growth in the project area and would evaluate the need and appropriateness of strategic native vegetation planting should natural growth appear inadequate. Please refer to Master Response 3.1.5, Project Area River Restoration.

Response R
Please refer to Master Response 3.1.3, Recreation Trail Access During Construction. Reclamation and CDPR recognize existing concerns regarding recreation use at the confluence and will address these issues in their long-term comprehensive planning studies for the Auburn SRA later this year.

L-5, pg. 4

R (cont) recent orders amending it. The original order is excessively broad in geographical areas closed in that it includes the entire drainages of Kickerbocker and Salt Creeks and other lands unrelated to the project site. If these lands are to remain closed, they must be considered as part of the project area for EIS/EIR evaluations.

Temporary closure for construction must also be considered a significant impact, since the time frame extends substantially more than a year. For mountain bikers, there is no reasonable alternative route. Additional use of Highway 49 as an alternate trail during construction would impact traffic and existing use on Highway 49 where congestion is already an impact.

S The statement that continued operation of the pumping plant would prevent closure of the tunnel requires further clarification. The current pumping site is above the tunnel. Access roads have been constructed throughout this area in the past and could be reactivated for seasonal installation. Such construction would be less costly and have less impact on the environment than would the tunnel closure proposed in the action alternative. The statement seems to confuse the action and no action alternatives (2-112)

T **Bridge Alternative.** Page 2-35 stated permanent closure of the Auburn-Cool Trail would be a significant impact with no proposed alternative or mitigation. For this significant impact, a bridge should be installed to compensate for loss of access. Such a bridge could readily be designed into the channel alteration plans and placed outside of future construction project sites. A bridge should be incorporated into the channel design to preclude future costs. The bridge may be of a temporary, removable design. For example, it could be installed during June through October periods when flows of record are below 10,000 cfs. Incorporating abutments into the artificial channel banks would incur no additional cost for the proposed project. Bridge span (and costs) can be minimized by design of a narrow and deep channel reach for the bridge to clear the river surface. In addition, for periods when bridge access is not available at the project site, the No-Hands Bridge should be opened to bicycle use, and a new trail extended to accommodate bicycles to the Auburn-to-Cool Trail on the south side of the river below No-Hands Bridge. Without bridge access across the river, significant safety impacts will be incurred with the preferred project as hikers, bikers and horse riders attempt to cross the river on the trail in a variety of stream conditions.

Highway 49 is already beyond capacity and a substandard mountain road, according to Caltrans, and therefore unsafe for bikers to use as an alternative to the Auburn-Cool Trail as stated on page 3-212. After project, the river will be a barrier to users on the trail. Accordingly, the proposed temporary closure and permanent blocking of this trail and the project action will constitute a significant impact to bike recreation in the area. A new bridge at the site would be the only way to provide mitigation and must be considered part of the project proposal.

U **Hazard Consistency.** The draft (2-86) states that existing use of the tunnel area under its closed status is a hazard, yet construction activity including explosives is not a hazard under closed status. This inconsistency among premises is unacceptable in the EIR.

S. The lead agencies could not pursue closure of the bypass tunnel and return of river flows to the river channel under the No Action/No Project Alternative. These modifications to the project area would require relocation of the seasonal pump station facilities and would be more extensive than what is permitted under existing conditions or what would occur under the No Action/No Project Alternative. Please also refer to Response L-5.Y.

T. Please refer to Master Response 3.1.1, Auburn to Cool Trail.

U. Construction blasting is considered a public safety hazard and would be confined to relatively small areas. The public would not be allowed into any areas where preparations for blasting or blasting operations were taking place. Reclamation's construction contractor would manage the area to control and minimize potential safety hazards within the specific area where blasting operations would be performed. The tunnel and access to it cannot be reasonably controlled; therefore, it remains a hazard. Please also refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

L-5, pg. 5

U (cont) Moreover, a clear alternative exists in opening the area to use and designing facilities to provide for public safety there, as has been done on other recreation sites on rivers in the region. This would reduce the impacts to less than significant for the No Project alternative, and such mitigation or avoidance opportunities must be included in the EIR. Upstream on the Middle Fork, all boaters pass safely through a tunnel below Tunnel Chute. Flood circumstances could also cause seasonal inundation of the tunnel with no outlet, but that is not considered a safety issue, and all boating use is permitted there.

V **Project Area.** The project area should be amended to include the river within the Folsom Lake bed since the lake is seldom full, and the river remains a valuable resource. Impacts to recreation and terrestrial values must be considered downstream from Oregon Bar (3-51) at least to the vicinity of Rattlesnake Bar. This reach has riparian as well as littoral values. The draft states that the action proposed could reduce the level of Folsom Lake further than current conditions. If the additional drawdown if 10 feet, for example, then the project action would impact an additional half mile of river below the tunnel site, based on a gradient of 20 feet per mile.

W **Backwater Effects.** Diversion backwater effects are not clear (3-211). Is this a temporary diversion structure or the proposed project? To what height will waters be raised over no-project conditions? During what flow events will the backwater occur? How long will the diversions occur? By what criteria would the backwaters be insignificant? This appears to be a significant adverse affect to the river environment.

X **Rapid Design or Concept.** The nature of rapids to be designed into the proposed new river channel should be described in detail. How will they be rated in comparison to the relatively flat water of the existing tunnel and adjacent river reaches? How will they serve current or new recreation needs in the area? (3-212)

Y **Alternative 4.** Another alternative should be included in the EIS/EIR which directly addresses the key legal issue of restoring the river to its natural channel. That Alternative 4 would provide for tunnel closure without change in pumping status, similar to the alternative that provides for a permanent pump station without tunnel closure.

Z **Water Use Impacts.** Impacts for new development in Western Placer County should be addressed more fully in the EIS/EIR, not just the programmatic documents. What uses will be made of the additional water in terms of crops or pastures irrigated, or ranchettes served (2-45)? How does the project water compare in cost and quality to groundwater pumping or other sources in that region? Will additional water change the land uses, and if so, how? Will changing uses of the water affect uses of the river above the project site

AA for recreation (Section 3-7)? The EIS/EIR currently does not provide sufficient information for decisionmakers and the public in this regard. There is an apparent inconsistency with the indications of water use for urban growth on page 3-6 and 3-40, and those impacts should be described in greater detail in this EIS/EIR regardless of the authority of PCWA over land uses. Further, the EIS/EIR should note that groundwater

BB drafting is uncontrolled and overdraft conditions could result regardless of project actions.

V. The regional and project area settings considered in the Draft EIS/EIR impact evaluations are described in Chapter 3, Section 3.2.1, Regional Setting and 3.2.2, Project Area Setting (pages 3-5 and 3-6) and shown on Figures 2-1, Regional Setting (page 2-2) and 2-2, Project Area Setting (page 2-3). The potential effects of reduced Folsom Reservoir elevations includes the reservoir up to its high water line, upstream of Oregon Bar (Figure 2-2). The potential effects of the Proposed Project and alternatives upon terrestrial recreation and other resources due to fluctuations in Folsom Reservoir elevations are presented in the diversion-related analyses in Chapter 3.

W. Please refer to Master Response 3.1.7, Tamaroo Bar.

X. The Proposed Project would have two channels that provide boat passage. The main (river right) channel would contain the water diversion intakes. These intakes would be integrated into boat chutes whose geometry creates favorable hydraulics for recreational boating, such as standing wave and mild hydraulic jumps. The geometry of the chutes was developed specifically for recreation and has been employed successfully at several sites, notably the Horseshoe Bend Hydroelectric project. The overall difficulty of the rapids through the diversion would be Class II, and Class III on the international scale, depending on the water level. At lower flows, difficulty would be Class II and at higher flows, difficulty would increase to Class III. This level of difficulty is comparable to the first rapid that occurs in the river just below the project site, downstream of the bypass tunnel outlet and upstream of Oregon Bar. The primary water intakes would be located on the invert of the boat chutes. These intakes would be appropriately screened to prevent trapping boaters; the intake screening also would meet CDFG fish screening criteria. A third boat chute would be constructed below grade, downstream of the two other boat chutes. Construction of this structure anticipates the lowering of the riverbed with time and would provide a variable transition for the diversion structure to the downstream riverbed.

At higher river stages (greater than 2,000 cfs) whitewater craft would be able to pass through a bypass channel on the river left (east) side. The total drop of the secondary channel would be roughly 8 feet over a distance of approximately 400 feet. This would produce a bottom gradient of little more than two percent. The bypass channel would be separated by a berm (a rock divider), which would be overtopped during high water (about 4,000 cfs), thereby joining the two channels. The river left (east) bank adjacent to the diversion would be graded at a slope of 5:1 (or less) for some distance above the anticipated high water level of 4,000 cfs. Boaters would be able to use this bank to scout the rapids and portage. Regarding present recreation needs, a report prepared by John Anderson for Montgomery Watson in 1997 addressed the recreation potential of the river. The report identified potential river uses, in detail, with reference to various stretches of the river. The stretch from the confluence to Robie Point would be appropriate for an easy family float trip. From the dam site to Oregon Bar, the whitewater is more challenging and more suitable for advanced beginning and intermediate whitewater boaters. Use from Oregon Bar to Rattlesnake Bar would depend on Folsom reservoir levels. During the high pool season, the trip to Rattlesnake Bar would be a long, flat water paddle.

Letter 5, page 5 responses continued.

Response Y
The alternative suggested by the commenter was not included as a separate alternative because it was not workable or feasible. In any event, consideration of these elements in relation to the project purpose, needs and objectives are addressed in Tables 2-1 and 2-2 of the alternatives, although each issue was evaluated separately. Health and safety factors associated with the tunnel closure were considered under the No Action/No project Alternative. Additionally, the seasonal pumps that are currently used to withdraw water in this section of the American River could not function if the river was re-watered and the tunnel closed because water levels at the point of diversion would be too low.

As discussed on page 2-5 of the Draft EIS/EIR, key features of the Proposed Project (Mid-Channel Diversion) include the intake/diversion location and the pump station site. The intake/diversion structures would remain situated on the outside curve of the natural channel to take advantage of the narrowed portion of the river channel created by the northwestern bank. The narrow channel formed by the cofferdam remnant creates a natural pooling of the river flow and permits control for the diversion. It would not be feasible to use the intake structures at the existing point of diversion that are associated with the seasonal pump station operations because, once the river is restored to its natural channel, flows will progress through the widened streambed and this will not provide adequate instream water depths to for the intake/diversion to function properly.

In order to adequately restore the river channel, approximately 700,000 cubic yards of cofferdam debris, alluvium and large rocks would be excavated from the dry river channel. Under the Proposed Project, this material along with an estimated 300,000 cubic yards of material generated from construction activity would be used to (a) build and reshape the river channel, (b) stabilize, fill and create barriers to the upstream and downstream tunnel openings, (c) fill holes in the keyway associated with past disturbance during the original construction of Auburn Dam as well as (d) provide building and fill material for the pump station facility.

Funding allocations for the river restoration efforts are tied to mitigation elements associated with the pump station expansion. There are currently no funding sources available to solely provide for an isolated river restoration project of this magnitude. It would not be economically feasible to remove such a vast quantity of material to a location far off-site, nor are there presently the financial means in place to do so. Therefore, this alternative was eliminated from further consideration because it did not meet the two primary criteria that would merit additional consideration and analysis which were: (a) meeting most of the project objectives; and (b) being technically, economically, and environmentally feasible.

Response Z
The impacts for land development within Placer County are appropriately addressed programmatically through the County's General Plan preparation and environmental review process and then by subsequent project-specific environmental evaluations and review by county or city planning departments and other permitting or regulatory agencies. PCWA has no land use approval or decision-making authority within the county, but recognizes the supply of water supports new development, as planned by the County and cities within its service area. As described in the Draft EIS/EIR, PCWA's delivery of raw water supplies to agricultural lands within western Placer County is not expected to change substantially from the existing condition. Also refer to Placer County Water Agency Surface Water Supply Update for Western Placer County (PCWA 2001) and Response L-21.A. As described in the Draft EIS/EIR, other sources of water and groundwater do not offer cost-efficient means for PCWA to obtain water supplies within the short-term, as compared to gaining reliable access to its existing permitted MFP water entitlement.

Response AA
The Draft EIS/EIR addresses the potential impacts upon river recreation above the project site (Chapter 3, Section 3.8, Recreation). Additional clarification is provided in Response L-5.E.

Response BB
Comment noted.

L-5, pg. 6

CC

List Costs Components. Costs should be listed for components of the major features of the alternatives in Table 2-2. For example, what is the cost for the recreation access improvements? Project cost estimates indicate that the proposed project will cost $31 million, greater than the amount initially authorized for Auburn Dam. At that cost, the project costs equal 31 to 124 years of current operation costs. Similarly, the proposed project would cost about 60 to 240 times the existing cost per acre foot of water diverted. This contrast is impossible to justify on the value of additional water diversions. Although restoration is desirable, the proposed project would cost an excessive $40 million per mile of channel artificially restored. We should just say, 'It is what it is' and work with the site to restore ecological functions.

DD

Include Oral Comments. Oral comments presented at scoping meetings must be included in the Summary of Public Concerns (1-11). Comments included that the area closures should be removed, safety of the tunnel was not a realistic problem, there was no history of incidents or accidents there, that several guidebooks referred to the reach below Highway 49 as Class II without substantial hazards or rapids, and that the tunnel itself was Class I as a half mile of flat water.

Until the above concerns are reflected in the EIS/EIR, I support the No Project alternative.

Thank you for your consideration.

Sincerely,

Emmett Cartier

Emmett Cartier

CC. Breakdown for the major components of the Proposed Project are as follows:

Pump station/diversion facilities	$18.1 million
Auburn Dam construction bypass tunnel	$ 1.0 million
North Fork American River channel excavation & public river access features	$11.9 million
Total	**$31.0 million**

This information is included in the Final EIS/EIR, Chapter 2.0, Section 2.2.2, Proposed Project – Mid Channel Diversion Alternative. This change does not alter the conclusions presented in the Draft EIS/EIR. The original authorization for Auburn Dame was $411,170,000 (House Document No. 171, 88th Congress, first session).

DD. The Draft EIS/EIR (Chapter 4.0, Section 4.2 Public Involvement) provides a summary of all public and agency scoping comments received at public scoping and informational meetings related to preparation of the Draft EIS/EIR. Please also refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel for information related to the tunnel hazard.

L-6

L-6

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Joannie Countryman
ADDRESS:	8625 Wise Rd
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 885-9795
ORGANIZATION (IF APPLICABLE):	American River Ride

COMMENTS:

A — go ahead and reroute the water but there still needs to be a way for our horses to get over to the other side. So the answer is to this situation is to build a a bridge for us to get to the other side!

How do we get to Mauldu Road from Cool side of River. Yes you get your water recreation but what about Hiking Mtn Biking & horses getting to cool. Have to have a bridge for all to get to other side from Auburn to Cool.

B — What are the parking lots for? What is the recreation? Rafting only!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.6, Public River Access Features.

L-7

Oct 11, 2001

RE: The Mid-Channel Diversion Alternative

To Whom It May Concern:

A

I am writing this letter to put fourth my vote for your preferred alternative, The Mid-Channel Diversion Alternative, which proposes to close the Auburn dam diversion tunnel and restore the American River at the Auburn Dam construction site to its natural channel, while at the same time providing the water agency with riverside pumping and diversion facilities to supply water to customers in Placer County.

I am also happy that this preferred alternative will restore BOATABLE CONDITIONS AND FLOWS to this now dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway - the long closed reach of the American River from the confluence of the North and Middle Forks of the American River to Folsom Reservoir.

I am a resident of Garden Valley, Coloma and spend a great deal of my like Kayaking and enjoying the American River. I am totally against the Auburn Dam and want this alternative to be passed.

I will be at the meeting on the 11th, but also wanted to send you this letter.

Thank you for fighting for all of us.

Patti Boyer
P.O. Box 979
Lotus, CA 95651

Patricia A Boyer

B

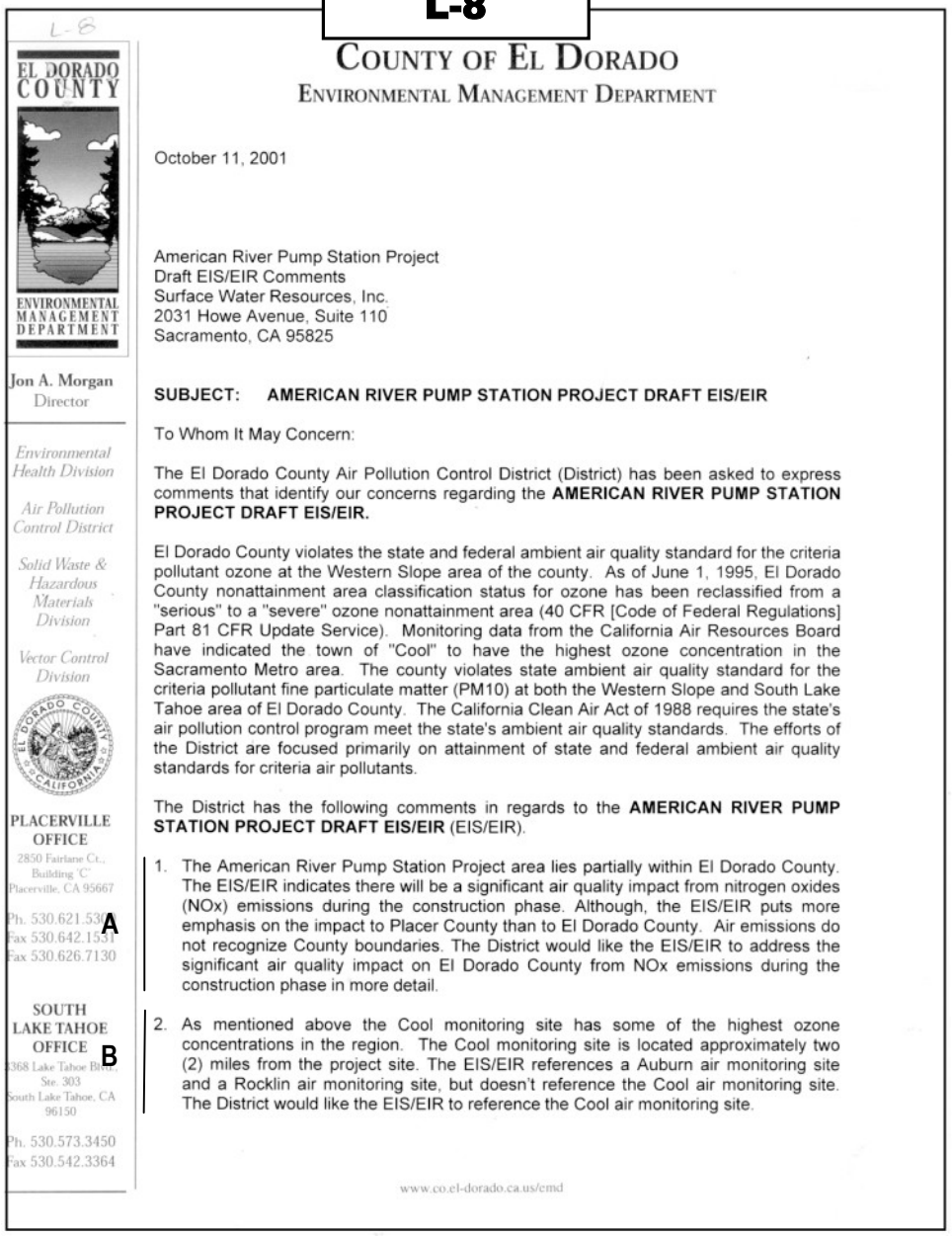
P.S. After attending the open meeting tonight, I cannot see how you could go forward with this project without constructing a bridge for the trail from Auburn to Cool. It is a must.

Patti Boyer

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-8



L-8

EL DORADO COUNTY

ENVIRONMENTAL MANAGEMENT DEPARTMENT

Jon A. Morgan
Director

Environmental Health Division

Air Pollution Control District

Solid Waste & Hazardous Materials Division

Vector Control Division

PLACERVILLE OFFICE
2850 Fairlane Ct., Building 'C'
Placerville, CA 95667
Ph. 530.621.5300
Fax 530.642.1531
Fax 530.626.7130

SOUTH LAKE TAHOE OFFICE
3368 Lake Tahoe Blvd., Ste. 303
South Lake Tahoe, CA 96150
Ph. 530.573.3450
Fax 530.542.3364

COUNTY OF EL DORADO
ENVIRONMENTAL MANAGEMENT DEPARTMENT

October 11, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

SUBJECT: AMERICAN RIVER PUMP STATION PROJECT DRAFT EIS/EIR

To Whom It May Concern:

The El Dorado County Air Pollution Control District (District) has been asked to express comments that identify our concerns regarding the **AMERICAN RIVER PUMP STATION PROJECT DRAFT EIS/EIR.**

El Dorado County violates the state and federal ambient air quality standard for the criteria pollutant ozone at the Western Slope area of the county. As of June 1, 1995, El Dorado County nonattainment area classification status for ozone has been reclassified from a "serious" to a "severe" ozone nonattainment area (40 CFR [Code of Federal Regulations] Part 81 CFR Update Service). Monitoring data from the California Air Resources Board have indicated the town of "Cool" to have the highest ozone concentration in the Sacramento Metro area. The county violates state ambient air quality standard for the criteria pollutant fine particulate matter (PM10) at both the Western Slope and South Lake Tahoe area of El Dorado County. The California Clean Air Act of 1988 requires the state's air pollution control program meet the state's ambient air quality standards. The efforts of the District are focused primarily on attainment of state and federal ambient air quality standards for criteria air pollutants.

The District has the following comments in regards to the **AMERICAN RIVER PUMP STATION PROJECT DRAFT EIS/EIR** (EIS/EIR).

1. The American River Pump Station Project area lies partially within El Dorado County. The EIS/EIR indicates there will be a significant air quality impact from nitrogen oxides (NOx) emissions during the construction phase. Although, the EIS/EIR puts more emphasis on the impact to Placer County than to El Dorado County. Air emissions do not recognize County boundaries. The District would like the EIS/EIR to address the significant air quality impact on El Dorado County from NOx emissions during the construction phase in more detail. **A**

2. As mentioned above the Cool monitoring site has some of the highest ozone concentrations in the region. The Cool monitoring site is located approximately two (2) miles from the project site. The EIS/EIR references a Auburn air monitoring site and a Rocklin air monitoring site, but doesn't reference the Cool air monitoring site. The District would like the EIS/EIR to reference the Cool air monitoring site. **B**

www.co.el-dorado.ca.us/emd

A. The Draft EIS/EIR Air Quality impact analysis (Chapter 3, Section 3.15) focuses on the potential effects of construction and operation upon sensitive receptors within the project study area. A sensitive receptor distance of ½ mile is used, although both the Placer County and El Dorado County air pollution control districts suggest an approximate ¼-mile distance for identification of sensitive receptors for air pollutant emissions. The analysis of NO_X and other air pollutants described for Placer County applies to El Dorado County as well. The Draft EIS/EIR identifies several sensitive receptors within the ½-mile range within Placer County; however, none were identified within the El Dorado County portion of the study area. Therefore, the focus of the analysis is appropriately within Placer County. The Final EIS/EIR, Chapter 3.0, Section 3.15.2.1, Methodology, provides this additional information explaining the focus of the air quality analysis. This information does not alter the conclusions presented in the Draft EIS/EIR.

B. The commenter requests that the EIS/EIR include reference to the Cool air monitoring site in El Dorado County. Information summarizing ozone level data from the Cool monitoring station, for the period 1995 through 1999 has been added to the Air Quality setting, as identified in the Final EIS/EIR, Chapter 3.0, Section 3.15.1.2, Project Area Setting, Air Quality Monitoring. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-8, pg. 2

American River Pump Station Project
Draft EIS/EIR Comments
October 10, 2001
Page 2

C

3. The EIS/EIR under Section 3.13 GEOLOGY AND SOILS states the project area contains chrysotile (asbestos). In addition, the project is in an area identified as more likely to contain asbestos on the Division of Mines and Geology map titled Areas More Likely to Contain Natural Occurrences of Asbestos in Western El Dorado County, California (Churchill, March 2000). The EIS/EIR doesn't indicate how the project will comply with El Dorado County Ordinance number 4548, The Naturally Occurring Asbestos And Dust Protection Ordinance (Ordinance #4548 is enclosed). The EIS/EIR doesn't indicate how the project will comply with the California Air Resources Board's (CARB) proposed Asbestos Air Toxics Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. The District would like the EIS/EIR to address the potential airborne asbestos emissions by indicating how the project will comply with El Dorado County Ordinance number 4548, The Naturally Occurring Asbestos And Dust Protection Ordinance and the CARB proposed Asbestos Air Toxics Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.

If you have any questions regarding these comments, please call our office at (530) 621-6662.

Respectfully,

Dennis Otani, Program Manager
Air Pollution Control District

Patrick Tedeschi, Senior Air Quality Specialist;
Air Pollution Control District

Enclosure

PT:pt

Pt/ceqa/americanriverpumpstationdraftEIR

C. The commenter requests that the EIS/EIR indicate the Proposed Project's compliance with El Dorado County Ordinance Number 4548, Naturally Occurring Asbestos and Dust Protection Ordinance and the California Air Resources Board's Asbestos Air Toxics Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. The environmental protection measures included in the Draft EIS/EIR satisfy the requirements of El Dorado County Ordinance 4548. Additionally, measures recommended in the referenced CARB Air Toxics Control Measure would be implemented by the construction contractor if asbestos is found at the project site (see Mitigation Plan, Appendix D to the Final EIS/EIR). This information is included in the Final EIS/EIR, Chapter 3.0, Section 3.15, Air Quality. These changes do not alter the conclusions presented in the Draft EIS/EIR.

Note: This comment letter included a copy of El Dorado County Ordinance 4548, The Naturally Occurring Asbestos and Dust Protection Ordinance as an attachment. A copy of this attachment can be reviewed at PCWA or Reclamation offices.

L-9

L-9

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Patricia Keller
ADDRESS:	16446 Burt Lane
CITY/STATE/ZIP:	Auburn CA 95602
BUSINESS AND/OR HOME PHONE/FAX:	530-886-8577 / FAX 530-745-9610
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — Although I support the proposed plans for the pump station and restoration of the river, I am upset that No plans have been made in regards to keeping the trail that runs from Auburn to Cool open. This is a vital trail to the hundreds of hikers, bikers, and horse back riders in the area. From my understanding, efforts must be made to keep all established trails open when any developement plans are made. The closure of this trail would have a huge impact on other trail use - possible misuse and injury in the corse of trying to get across the river.

Every effort should be made to provide a crossing of the river at the trail site.

B — The other issue of concern is the parking lot. A gate should be made and locked at night. Parking permits ~~or~~ should be purchased through the parks and rec. for all areas to help pay for ~~and~~ maintain areas. Orange Co. Charges $50.00 per year to access all parks. I think this is a good way of keeping up the areas and keeping them safe.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.6, Public River Access Features. The entrance to the area would include a staffed entrance booth and gate. The gate would be closed and locked at night and at other times vehicular access to the site would not be permitted. It is undetermined whether CDPR would charge a user fee at the public river access entrance.

L-10

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Lore Roberts
ADDRESS:	PO Box 9263
CITY/STATE/ZIP:	Auburn CA 95604
BUSINESS AND/OR HOME PHONE/FAX:	530 / 888-1498
ORGANIZATION (IF APPLICABLE):	PARC (Protect American River Canyons)

COMMENTS:

A I am in favor of the proposed project, Mid-Channel Diversion Alternative.

B I am also in favor of another search to discover a feasible solution to the Auburn-to-Cool trail closure problem.

Lore Roberts

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-11

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kathie & ERNIE PERRY
ADDRESS:	2691 Shirland Tr. Rd
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	916-663-3869
ORGANIZATION (IF APPLICABLE):	AMERICAN RIVER Ride

COMMENTS:

A

50 MILE ENDURANCE Ride has been held for the PAST 30 years - we have moved our trail from Sacto (Cal-Expo) to many bike trails (paved) to Negro Bar - We use the Cofer Dam as a return route for our 50 & 70 MILE rides - The impact on the trail from Auburn to Hwy 49 - will be to great thru-out the years - We need a bridge to keep the Auburn to Cool loop open. I do believe in the original plan a bridge was proposed - ?!

Once a trail is given-up - it hardly ever will be put back into use!

We must have a BRIDGE.

Sincerely,
Ernie and Kathie Perry

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Response L-4.B and Master Response 3.1.1, Auburn-to-Cool Trail.

L-12

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	WILLIAM WAUTERS
ADDRESS:	700 CLIPPER GAP ROAD
CITY/STATE/ZIP:	AUBURN, CA, 95603-8471
BUSINESS AND/OR HOME PHONE/FAX:	530-878-0296 FAX 878-1949
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A THE MID-CHANNEL DIVERSION ALTERNATIVE OF THE AMERICAN RIVER PUMP STATION PROJECT WHICH INCLUDES RIVER RESTORATION APPEARS TO BE THE RESPONSIBLE PLAN. LONG TERM WATER USE NEEDS BALANCE WITH LONG OVERDUE HABITAT RECLAIMATION AND GENERAL PUBLIC RECREATION USE IN THE MID-CHANNEL ALTERNATIVE. THE OTHER PLANS ARE NOT RESPONSIBLE MANAGEMENT.

B HOPEFULLY THE VAST ROCK PILES CAN BE ENGINEERED TO PROVIDE A SEASONAL FORD TO REPLACE THE PRESENT EQUESTRIAN TRAIL.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.*** —CONTINUED

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-13

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Roberta Smith
ADDRESS:	141 El Dorado St
CITY/STATE/ZIP:	Auburn Ca.
BUSINESS AND/OR HOME PHONE/FAX:	530-823-5509
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A please let the river run free!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Comment noted.

L-14

To: American River Pump Station
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

From: Gene and Debbie Zanot (AERC Trail Advocates)
RD# 1 Box 132 A
Reynoldsville, PA 15851 (814-328-2702-email darkcat5@yahoo.com

Subject: Trails

Date: October 22, 2001

To Whom It May Concern,

A It has come to our attention that a very vital part of the internationally known Tevis training trails are in danger of being closed off for public use in the near future, due to the undergoing river restoration project. While river restoration is supported by the public the permanent cutting off of major trail heads is opposed greatly, and rightly so.

Please include in your plan the building of an access bridge and room on the side of the paved road for a right of way trail for outdoor enthusiasts to connect to widely used trails Thousands of people use the Western States Trails, Olmstead Trail and the Maidu area trails for different activities which are wholesome and family oriented recreation and it would be a great loss to the health and well being of people not to be able to escape this world of mayhem to enjoy the mountain trails they have historically enjoyed for years, simply because the connection to these trails has been cut off.

My husband and I are very alarmed at the trend nation wide by small in number but largely funded Radical eco-groups that would like to see all healthy outdoor recreation cease and public access to public land end. Please take the opportunity to be a leader in CA. who would reverse this nonsense and support sensible solutions for all Americans who enjoy the outdoors.

Our Nation is undergoing many changes and loss of personal freedom due to the world situations such as it is. The privilege of being in the outdoors had become even more precious because that is where we are closest to God and a world that has order and sanity.. A place where we all can regroup and renew the spirit to fight the battles yet to come.

We would appreciate your careful consideration with this project and look forward to hearing that you have decided to be a leader in common sense solutions.

Sincerely yours,
Gene & Debbie Zanot
Gene and Debbie Zanot

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-15

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Linda & Jerry Potter
ADDRESS:	2142 Del Mar Ave
CITY/STATE/ZIP:	Penryn CA 95663
BUSINESS AND/OR HOME PHONE/FAX:	(916) 652-5339 jlpotter@lanset.com
ORGANIZATION (IF APPLICABLE):	Loomis Basin Horsemen's Assoc. American Endurance Ride Conf. National Pony Express Assoc. Mother Lode Arabian Horse Assoc. Calif. Horse Council

COMMENTS:

A We are pleased to see the American River returned to its natural course but feel that the trail through the coffer dam area should not be forfeited in this process. Please include in your plans to build a bridge for hikers, bikers & equestrian over the river so this valuable trail is not lost. We need to keep all our trails & add more - not loosing them. They are a valuable resource for physical & mental well-being. Please do not do this in a separate phase. It needs to be included in the whole plan.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-16

RECEIVED OCT 1 9 2001

Placer Country Water Agency
P.O.Box 6570
Auburn, Ca 95604
Attn: General Managers Office

Dear Sir or Madam;

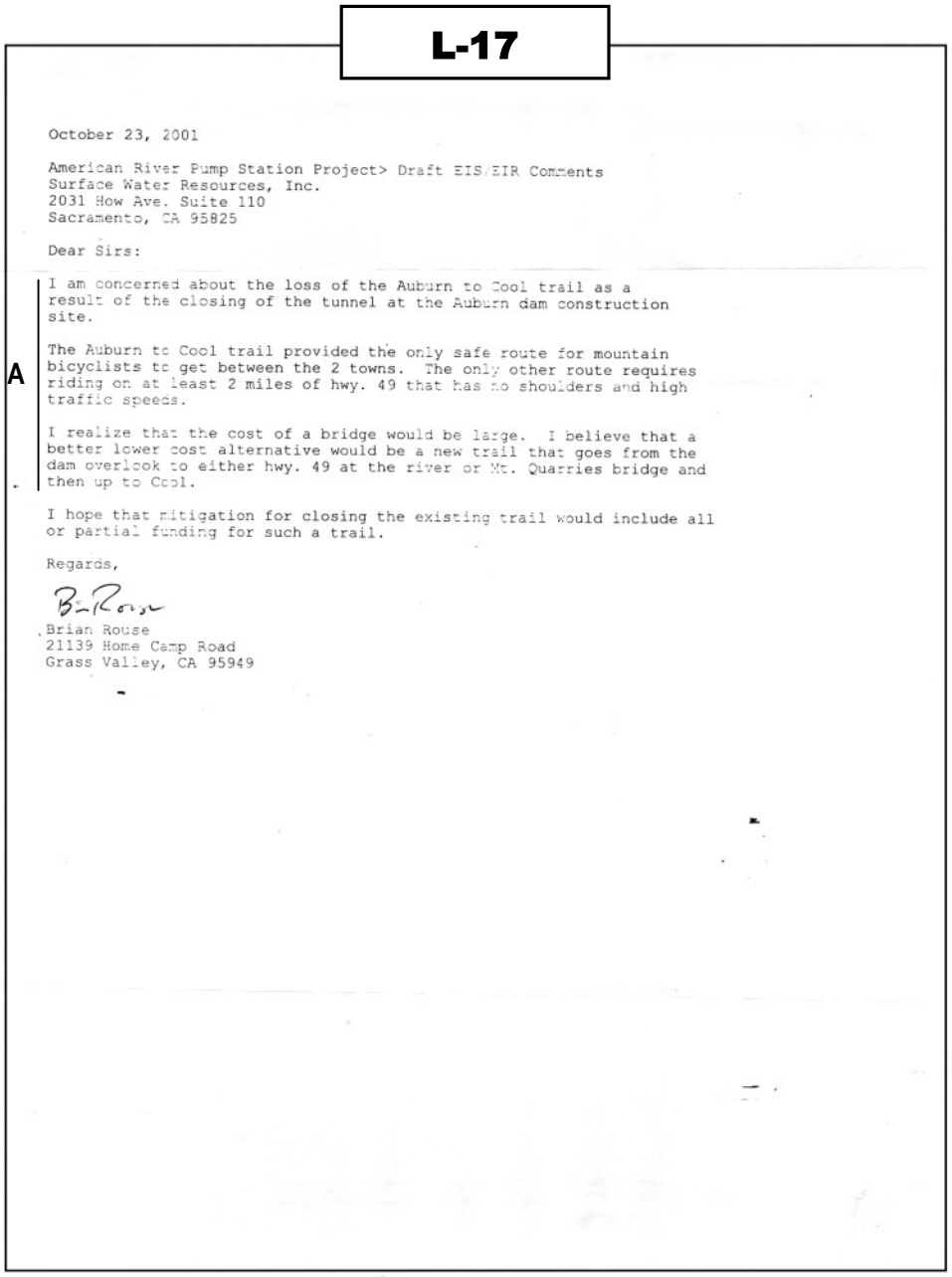
A

It is our opinion the Auburn to Cool trail, via the cofferdam, remain open and water continue to pass through the tunnel. If, in fact, the lobbyists for the single benefactor of the tunnel closure, are able to succeed, and the tunnel be closed, the many displace current users should be accommodated and a bridge be constructed. To recognize a single user group, the rafter interest, to deny several diverse groups, hikers, runners, bicyclist, equestrians, is a travesty of justice and fairness. The only satisfactory resolution, should money interest prevail, is to construct a multiuse bridge.

Respectfully,

Charles and Nanci Gabri
20043 Hosmer Mine Court
Foresthill, Ca 95631
530.367.2981

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and 3.1.4, Auburn Dam Construction Bypass Tunnel.



L-17

October 23, 2001

American River Pump Station Project> Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

Regards,

Brian Rouse
21139 Home Camp Road
Grass Valley, CA 95949

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail

L-18

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Andrea H. Rosenthal
ADDRESS:	255 Cossonia Park
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-887-9314
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I agree with the current EIR/EIS proposed for the PCWA Pump Station.

B I have some concerns about the loss of Tamaroo Rapids above Tamaroo Bar.

C I also ~~am to~~ am ~~at~~ concerned about the loss of the trail at the dry river bed going from Auburn → Cool.

Thank you again for making the right choice with regards to closing the tunnel & restoring the river.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.7, Tamaroo Bar.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-19

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	RICHARD WARREN
ADDRESS:	2877 ALLEN DR
CITY/STATE/ZIP:	AUBURN, CA 95602
BUSINESS AND/OR HOME PHONE/FAX:	PH. 530 878 0738 / FAX 530 878 9395
ORGANIZATION (IF APPLICABLE):	PROTECT AMERICAN RIVER CANYONS

COMMENTS:

A I support the draft EIS/EIR, but have a few concerns:

B (1). Concept pictures at the public hearing showed the restored canyon walls as smooth and very similar to most landfills in appearance. Please provide a more natural variation of the terrain.

C (2). It was not clear if the PCWA pumping basin would go to the TOP of Tamaroo Rapid or the BOTTOM. I do NOT support flooding Tamaroo Rapid.

D (3). The parking provided seems adequate for the circumstances of this project. I suggest that a statement be made in your document suggesting a more global approach to this issue should further "improvements" be made due to the tunnel opening.

E (4). The issue of a bridge crossing should be addressed as part of this project due to the disruption of now-established recreational use of the trails between Cool and Auburn.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.7, Tamaroo Bar.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-20

44 Walnut Tree Court
Colusa, California 95932
October 24, 2001

American River Pump Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

Dear Friends,

In this time of uncertain current events and increasingly troubling news on a daily basis, I submit to you the need for recreational areas for the public. Outdoor enthusiasts need a place of refuge where they can collect their thoughts, as well as become a part of the natural beauty of this great state of California.

A Please add my name to the list of those encouraging you to build a bridge as part of the river restoration and pump project on the Coffer Dam site. I frequently use the Coffer Dam loop for both running training for me and for enjoyable hours of riding on my horse. The trails in the area are challenging and good for the soul. To lose them would be a loss, as well as cause problems of safety on other nearby trails that more and varied users would be forced to share. A bridge seems a small price to pay for the recreational opportunities that would be saved by doing so.

Thank you for your consideration. I believe that with careful planning and cooperation between trail users and government officials, this can be a win-win situation.

Sincerely,

Barbara White

Barbara White
530 458-2443
Captain, Dusty Corners Aid Station, Western States Trail Run
Buckle Winner, 25 times since 1968, Tevis Cup Ride

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-21

A.R. Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources
2031 Howe Avenue, Ste 110
Sacramento, CA 95825

October 24, 2001

Ladies and Gentlemen:

I wish to comment on two aspects of the American River Pump Station Project (ARPSP). First, the pump station should NOT be built; and secondly, the American River should be restored to its natural state with the tunnel permanently sealed.

A First, the pump station is the worst kind of growth inducing project in an area that is already having its rural, natural qualities destroyed. Building pump stations will provide the go-ahead for rampant development. As soon as the water capacities are maxed out, there will be pressure to build more and bigger pumps since the precedent has been set. More is never enough as far as development mentalities are concerned. No pump stations will make populations increases somewhat limited in this area which in turn will preserve Placer County's disappearing delightful rural qualities.

B Secondly, the American River should be restored to its natural channel--not for the pumps, not for increased water supplies, not for recreational activities, or for any other artificial advantages. The American River is a vein through which nature flows. It never should have been altered in any way in the first place. It is our moral imperative to restore it for its own sake--as a vital part of our ecological heritage.

C In addition, no bridge should be built (to keep the Auburn-Cool Trail open). That trail was never meant to be a commute route. There are other nearby crossings upstream that should suffice for recreational activities. The trail crossing did not exist before. Restoration of the American River should not include, nor be obligated to include, nor be an excuse to include a man-made object constructed for the convenience of a few. The costs and impacts of any type of crossing at this point border on obnoxious.

"Restoration" and/or "natural" mean just that. Give us back our river as it was--no bridge, no pumps, no tunnel. Thank you.

Cordially,

Katie Cather

Katie Cather
P.O. Box 2052
Loomis, CA 95650

A. The Draft EIS/EIR acknowledges that rapid growth has occurred in Placer County since the mid-1980s, and that growth demands have pushed the limits of PCWA's existing water supply delivery means from both the Drum-Spaulding Project and the MFP seasonal pump station (page 1-6). Future growth and development have been approved through local planning processes (i.e., different City and County General Plans).

PCWA's need for a larger pump station and the added capacity associated with it does not increase the quantity of PCWA's existing water entitlement. The proposed larger pump station facility would only enable PCWA to withdraw the quantity of water to which it is rightly entitled under the law, in accordance with its FERC license and two Water Rights Permits granted by the State Water Resources Control Board.

It is the responsibility of planning agencies to foresee future needs and try to develop land use development alternatives that will meet impending demands while being environmentally sound and beneficial to the overall needs of the community. PCWA does not possess land use regulating authority; however, it is PCWA's mandate to meet water demand within its service area. Provisions in existing state and county planning efforts running through 2030 have anticipated what future water supply demands will be under mid-range growth and build-out projections, and have established alternative water supply sources within the Central Valley as well as other combinations of efforts including reduction over time in the amount of MFP water supplied to Sacramento Suburban Water District.

Response A continued on the following pages.

Response A (cont.)
PCWA's legal duties arise in part from the Placer County Water Agency Act, which is found in section 81-1, et seq., of the appendices to the California Water Code. Section 81-4 of that enabling legislation gives PCWA the power "to do **any and every lawful act** necessary in order that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the agency, including, but not limited, to, irrigation, domestic, fire protection, municipal, commercial, industrial and all other beneficial uses and purposes." (Emphasis added.) Section 81-4.3 gives PCWA the authority to "appropriate and acquire water and...[to] utilize…water for any purpose useful to the agency." Section 81-6 gives PCWA the authority to cooperate and contract with Reclamation with respect to the "construction of works" for "water supply" and other purposes.

PCWA also is subject to the Urban Water Management Planning Act (Water Code, Section 10610 et seq.) as amended in 2001 in response to the Legislature's concern that California's water supply agencies might not be engaged in adequate long-term planning. That Act requires PCWA, as an "urban water supplier," to maintain an "urban water management plan" that must identify existing water supply and demand, and must identify any new water sources required to satisfy demand as projected at least 20 years into the future. The projected 20-year water supply must account for "average, single-dry, and multiple-dry water years."

In predicting 20-year water demands, PCWA, like other urban water agencies, must rely on "data from the state, regional, or local service agency population projections[.]" Thus, to the extent that Placer County and its incorporated cities (e.g., Roseville, Rocklin, Lincoln, Auburn, and Loomis) anticipate large population increases in their adopted general plans, PCWA is required to identify water sources necessary to serve such planned development, and is not in a position to refuse to comply with that legal obligation as a means of reducing the "growth-inducing" effects of obtaining new water supplies.

The Draft EIS/EIR provides a summary of PCWA's estimated future water supply needs (pages 1-5 to 1-7) as determined by the Placer County Water Agency Surface Water Supply Update for Western Placer County (PCWA 2001). The Surface Water Supply Update contains an evaluation of the build-out demands under the existing General Plans of the Cities and the County within its present service area, based on a mid-range estimate of probable growth rates (PCWA 2001). The existing General Plans permit development as indicated by the plans, without further evaluation. The Surface Water Supply Update indicates that the build-out demands that that are documented in those plans extend to 2030 and require an additional 70,000 AF of water to be supplied by PCWA.

The water demand projections utilized in the Draft EIS/EIR have been prepared based upon data from several sources, including City and County General Plans, as described on pages 3-30 and 3-31. Table 3.4-2 in the Draft EIS/EIR shows incremental projected water demands up to the year 2020. The projections assume PCWA's continued implementation and support for water use efficiency measures, as stated on page 1-6 of the Draft EIS/EIR.

Surface water projections through 2030 indicate an increased water supply demand throughout the service area. This is consistent with PCWA's Surface Water Supply Update report, which shows PCWA's long-term need for the construction of new diversion, treatment, transmission and distribution infrastructure facilities, from both the American and Sacramento Rivers, of equal capacity to PCWA's existing water supply entitlements in order to meet the future demands of Placer County. Ultimately, the size of these facilities may be smaller in their final phases as PCWA moves forward with planned conservation and water use efficiency measures and others move forward with planned reclamation projects. However, nothing except a building moratorium in Placer County will allay the need to construct the American River Pump Station now.

It is unlikely that a precedent will be set allowing further construction of larger pump stations along the Middle Fork of the American River in the future, because this would require an increase in PCWA's overall water entitlements from a river whose water is already in high demand and highly regulated. Any future request for an increase in water rights allocations or alterations to annual use patterns from existing sources would require extensive and long-term adjudication affecting a multitude of numerous

planning policies and regulatory actions. This would include new water rights permits, which would be opposed by downstream users, Reclamation, the Water Forum and other environmental groups.

Response B
Please refer to Master Response 3.1.5, Project Area River Restoration.

Response C
Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-22

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	JAMES KELLER
ADDRESS:	4646 BURT LANE
CITY/STATE/ZIP:	AUBURN CA 95602
BUSINESS AND/OR HOME PHONE/FAX:	530 886 8577
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A The plan for the pump station and re-watering of the river is great, however I feel the loss of the Auburn to Cool trail is a major flaw in the over all plan.

As you saw from the turn out at the meeting, this trail is very important to the hundreds of hikers, biker, and horse back riders who use it. The closure will have an impact on the other trails in the canyon, and it will have a financial impact on the Main Street Grill in Cool, who caters to all the people who are hungry and thirsty after riding that great trail.

Please consider a crossing so we can continue to enjoy this trail.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-23

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources Inc.
2031 Howe Ave
Sacramento, CA 95825

To Whom It May Concern:

A PLEASE reconsider the decision to eliminate precious trail resources in the Coffer Dam area. Recreational use of this area would be irreparably damaged by the proposed plan. As you have no doubt been advised, there is heavy use of this section of trail by hikers, bicyclists, and equestrians. Please include a plan and resources for creation of a bridge to circumvent the area of closure.

Sincerely,

Pat Farmer
1300 E. Barcus Way
Fortuna, CA 95540

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-24

Kenneth Prager
6107 Teague Lane
Granite Bay, CA 95746
916-791-8525

October 24, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A

I am elated about the closing of the tunnel at the Auburn dam construction site and the eventual return of this area to its original state. However, I am concerned about the loss of the Auburn to Cool trail as a result of this closing.

The Auburn to Cool trail provides the only safe route for mountain bicyclists to travel between the 2 towns. The only other route requires riding on Highway 49—a route that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large but believe that a better lower cost alternative exists. The better alternative would be a new trail that goes from the dam overlook to either Highway 49 at the river or Mt. Quarries bridge and then up to Cool.

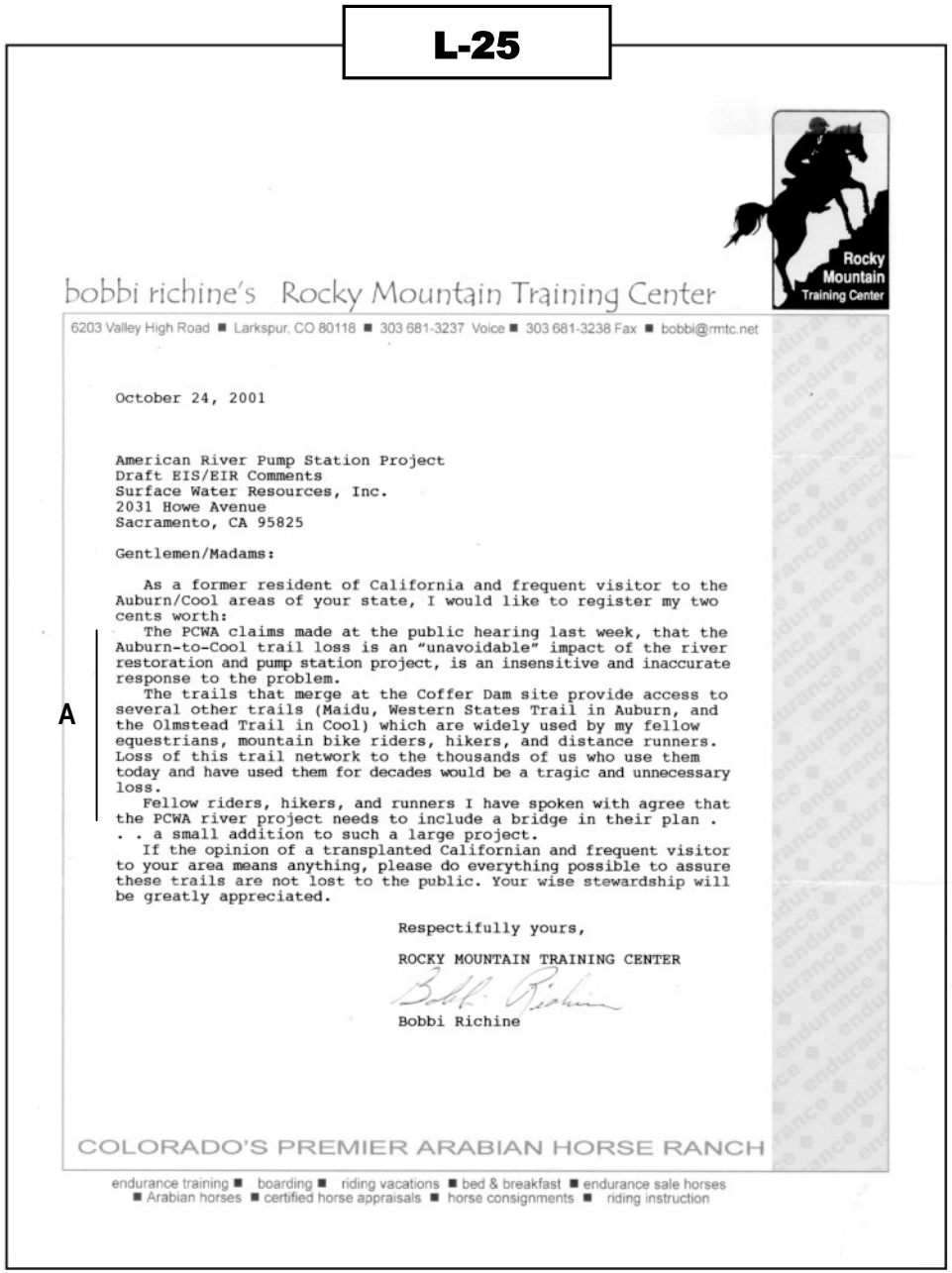
I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

Sincerely,

Kenneth Prager

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-25



bobbi richine's Rocky Mountain Training Center

Rocky Mountain Training Center

6203 Valley High Road ■ Larkspur, CO 80118 ■ 303 681-3237 Voice ■ 303 681-3238 Fax ■ bobbi@rmtc.net

October 24, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

Gentlemen/Madams:

As a former resident of California and frequent visitor to the Auburn/Cool areas of your state, I would like to register my two cents worth:

The PCWA claims made at the public hearing last week, that the Auburn-to-Cool trail loss is an "unavoidable" impact of the river restoration and pump station project, is an insensitive and inaccurate response to the problem.

The trails that merge at the Coffer Dam site provide access to several other trails (Maidu, Western States Trail in Auburn, and the Olmstead Trail in Cool) which are widely used by my fellow equestrians, mountain bike riders, hikers, and distance runners. Loss of this trail network to the thousands of us who use them today and have used them for decades would be a tragic and unnecessary loss.

Fellow riders, hikers, and runners I have spoken with agree that the PCWA river project needs to include a bridge in their plan . . . a small addition to such a large project.

If the opinion of a transplanted Californian and frequent visitor to your area means anything, please do everything possible to assure these trails are not lost to the public. Your wise stewardship will be greatly appreciated.

Respectifully yours,

ROCKY MOUNTAIN TRAINING CENTER

Bobbi Richine

COLORADO'S PREMIER ARABIAN HORSE RANCH

endurance training ■ boarding ■ riding vacations ■ bed & breakfast ■ endurance sale horses ■ Arabian horses ■ certified horse appraisals ■ horse consignments ■ riding instruction

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-26

RECEIVED OCT 2 9 2001

Leonard and Heather Davis
2365 Shirland Park Place
Auburn, CA 95603
(530) 889-8808

TO	DATE	INFO.	ACTION
GNL. MGR.			
DIRECTORS			
ATTORNEY			
BRD. CLERK			
PLANNING ADM.			
DEPT. HEADS			
MGT. TEAM			
CUST. SERV. DIR.			
FIELD SERV. DIR.			
FINANCE DIR.			
H.R. DIR.			
PWR. SYS. MGR.			
STG. AFF. DIR.			
TECH. SERV. DIR.			
Brent Smith	10/30		

October 25, 2001

Placer County Water Agency
P. O. Box 6570
Auburn, CA 95604

Dear Gentlepersons:

RE: American River Pumping Station Closure

My husband and I oppose the American River Pumping Station Closure project as it now stands.

We have no objection to the installation of a permanent pumping station in the canyon. We do however most strenuously loss of the trail to Cool that would occur if the diversion tunnel were closed.

A Closure of the tunnel would benefit one group only – the river rafters. Hikers, bikers and equestrians would lose a most valuable trail. The trail as it now exists is especially valuable because it provides a connection to a series of loops on the Cool side of the canyon.

There surely is a way that we can all use and share the canyon and the trail system that exists.

A bridge is a possibility; perhaps a graded bar could be put in and repaired on a yearly basis. And perhaps the tunnel could stay as it is. What about portaging around the tunnel? It's not very far. Who has the money to close the tunnel? Is this good use of our money?

Once again, whatever happens in the river canyon, we must find a way to provide access to the Cool side of the canyon.

Yours sincerely,
Leonard + Heather Davis

Leonard and Heather Davis

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

L-27

Rancho Milagro

Paso Fino Horses

P.O. Box 1803 Shingle Springs, CA 95682
(530) 676-1245

October 25, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

To Whom It May Concern:

A

It has come to our attention that the PCWA plan for the American River Pump Station Project as currently outlined results in the loss of the Auburn-to-Cool trail. This is of great concern to us.

This trail is used by thousands of outdoor enthusiasts. The Coffer Dam site is one of the few places where several trails merge and provide access to other trail systems. Loss of this trail would negatively impact cyclists, hikers, joggers and equestrians. These trail users would then be forced to use other seriously dangerous alternatives.

It is our belief that loss of this trail is significant and avoidable. Construction of a bridge to allow continued access to these trails, as well as dirt trails along paved roads would result in the successful completion of the project as well as continued availability to trail users.

We are asking PCWA to support the community and not take away the use of these precious and beautiful canyon trails. They are literally used by people from around the world as they train for several world class local events, and would be a huge loss to the community.

Thank you for your respectful consideration.

Sincerely,

Bruce and Dana Baldwin

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-28

EL DORADO COUNTY TAXPAYERS FOR
Quality Growth

POST OFFICE BOX 94 • GREENWOOD, CALIFORNIA 95635 • TELEPHONE 530/823-1662
FACSIMILE 530-823-3137

October 25, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

RE: Disclosed impacts and other unknown impacts: We request that these analyses be included in the EIS/EIR being conducted by the Bureau of Reclamation (BOR) and the Placer County Water Agency (PCWA)

Dear PCWA and BOR staff:

A Asbestos is mentioned as a possible significant impact, yet the document only states that the Placer County Air Pollution Agency is the agency that "will" investigate air pollution for this project. El Dorado County is a adjacent County that has its own Asbestos Rules and regulations that are not mentioned in reference to the methods used to mitigate the potential impacts of Asbestos as well as those applicable rules of the CA Air Resources Board. It is our comment that the that these Rules must be included during the construction and included in the final vegetation plan.

B We also comment that onsite air pollution monitoring equipment be placed at locations throughout the site(both in the canyon and on the upper rims of the project construction site). This equipment will be monitored daily and the results recorded so that a true onsite evaluation will be available to access the mitigation measures that are intended to control air pollution impacts caused as a result of ongoing activities at the construction site. If the daily testing depicts a low level of impacts then, the testing should be changed to a weekly schedule.

C The draft documents do not include the cumulative impacts from the project (mixing of PM and other toxic discharges from equipment) and the windblown pollutants imported from

1

A. El Dorado County APCD was consulted during preparation of the Draft EIS/EIR (page 3-298); however, the air quality impact analysis focused on potential effects on sensitive receptors. No sensitive receptors were identified in El Dorado County within ½ mile of the project site so the analysis focused on sensitive receptors identified within Placer County. Please refer to Response L-8.A. Please refer to Response L-8.C regarding the Proposed Project's compliance within the referenced asbestos rules. Establishment of a vegetative cover is one option for post-construction stabilization of disturbed areas and will be employed as determined appropriate at the project site. Please also refer to Master Response 3.1.5, Project Area River Restoration.

B. Air quality monitoring and inspections are included in the Mitigation Plan (Final EIS/EIR, Appendix D), as required by Placer and El Dorado county APCDs.

C. With the exception of NO_x emissions during construction, the Proposed Project would not generate air pollutant emission levels in excess of the local APCD significance thresholds. As such, the Proposed Project's incremental contribution to the cumulative impacts would be considered less-than-significant for ROG and PM_{10}.

As discussed in the Draft EIS/EIR (page 3-307), the lead agencies acknowledge that the Proposed Project would result in a potentially considerable contribution to the cumulative NO_x emissions condition. As part of the air emissions control efforts, Reclamation's construction contractor would implement all feasible NO_x emission reduction measures. These measures would be implemented in consultation with Placer APCD and El Dorado APCD.

L-28, pg. 2

EL DORADO COUNTY TAXPAYERS FOR
Quality Growth

POST OFFICE BOX 94 • GREENWOOD, CALIFORNIA 95635 • TELEPHONE 530/823-1662
FACSIMILE 530-823-3137

the Pacific Coast cities and industries including those of the San Joaquin Valley area and the Sacramento areas.

We comment that these should be included so that there is no net gain in existing pollutants as a result of the onsite and offsite operations of this project. One of the offsite significant long-term impacts that was not mentioned was the increase in water based traffic that utilize unpaved roads, to access the American River (Drivers Flat Road, lower portion of Mammoth Bar OHV road system and river access points, Sliger Mine Road ect.) these locations have the potential to significantly increase at least the PM and other toxic emissions by the use of these unpaved, dusty under maintained roads.
There is also a significant amount of silt and sedimentation associated with the use of these unpaved roads which is a significant long term offsite impact. We comment that these potentially significant impacts need to be included in the EIS/EIR for the PCWA pumping station project.

D

We comment that through out the EIR/EIS a statement is made that the CA State Parks (CASP) and the BOR will in the near future update the Interim Management Plan for the Auburn State Recreation Area. It is our opinion that this a bifurcation of the projects significant impacts. This is a delegating of the lead agencies responsibility to access and mitagate all significant impact that are a part of its project description. This provides the lead agency way to deny the public the opportunity to partake in a meaningful way on the "whole of the project". It will also allow a large project to be broken down into smaller projects that may have a less than significant impact when considered individually instead of a part of the "whole project" We comment that all of the projects impacts be included in this project so that the public will have the opportunity to have a meaningful impact on the results of this project without allowing a piece mealing to occur.

E

This project should include impacts to the citizens of El Dorado County and the sensitive receptors (school aged children) in at least two schools in the Cool area, and a large number of older retired citizens in the Cool area (Auburn Lake Trails) (ALT) which shall be impacted by this project. We

F

2

D. Reclamation and CDPR will evaluate the long-term impacts associated with future changes to facilities throughout the Auburn SRA. The Proposed Project would not be expected to affect use at locations identified by the commenter, other than providing an alternative river access location.

E. As noted in the Draft EIS/EIR and in Master Response 3.1.6, Public River Access Features, the proposed public river access features were incorporated into the Proposed Project as a short-term interim solution to mitigate potential public health and safety impacts created by closing the Auburn Dam construction bypass tunnel and rewatering the North Fork American River channel near Auburn. The incorporation of these features is within the lead agencies' discretion over Proposed Project elements. The development of these features as part of the Proposed Project does not affect future decision making relevant to other activities within the Auburn SRA or at the project site. Reclamation and CDPR have plans to initiate their comprehensive planning studies, including public involvement activities, for the entire Auburn SRA in 2002.

F. The El Dorado County Air Pollution Control District (APCD) recommends evaluating sensitive receptors located within a 1,000-foot radius of project construction activity. Placer County APCD recommends consideration of sensitive receptors within one-quarter mile (1,320 feet).

The Draft EIS/EIR considers the potential for air quality impacts upon receptors within one-half mile of the proposed construction activity, and therefore encompasses a larger region and provides a more conservative evaluation of potential project impacts than required by the El Dorado County APCD or the Placer County APCD. The community of Cool is located over 2 miles east of the proposed project area, and therefore residents and schools within the community do not fall within the sensitive receptor study area, as recommended by these agencies.

L-28, pg. 3

EL DORADO COUNTY TAXPAYERS FOR
Quality Growth

POST OFFICE BOX 94 • GREENWOOD, CALIFORNIA 95635 • TELEPHONE 530/823-1662
FACSIMILE 530-823-3137

G further request and comment that the air pollution station located in Cool (ALT) CA be upgraded to detect a full range of air borne pollutants including PM. This will provide residents on both side of the project the opportunity to access the impacts along with the regulatory agencies.

H Recreation impacts to trails and trail crossing above and below the proposed project site have not totally been included in this project's EIR/EIS.
The sites that we have a initial concern are the Tevis crossing located at Poverty Bar. This crossing as well as others is used year round and will be impacted by additional flow releases needed to supply PCWA Pumping Station. Other sites located above the project site is the crossing at Sliger Mine, Fords Bar, Cock Robin Point Trail below San Ramon Hill.

Below the project site is a river crossing used just below Cardiac Hill near Oregon Bar. These trail river crossings have been in use for generations, yet have not been mentioned in the EIS/EIR. We comment and request that a analysis be done on these and any other crossings which may be impacted by the additional release of water needed to supply the PCWA project.
Some of these if not all may be subject to Federal Law RS 2477. We comment and request that a analysis be included as to the standing of these trails.

I We comment that the County of El Dorado has trail plan that is not referred to in the EIR/EIS. This trail plan and the El Dorado County General Plan rely on some of these trails for the recreational requirements for the residents and guests of El Dorado County yet the only mention of a General Plan is on Air Pollution and Noise. We request and comment that a through review be preformed of the afore mentioned plans for the potential impacts that may arise from the lack of any mitigations for impacts which may occur as a result of this project.

J We comment that he PCWA claims that the Auburn-to-Cool Trail (Coffer Dam) loss is a significant but unavoidable impact of the river restoration and pump station project. We comment that the PCWA and the BOR need

3

G. CARB installed the Cool monitoring station to measure ozone levels in El Dorado County based on the results of a 1990 Sacramento Air Quality Field Study that indicated the potential for high ozone levels near Cool. The need for PM_{10} monitoring at Cool was not identified in this study or since then. CARB has no plans to upgrade the station as it finds existing monitoring locations are better-suited for capturing high PM levels and that the Cool site would not substantially improve their data or planning efforts. It is outside the responsibilities of the lead agencies to pursue such action.

H. It is recognized that people cross the river in many locations throughout the Auburn SRA. CDPR does not officially designate the locations cited in the comment letter as official trail crossings of the river and does not maintain any specific goals or objectives for the use or management of use in those areas that differ from other areas in the Auburn SRA. CDPR is committed to providing the public with information about the inherent dangers associated with river recreation of all types, including swimming, boating, and river crossings, while also providing access and opportunities for the public to enjoy the river in a safe manner. CDPR does not recommend, condone, or prohibit individuals' attempts to cross the river at these locations; however, crossing the river is done at one's own risk. The referenced federal law RS 2477 is not known to apply to the crossings identified in the comment letter. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail, for more information regarding tail access and possible river crossings.

CDPR finds that there are sufficient trail miles and access locations for the public to enjoy the North and Middle forks of the American River without crossing. Sliger Mine and Cock Robin Point are accessible by roads or trails on either side of the Middle Fork. The Western States Trail crossing at Poverty Bar may be considered easier to ford that other locations; however, as indicated previously, CDPR does not consider this an official river crossing location. It is recognized that river flows are regulated at the Oxbow Powerhouse to permit crossing in this location during specially-permitted annual trail events. Maximum increase in releases from Oxbow would be 100 cfs during summer when flows would generally be otherwise low. The project would not result in increased flows below the pump station.

Response I

The El Dorado County General Plan lists non-motorized transportation systems as one of six closely related components that play a vital role in the County's attempt to achieve a balanced and sustainable transportation system. Goal 3.11 of the plan seeks to "develop and implement a comprehensive bikeway, hiking, and equestrian trails plan that maximizes the opportunities for non-motorized transportation and meets the recreation and local community needs of El Dorado County residents." The El Dorado County Trails Master Plan includes goals, policies, and implementation strategies to guide trail development and maintenance throughout the County. The Master Plan does not identify detailed trail alignments but has objectives and policies related to the goals of creating a network of trails to serve multiple users and provide inter-connections throughout the county.

The Placer County General Plan states that one of its recreational goals is "To develop a system of interconnected hiking, riding, and bicycling trails and paths suitable for active recreation and transportation and circulation." Multi-purpose trails also are linked to Goal 3.D, "To provide a safe, comprehensive, and integrated system of facilities for non-motorized transportation."

The City of Auburn distinguishes between independent trails and pedestrian/cyclist trails in its 1994 General Plan. The plan recognizes three trail types for Pedestrian/Cyclist trails. One of these, a "route," uses existing roadway and is not designated as a separate facility. It is signed for user information as well as to inform the driving public that the road is a designated route for non-motorized transportation.

Neither the El Dorado County General Plan, the El Dorado County Trails Master plan, Placer County General Plan, nor the City of Auburn General Plan specifically refer to the Auburn-to-Cool Trail or its use designation within the project study area or elsewhere.

The general plan goals and policies information related to trails is included in the Final EIS/EIR, Chapter 3.0, Section 3.8.2.2, Applicable Laws, Ordinances, Regulations. This information does not alter the conclusions presented in the Draft EIR/EIS.

L-28, pg. 4

EL DORADO COUNTY TAXPAYERS FOR Quality Growth

POST OFFICE BOX 94 • GREENWOOD, CALIFORNIA 95635 • TELEPHONE 530/823-1662
FACSIMILE 530-823-3137

J (cont)

to include the construction of a bridge spanning the American River in their plan. We further comment that there is a need to leave a dirt trail along side the roads with adequate construction standards to protect the recreational users that require dirt trails. We comment that these trails must have a sufficient buffer distance from the paved roadways for safety. (See El Dorado County Trails Plan for example)

The Coffer Dam site is one of the few places where several trails merge and provide access to other trail systems (the Western States Trail in Auburn, the Olmstead Trail in Cool, and the Maidu and Folsom area trails). Most people feel that if the PCWA river project doesn't include a bridge in their plan now that it will never happen and we will lose the Coffer Dam area trails, three of our best training hills, and a major trail system connection FOREVER.

We comment that to not include at this time any decisions which will be made in the foreseeable future to CASP and or BOR would be a bifurcation of the project. (Please see our previous comments on bifurcation i/e Piece Mealing of a project.) The loss of this trail and the other afore mentioned trails/crossings would be inconsistent with the El Dorado County General Plan and the El Dorado County Trails Plan.

Several thousand hikers, outdoor enthusiasts, equestrians, mountain bikers, and runners use these trails annually. If the Auburn-to-Cool Trail is closed, the treacherous canyon trail to 'No-Hands Bridge' (Western States Trail) will become overcrowded - presenting a seriously dangerous situation. The interdiction of water based recreational users as a direct result/impact of the PCWA project will cause a conflict with existing user groups.

We comment that conflicts with other prior/existing groups will need to be resolved. We here by request that this conflict be mitigated through the inclusion of a bridge to replace the trail at the Coffer Dam. This trail was not designed to handle the kind of traffic that the Coffer Dam trails can. The trails are narrow and the drop-offs are steep, rocky, and several hundred feet high. People and horses will be at a much greater risk for potentially

4

J. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-28, pg. 5

EL DORADO COUNTY TAXPAYERS FOR Quality Growth

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deadly accidents involving collisions and falls.

J (cont) The Auburn-to-Cool Trail loss is not just a trail, but also a merging of 3 canyon hills where athletes have been training for years. Runners and equestrians will no longer have these hills for training for the world famous 100 mile Western States run, the 100 mile Tevis endurance race, and other events. Auburn is proud to host the finish lines of both of these and other prestigious races. We comment that there has not been any analysis as to the economics losses that will occur as a result of these trail impacts now and into the future. We comment and request that this analysis be included in the FEIR.

Mountain biking access to the American River Canyon below Auburn is already limited. In fact, the Auburn-to-Cool trail is the only access they have to the trails in Cool from Auburn. It is not fair to take their only access route away from them. The canyon represents many user groups that include water use AND land use. The PCWA project needs to support canyon user groups and recognize the value of keeping the canyon access available.

K Currently a volunteer mounted unit patrols the Coffer Dam area. Equestrians will no longer have access to the area as the PCWA plan includes paved roads on the Auburn side and piled river rock from the excavation on the Cool side. Who is willing to take on the expense and responsibility for patrolling this area when it becomes not so horse friendly? We comment that the inclusion of a bridge into project will provide the ability a safety and enforcement element in the case of a medical emergency in this section of the canyon.

L We comment that the potentially significant impacts associated with the loss of the wildlife corridor/corridors between El Dorado and Placer Counties for the movement of wildlife through the Cofferdam area, including upstream and downstream areas has not been adequately analyzed. The higher river flows that are mentioned as a requirement for the PCWA/Georgetown Divide Public Utility District (GDPUD0 diversions must be include in the analyses. These analyses must include the

M

5

K. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L. Please refer to Master Response 3.1.12, Project Area Wildlife.

M. The Draft EIS/EIR includes a qualitative assessment of the potential impacts associated with future increases in water supply diversions from the American River at the project site, including consideration of higher releases from Ralston Afterbay that may affect the Middle Fork American River. Evaluation of the Proposed Project assumes diversion of up to 100 cfs for use by PCWA. The cumulative analysis including an assumed increased diversion of up to 225 cfs to meet future demands from PCWA (100 cfs) and GDPUD (25 cfs). At this time however, it is unknown whether either PCWA or GDPUD would obtain additional future water supplies from the American River pump station location. Future environmental documentation to evaluate specific project impacts would be required prior to initiation of a pump station expansion project.

L-28, pg. 6

EL DORADO COUNTY TAXPAYERS FOR
Quality Growth

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M (cont) maximum amount of water which may be added to the American River flows to satisfy the possible future diversions of both the PCWA and GDPUD. There is a migratory bird refuge site located just below the project site.

N Members of our group have observed this site including the migrating bird wildlife. We request that these analyses be included in the EIS/EIR being conducted by the Bureau of Reclamation and the Placer County Water Agency

K (Repeat) Most people want to share in the joy and celebration of opening the river back to its natural course. We are asking PCWA and the BOR, to do the right thing and not take away the use of precious and beautiful canyon trails from our community. This can be achieved by building a bridge - a small price to pay when compared to the overall $31 million project budget. A small price to pay compared to the permanent loss of trails that thousands of people have been using for years.

We comment that there may be the opportunity to alter slightly the location of the a bridge crossing to replace the present crossing at the site of the present trail crossing at the site of the destroyed coffer dam. We comment that if the site upstream of the present site would be able to connect with a trail access to the Knickerbocker Trail and possibly allow for a resumption of trail use at a earlier time and provide for significant economic savings. We comment and request that a committee of trail users, BOR, PCWA and CASP to investigate these alternatives. The afore mentioned down stream crossing also may be another alternative crossing opportunity with the same economic, visual and social benefits.

Thank you for this opportunity to provide written comments, please include the comments that have previously submitted by our representative Mr. Steven Proe including oral comments that were transcribed at the PCWA Public Hearing on Oct 11, 2001. If you have any questions on any of the comments or if our representative can be of further assistance on this project please do not hesitate to contact him. Contact by phone is 530-823-

6

N. The lead agencies are unaware of any officially designated or protected migratory bird refuge along the North Fork American River in the project study area. There is a sign along Auburn-Folsom Road in the City of Auburn that is believed to be a promotional statement for the city, and not a reference to a specific designated refuge area. Anderson Island Natural Preserve, located within the Folsom Lake State Recreation Area is a designated State Natural Preserve. Herons and egrets have been known to roost on Anderson Island (which at some lake levels is a peninsula). However, Anderson Island is located downstream of Rattlesnake Bar on the North Fork arm of Folsom Lake, well below the project area.

L-28, pg. 7

EL DORADO COUNTY TAXPAYERS FOR Quality Growth

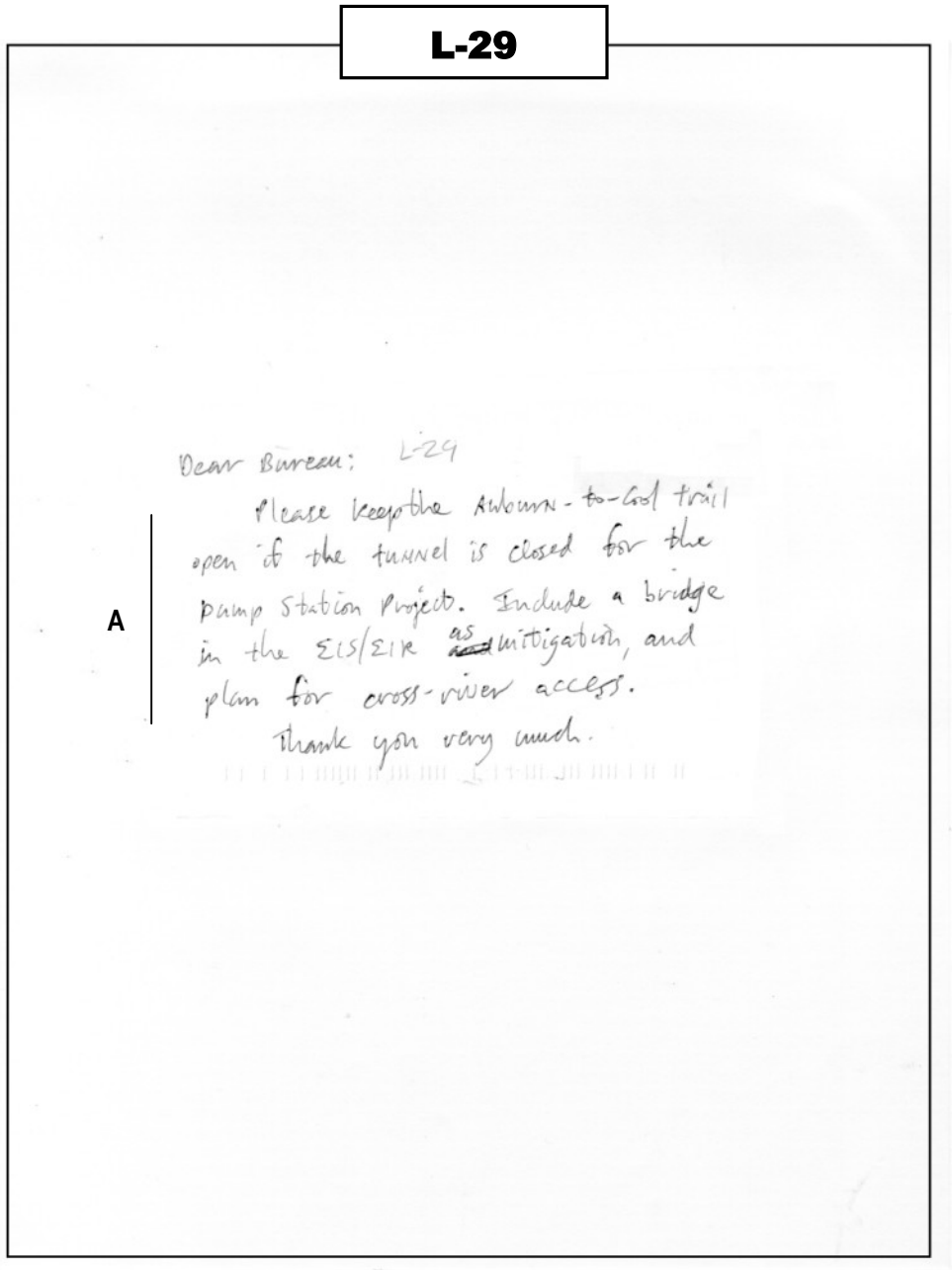
POST OFFICE BOX 94 • GREENWOOD, CALIFORNIA 95635 • TELEPHONE 530/823-1662
FACSIMILE 530-823-3137

1662, fax 530-823-3137, E-Mail trails@aaahawk.com at P.O. Box #94,
Greenwood, CA 95635

Thank You

Steven Proe, Secretary
El Dorado County Taxpayers
For Quality Growth

7



A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-30

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Barbara Jicha
ADDRESS:	125 Del Monte Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 823-1034
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I favor the American River Pump Station Project as proposed. The installment of a permanent PCWA pump station on the American River is long overdue. The pump station should be located in the area originally proposed by PCWA which would entail closure of the diversion tunnel, as this is the most efficient location for pumping PCWA's entitled water out of the River.

B I would like to see a bridge constructed to maintain access from Auburn to the Cool Trail. This issue is secondary to the primary issue of fulfilling the government's commitment to PCWA to provide a permanent pump station facility.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-31

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	William Gore
ADDRESS:	PO Box 8088
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 273-2899
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I feel that before any changes are made to the current course of the river that:

A 1) The current recreational activities in the canyon be taken into consideration. (Hikers, Runners, Bikers, Horse Riders)

2) Some type of bridge be in place before our trails are cut off. A bridge near the site that is now being used to cross the river.

B I feel that leaving the river as it is would be the best for the majority of the public.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
■ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Leaving the river "as is" would not meet the objectives of the lead or responsible agencies. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

L-32

3921 Dawn Drive
Loomis, CA 95650
October 26, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Ladies and Gentlemen:

A The most gratifying and important aspect of the American River Pump Station Project is the restoration of the American River to its natural channel AND the PERMANENT, irreversible closing of the tunnel. If the restoration were all that happened, I'd be satisfied.

B However, I am concerned about two "negative" impacts that will occur with the construction of the pumps. One negative impact deals with the need to justify the pumps because of the increase in Placer County's population and subsequent water needs. Which comes first? Without the pumps, wouldn't we have little or no population increases? (I'd vote for that rather than what we currently have on the books with regard to Placer County's horrendous sprawl over the next twenty years.)

When the growth exceeds the pumps capacity to serve the area, will more pumps be built? Will the flows of the American River be reduced? Or will precious ground water be tapped? I urge more study regarding the serious negative long-range impacts of any pump stations.

C The other negative impact is the visual blight that the pumps will be to the river (especially if it is restored, replanted, and returned to its natural appearance). No pumps should be visible if the river is truly "restored."

Pump station or not, I urge you to proceed with the restoration of the natural channel and keep this aspect of the project as the highest priority.

Sincerely,

Marilyn Jasper

Marilyn Jasper

A. Project support noted.

B. Please refer to Response L-21.A.

C. Visually the project study area is considered substantially degraded when compared to the appearance of river reaches upstream and downstream of the Auburn Dam construction area. Although the Proposed Project features would be visible to recreationists at the canyon floor, along portions of the recreation trails, and at glimpses from homes adjacent to the ridge top in Auburn, the overall influence of the Proposed Project upon the study area viewshed would be considered beneficial due to restoration of river flows to the channel. The appearance of the river channel would be enhanced by creation of features that are found in natural streams, such as pools, riffles, and variations in the channel cross section. The design process for the river restoration element includes reference to photographs and other historic information (prior to Auburn Dam) to aid in the hydraulic and visual re-connection of the currently dewatered segment with upstream and downstream reaches of the river. Additionally, the design of other project elements, such as tunnel closure, river access facilities, and pump station housing, would be such that the project features blend with the surrounding area and do not introduce other sources of glare or other visual distractions. The pump house would be constructed of a neutral tone split-face block. River access features would be minimal and "rustic," similar to those at other locations within the Auburn SRA.

L-33

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	IRV Mazur
ADDRESS:	26889 Table Meadow Rd.
CITY/STATE/ZIP:	Auburn, Ca 95602
BUSINESS AND/OR HOME PHONE/FAX:	530-269-3018 / FAX 269-3017
ORGANIZATION (IF APPLICABLE):	Gold Country Trails Council

COMMENTS:

My wife & I moved here from the bay area w. 4 of our (3) Three horses primarily because of the extensive Trails systems in Placer & Nevada County's. If the Coffer dam Trails are lost, The "Best Trail" in the entire area will be lost!! Horse people in general spend a lot of money on our animals & feed Trailors & Trucks, Gasoline, Insurance etc. If this & other trails are taken from us, I'm sure that there are other states in these United States that would want our money & support.

Please make the Coffer Dam trail available to us!!

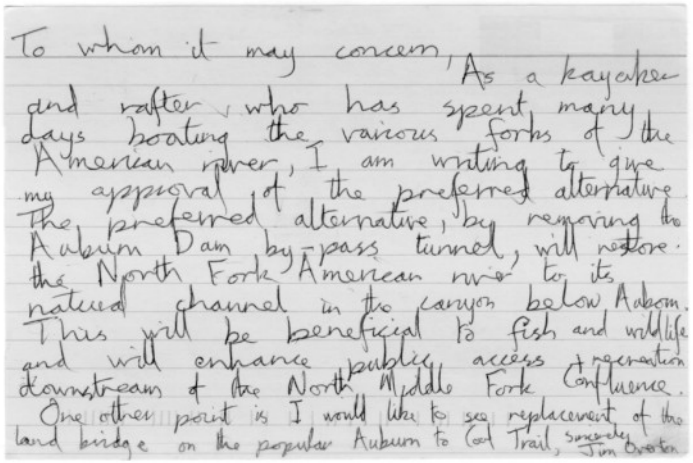
Thank you

Sincerely,

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-34



To whom it may concern, As a kayaker and rafter who has spent many days boating the various forks of the American river, I am writing to give my approval of the preferred alternative. The preferred alternative, by removing the Auburn Dam by-pass tunnel, will restore the North Fork American river to its natural channel in the canyon below Auborn. This will be beneficial to fish and wildlife and will enhance public access & recreation downstream of the North Middle Fork Confluence.

One other point is I would like to see replacement of the land bridge on the popular Auburn to Cool Trail,

Sincerely
Jim Overton

Jim Overton
8903 NE 144th Pl
Bothell, WA 98011-5140

N.W.F.

L-34

American River Pump Station Project,
Draft EIS/EIR Comments,
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento CA 95825.

95825+1927

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-35

28 October 2001

American River Pump Station Project
Surface Water Resources, Inc.
2031 How Avenue
Sacramento, CA 95825

Ref: Draft EIS/EIR Comments

I understand that current plans for the river restoration and pump station project do not include preservation of the Auburn-to-Cool trail. I also understand that a simple bridge could solve the problem. I strongly oppose any plan that does not include preserving access to this multi-use recreational asset for several reasons.

A

1. TRAIL NETWORK. The Coffer Dam site is an intersection for connecting several major regional trails (Western States trail, Olmstead trail, and Maidu trail). Eliminating access to these trails forfeits a significant recreational opportunity that cannot be duplicated elsewhere.
2. USER SAFETY. These trails are multi-use assets for hikers, equestrians, runners, etc. Diverting all these users to the remaining narrower trails will create overcrowding and dangerous conditions for everyone.
3. TRAINING SITES. The canyons and hills along these trails have been established as training grounds for international caliber athletes and equestrians. Major competitive events have traditionally trained and competed on these trails.
4. COOL ACCESS. Mountain bikers have only the Auburn-to-Cool trail for accessing the Cool area trails.
5. VOLUNTEER PATROL. The mounted unit that currently patrols the Coffer Dam area will no longer have access to horse friendly trails. Paved roads and piled river rock will discourage community service and degrade safety and usability of the recreational areas.

In summary, I wish to emphasize that I am in favor of preserving and restoring the river. I am equally in favor of preserving and restoring the recreational opportunities in the area. One does not have to be sacrificed for the other.

The PCWA project needs to support all canyon user groups. It also needs to recognize the economic value of retaining attractive recreational and athletic competitions in the region.

Lucy Badenhoop

Lucy Badenhoop

7728 Bellingrath Drive
Elverta, CA 95626
(916) 991-7040

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-36

16983 Grovenor Drive
Castro Valley, CA 94546
October 28, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

To Whom It May Concern:

A I am writing to decry the loss of the trail from Auburn to Cool because of your river restoration and pump station project. What a sad thing it would be to lose this beautiful, historic, and much-used trail! And it doesn't have to happen! It seems that the easy solution is to build a bridge at the appropriate crossing place and build a dirt trail alongside the road. I'm sure that with a little good-will advertising you could get members of the hiking/biking/riding public to help with the construction. Now is the time to do it!

Sincerely,

William L. Coburn

William L. Coburn

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-37

Oct 29, 2001
120 Awali Ave
Auburn, CA. 95603

Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA. 95825

Re: American River Pump Station Project
Draft EIS/EIR Comments

The issues involved with construction of the Pump Station and restoration of the riverbed are sufficiently covered. However, the EIS does not sufficiently cover the environmental impacts that will be generated by the recreation facilities. The proposed Pump Station will essentially replace the original one; and plugging of the river bypass will simply return the river to its original course. **But the construction of parking areas, roads, trails and related facilities for recreational use are new features.**

The public health and safety aspects related to these facilities have not been addressed, except to acknowledge that these issues would be incorporated in a future Auburn State Recreation Area plan. **How can this EIS be considered adequate, when it leaves the effect of these facilities to be determined at a future date ?? This should be done prior to construction – not afterwards !!**

A **The increased fire risk associated with the proposed recreation facilities is the predominate public safety issue;** and it deserves more that the passing remark on page 36 in the EIS Executive Summary. What measures will be taken to prevent or reduce the likelihood of fire in the canyon ? Since these facilities are included in the Pump Station Project, the resulting environmental impacts should also be fully addressed in the EIS.

B Besides the fire risk, some of the other factors that need attention include the effect of traffic through the residential area; type and size of vehicles to be permitted on the access roads; type of use to be allowed on the trails (ie. horseback, motorized bikes, etc.); and more detail on the "afternoon boating" referred to on page 2-25 of the EIS.

C Does this include jet skis, motor boats and water skiing? How will the proposed recreational use affect the water quality in the American River?

D Unless these subjects are covered, the EIS statement on page 36 - that there will be no cumulative impacts to the public health and safety issues - is in error.

Bill G. Grant

Bill G. Grant

Cc; PCWA – Brent Smith
Auburn Fire Safe Council

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Increased recreational use in the project area would have minimal impact on water quality since only non-motorized watercraft would be permitted on this stretch of the North Fork American River.

D. Please refer to Responses L-37.A, L-37.B, and L-37.C.

L-38

October 29, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

For your attention please:

A

I am a resident of El Dorado County. My family, friends, and I and ride our horses on the Cool-to-Auburn trail on a regular basis. We have enjoyed the recreation these trails have to offer from horseback for many years now. We would feel a great loss if were unable to ride to Auburn and use the connecting trails.

If we have to loose the Coffer Dam trail, we ask that there would be an appropriate safe horse-friendly bridge be put there. We must tell you that the sole use of the Western States Trail "no-hands" bridge is not an optional use. This bridge and connecting trails are not safe for horses.

PLEASE help us. We love these trails and do want to have them available to us and our children in the future.

Sincerely,

Bonnie K. Borovich
P.O. Box 114
Garden Valley, CA 95633

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-39



October 30, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave.
Sacramento, CA 95825

Gentlemen:

I am writing in regard to the Coffer Dam area trails that are in grave danger of being lost to much-needed recreational uses with the closing of the diversion tunnel on the American River. I am a life-long trail rider and member of the Loomis Basin Horsemen's Assn., the Mother Lode Arabian Horse Assn., and the Gold Country Endurance Riders.

A For equestrians and residents of the Auburn side of the river, access to safe trails that cross the American River and lead to the network of trails in the Cool area is very important. If only one trail remains for hikers, horseback riders, and bicyclists alike, and that trail crosses No Hands Bridge, it will be much too crowded to be safe for all concerned. We would be forced to trailer our horses to Cool along Hwy. 49, which is already clogged with traffic and slow-moving vehicles.

While I am delighted with the prospect of returning the American River to its natural course, I regret that this will inevitably result in the loss of some trails. However, if a bridge across the river were included in your plans, optimal and safe use of this much-used and beloved scenic recreational area will be realized.

Thank you for your consideration.

Sincerely,

Linda Romander

LINDA L. ROMANDER
9168 King Road
Loomis, CA 95650
916/652-2327

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-40

Barbara Rush
P O Box 748
Newcastle, California 95658

(916) 663-1896

October 30, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, California 95825

To Whom It May Concern:

This letter is in regard to the impact of the river restoration and pump station project.

A As you are aware, the Auburn area is one of the most highly sought areas in California for hiking, horseback riding and mountain bike riding. The fact that PCWA is even considering not putting in a bridge to allow the continuation of these activities is unthinkable.

I ask that you at least consider the value this bridge will have in the future for all runners, equestrians and mountain bikers alike.

Thank you.

Barbara Rush

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-41

CITY OF AUBURN

1225 Lincoln Way • Auburn, CA 95603 • (530)823-4211 • Fax(530)885-5508

October 30, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Reference: Draft Environmental Impact Statement/Environmental Impact Report for the American River Pump Station Project, Auburn, California

To Whom It May Concern:

A I am writing on behalf of the Auburn City Council. Because the project is located in close proximity to the City of Auburn, there will be increased public access and recreation activities in the area. The Auburn City Council has concerns about the increased potential and risk for wild land fires in the American River Canyon and the impact on our City. The City Council requests that this issue be reviewed and appropriate mitigation provided.

Please also be advised that City staff is in the process of reviewing the draft EIS/EIR and will comment on other concerns by separate letter.

Sincerely,

Alice Dowdin Singh
Mayor

ADS/PO/mhc
cc: Tom Fossum, Director of Public Works
Howard Leal, Fire Chief
David Breninger, General Manager, Placer County Water Agency

A. The Draft EIS/EIR recognizes that use of the public river access facilities would result in increased public activity in the area and associated potential increased fire risk. (Section 2.3, page 2-43). Since publication of the Draft EIS/EIR, the Fuels Management Action Plan of the Auburn State Recreation Area Prefire Management Plan being prepared by Reclamation, the California Department of Forestry and Fire Protection, CDPR, and in coordination with the City of Auburn, has been completed. Please refer to Master Response 3.1.9, Fire Management.

L-42

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Terri Barney
ADDRESS:	10620 Bear Tree Ct
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-888-8170
ORGANIZATION (IF APPLICABLE):	Loomis Basin

COMMENTS:

A With a budget of 31 million a bridge should (must) be included in order to retain major trails in our area. A bridge would benefit a greater portion of people. It should also be noted that pavement is not user friendly to horses and maintaining dirt trails in all areas is very important.

Mountain bikes hikers and Equestrians need this bridge in order to have a continued use of this portion of trails

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-43

November 4, 2001

From: The Harrington Family
10045 Snowy Owl Way
Auburn, CA 95603

To: American River Pump Station Project, Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite #110
Sacramento, CA 95825

Re: Auburn Dam diversion Tunnel closure and American River restoration project.

To whom it may concern,

A We live next to Maidu Road in Auburn. We are very concerned about the planned access to the project you are planning using Maidu Road as future access. We are writing this letter to you to voice our concerns regarding your proposed plan, and to let you know we **oppose** the Maidu Rd. access plan.

This planned access via Maidu Rd. is unacceptable for many reasons. The increase in traffic and pollution, both air and noise pollution would be unacceptable to our residential neighborhood. All of the associated traffic and noise related to the construction of this project would also be unacceptable. We, like many of our neighbors, have small children. Our children not only live and play in this peaceful neighborhood but walk to Skyridge Elementary School. Our children must cross Maidu to get to and from school each day. This increase in traffic would pose an undue safety risk to our children.

We have many other concerns, such as who will police the facility. This access would bring undue crime and transient traffic through our residential neighborhood, which would be unacceptable at a level we simply would not tolerate.

B I understand that there are possible alternative access roads to this project and I strongly urge you to consider them. From our point of view, Maidu Rd. as an access to this project is simply not an option that we will consider.

If you would please pass along to us any contacts that would care to hear our position on this matter it would be greatly appreciated.

Sincerely,
Perry J. Harrington
Beverly M. Harrington
Tiffany M. Harrington
Jerry K. Harrington

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-44

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	JULIETTE LI SUHR
ADDRESS:	100 MARINERA ROAD
CITY/STATE/ZIP:	SCOTTS VALLEY, CA 95066
BUSINESS AND/OR HOME PHONE/FAX:	831-335-5937
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I have used the Cutler Dam trail for years on horseback. You simply cannot divert all the traffic if you bears to the Robie Point to 49 crossing That area is too fragile.
Please provide some sort of overpass to keep the people coming to the area for recreation.
Sincerely,

Juliette Suhr

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-45

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MARK PERRY
ADDRESS:	376 AEOLIA DRIVE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I AM TOTALLY IN FAVOR OF THE TUNNEL CLOSURE, CONGRATULATIONS AND THANK YOU.

B I BELIEVE THAT THIS PROJECT SHOULD BE FUNDED BY DEVELOPER FEES UPON USERS OF THE WATER THAT WILL FLOW THROUGH TO WESTERN PLACER COUNTY.

C HOWEVER, I CONCUR WITH CITIZENS' CONCERNS ABOUT THE PROPOSED PARKING AREA NEAR THE PROJECT, THAT IT IS AN UNECESSARY EXPENSE THAT WILL LEAD TO INCREASED TRAFFIC, NOISE, AND MOST IMPORTANTLY AN EXTREME RISK OF CATASTROPHIC FIRE DANGER FROM INCREASED USE.

A GATE CLOSING ROADWAY ACCESS TO CANYON IS NEEDED. THANK YOU. M. Perry

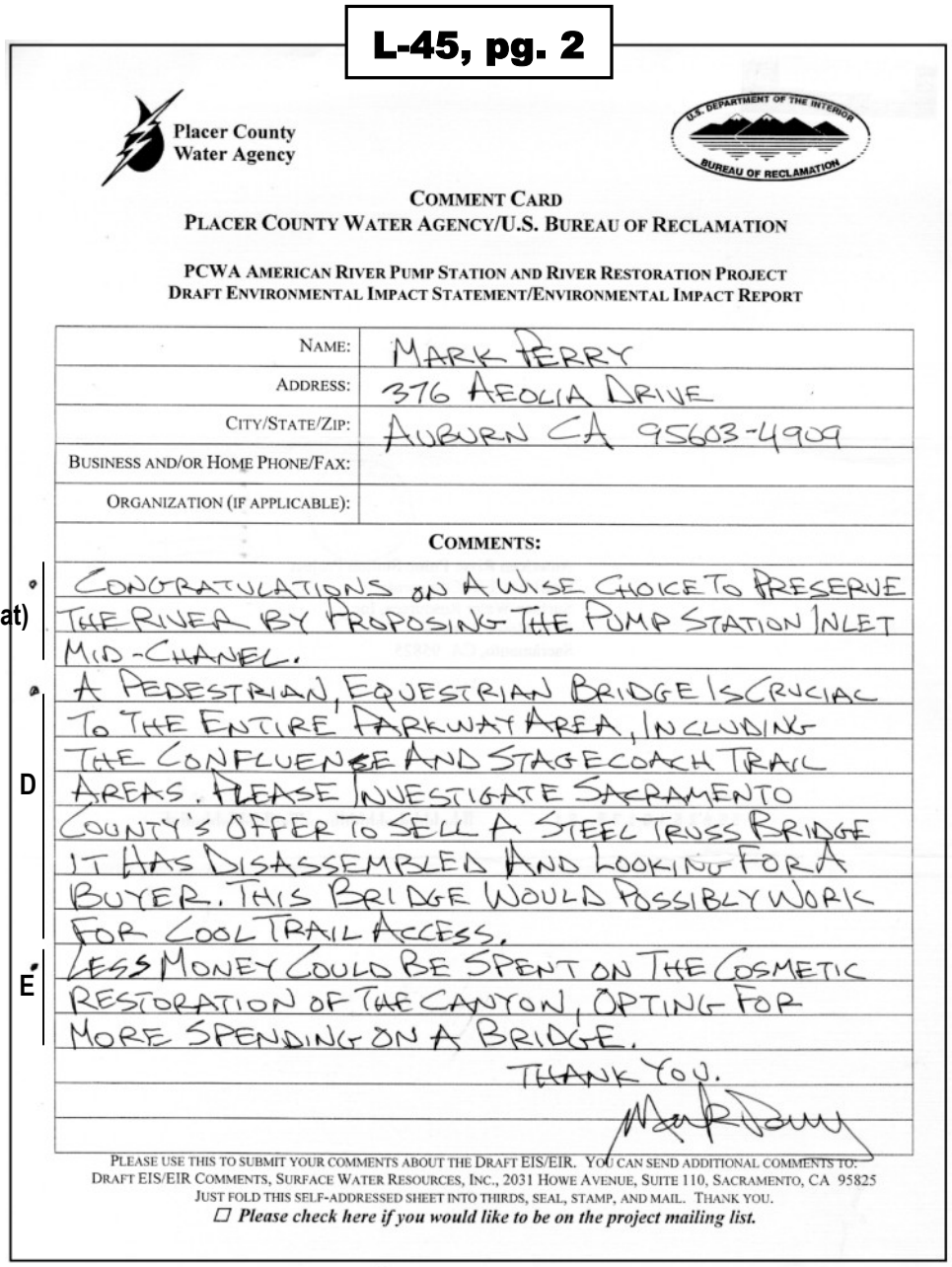
PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

C. Please refer to Master Response 3.1.6, Public River Access Features; and Master Response 3.1.9, Fire Management.

L-45, pg. 2



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MARK PERRY
ADDRESS:	376 AEOLIA DRIVE
CITY/STATE/ZIP:	AUBURN CA 95603-4909
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A (Repeat) • CONGRATULATIONS ON A WISE CHOICE TO PRESERVE THE RIVER BY PROPOSING THE PUMP STATION INLET MID-CHANEL.

D • A PEDESTRIAN, EQUESTRIAN BRIDGE IS CRUCIAL TO THE ENTIRE PARKWAY AREA, INCLUDING THE CONFLUENCE AND STAGECOACH TRAIL AREAS. PLEASE INVESTIGATE SACRAMENTO COUNTY'S OFFER TO SELL A STEEL TRUSS BRIDGE IT HAS DISASSEMBLED AND LOOKING FOR A BUYER. THIS BRIDGE WOULD POSSIBLY WORK FOR COOL TRAIL ACCESS.

E • LESS MONEY COULD BE SPENT ON THE COSMETIC RESTORATION OF THE CANYON, OPTING FOR MORE SPENDING ON A BRIDGE.

THANK YOU.

Mark Perry

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

D. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

E. Please refer to Master Response 3.1.5, Project Area River Restoration.

L-46

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Joanne Arnold
ADDRESS:	1901 Shirland Tract Road
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(916) 263-2221 (work)
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I support closing the tunnel & returning the river back to its natural course but due to the level of activity currently in the canyon I believe that it would be a logistical nightmare to not include a bridge.

B

C I am also vehemently opposed to any parking lots at the bottom of Maiden Drive. To have convenient access to the river will generate people who have been drinking on the river to be driving through a residential neighborhood as well as cars that have dropped rafters off at the confluence to be racing down Maiden Drive to pick them up in time. The people using the river/canyon should be fit enough to walk up to the overlook to get out of the canyon. Dikers Flat is a good example of how this could work.

Final

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

C. Please refer to Master Response 3.1.6, Public River Access Features. It is noted that CDPR park aides and rangers would enforce rules prohibiting alcohol at the proposed facilities. Additionally, CDPR is authorized to ticket drivers speeding within the Auburn SRA; Placer County and City of Auburn law enforcement would address these concerns within their respective jurisdictions and have indicated ability to provide these services.

L-47

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	TRISTA COLLINS
ADDRESS:	P.O. BOX 679
CITY/STATE/ZIP:	FORESTHILL, CA. 95631
BUSINESS AND/OR HOME PHONE/FAX:	(530) 367-3585
ORGANIZATION (IF APPLICABLE):	Placer County Resident

COMMENTS:

A Please include a bridge in the project!!!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-48

Stewart Ranch

10/28/01

8497 STATE HIGHWAY #1
P.O. BOX 130
OLEMA, CA 94950
(415) 663-1362

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources Inc.
2031 Howe Ave.
Sacramento, Ca. 95825

Dear: American River Pump Station Project CEO,

Coffer Dam is one of the few places where several trails merge and provide access to other trail systems (the Western States trail in Auburn, the Olmstead trail in Cool, and the Maidu area trails). Most people feel that if the PCWA river project does not include a bridge in their plans now, that it will never happen and we will lose the Coffer Dam area trails, three of our best locations and a major trail system connection forever.

Several thousand hikers, outdoor enthusiasts, equestrians, mountain bikers, and runners use these trails. Losing the Auburn to Cool trail would mean the narrow trail "no-hands bridge" (Western States Trail) will become overcrowded- presenting a serious passing problem for everyone. There are almost no areas where one could pull over safely to allow another to pass. Having the Coffer Dam trails allows room for these outdoor enthusiasts without overcrowding trails that are narrow and reducing any erosion that surely would occur because of overcrowding. **A**

For the mountain bikers alone, the only trail from Auburn to Cool is the Western States Trail and "No-hands Bridge". The mountain bikers are already limited in their trail access and placing ALL outdoor enthusiast on one narrow trail will cause hazards for ALL. This would be poor judgment on the part of the PCWA to do this.

Most people want to share in the joy and celebration of opening the river back to its natural course. We are asking the PCWA to do the right thing and not take away the use of precious and beautiful canyon trails from our community. This can be achieved by building a bridge, a small price to pay when compared to the overall $31 million dollar project budget. A small price to pay compared to the permanent loss of trails that thousands of people have been using for years.

Although we live in Marin County, we are familiar with these trails because of friends and participation in the NATRC. We are members of the Marin Horse Council and Amanda Wisby is one of the directors. We also operate the Stewart Horse Camp in the Point Reyes National Seashore and have a knowledge of the many public uses these trails have. Every year there are more people who use public lands for day and overnight use, therefore there is a GREAT need for maintaining existing trails. If existing trails cannot be maintained or others created as replacements, then the remaining trails become heavily used. This type of heavy use can be damaging to the plant and animal species and cause erosion on the remaining trails.

Thank You
The Stewart Ranch
Amanda Wisby

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features.

L-49

October 29, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources Inc.
2031 Howe Avenue
Sacramento, CA 95825

Dear Sirs:

A I am writing to convey my concerns that the American River Pump Station Project will result in the permanent loss of several intersecting hiking and equestrian trails in the Auburn/Cool area. This should not be considered an "unavoidable impact." Every effort should be taken to mititgate the loss of these trails, including the construction of bridges when necessary.

Thank you for your consideration.

Sincerely,

Julie Jackson
6746 Terreno Drive
Rancho Murieta, CA 95683

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-50

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dana Wise
ADDRESS:	4080 Eagles Nest
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-888-1892
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I'm in favor of a foot/bikers bridge where Kanyon dam exists

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-51

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Nick Lockett
ADDRESS:	6418 SNAKE TRL.
CITY/STATE/ZIP:	ROSEVILLE CA 95749
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A MAKE A BRIDGE. IT'S THE ONLY WAY I HAVE TO RIDE MY BIKE. A BRIDGE WOULD GREATLY BENEFIT EVERYONE. IT WOULD BE THE RIGHT THING TO DO.

THANKS

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-52

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Laura Horst
ADDRESS:	PO Box 44
CITY/STATE/ZIP:	COOL, CA 95614
BUSINESS AND/OR HOME PHONE/FAX:	916-491-1685
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

Please be aware there are many users and uses for the canyon. We wish to be able to still enjoy it after the work you are planning. Keeping the trails user friendly for all activities should be taken into consideration. Keeping the river crossing open is a MUST — this detrimental impact is avoidable —

BUILD A BRIDGE — REGRADE TRAILS —

MAKE THE CANYON SAFE & USEABLE FOR ALL

Laura Horst

A

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND [redacted] COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS [redacted] SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-53

Kim Dean
P.O. Box 497
Applegate, CA 95703

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

November 3, 2001

Dear Sir or Madam:

A

I often ride my horse through the Coffer Dam area trails of Auburn. I understand that these trails will be lost in the river restoration and pump station project. I am writing to voice my concern over the impact of this loss.

The trails will be severely affected by the loss of the Coffer Dam site. This area is a connection point for trails that lead in many directions, not only for equestrians, but also for mountain bikers, runners and hikers. This area is critical to keep the trails accessible for the enjoyment of so many.

I am sure the river can be restored as planned while minimizing the impact on the many people who use the trails. Auburn is well known for these trails, and the training and recreation they provide. It would be a shame to lose them! Please consider a bridge to provide the continued access for so many that now use the trails that will be lost.

Thank you for your consideration.

Sincerely,

Kim Dean

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-54

Alice T. Dunbar
12865 Pine Cone Circle
Grass Valley, CA 95945

November 4, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

Dear Sir:

As an owner of a residence within walking distance of the American River, I commend the American River Pump Station Project and the proposed restoration of the American River near Auburn. However, there are several comments that I would like considered:

A
- The loss of the only safe recreational access from Auburn to Cool caused by this project via the Auburn to Cool Trail should be mitigated. Equestrians, mountain bikers, hikers and runners heavily use this trail. Several options exist. Build a pedestrian bridge near the pump station or create an alternative multi-user group trial that goes from the dam overlook to either Hwy. 49 at the river or Mt. Quarries Bridge and then up to Cool. Those are long-term solutions, how will the loss of this recreational resource be mitigated during construction periods?

B
- Complete restoration of the surrounding natural area should be considered. This should include re-naturalization of the existing dam footing scars.

C
- PCWA has not, in my opinion, pursued a very aggressive water conservation program for Placer County. I realize this would in no way supply enough water without the pump station project. However, it would be in our own best interest to help our community form good water use patterns now as the "building out" of Placer County will be here before long.

I appreciate this opportunity to give you my input.
Sincerely,

Alice Dunbar

Alice T. Dunbar

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.11, Placer County Water Agency's Water Conservation Program.

L-55

Neighborhood Impact: Auburn Dam diversion Tunnel closure and American River restoration project

Are you aware?

- A major project is underway to restore the river channel and add recreation facilities in the canyon just below our neighborhood.
- An entrance station to a new State Parks facility to the American River is planned on Maidu Drive. – MAIDU is already over crowded – ex. School, new development – Suggest you move ~~them~~ entrance

A

If not, you are invited to a community information session being given just for the neighborhood residents by the State Parks, PCWA and Bureau of Land Management at the time and place noted below.

Maidu Drive Neighborhood Information Session

(Falcons Point, Auburn Oaks, Monticielo, Tanglewood, and Maidu Acres)

When: Wednesday, November 7, 2001, 7-9 pm
Where: Skyridge School Multipurpose Room
800 Perkins Way, Auburn

There is a draft Environmental Impact Report (EIR) that is available that outlines the details of the project. The following are some of the impacts to our neighborhood that you should be concerned with:

- Estimated increasing in traffic by 210 cars on peak days.
- Parking lots in the park to accommodate up to 60 vehicles.
- Increase in traffic and noise and associated safety issues for 2 years during construction.
- Will rafting company busses be allowed to the facilities?
- Who will police the facilities? What are the hours of operation?
- Are alternative entrance station sites being evaluated?

Please plan on attending this special meeting for your neighborhood.

The planning process is still underway and your opinion and ideas will be considered. Your opinions and comments to this project need to be mailed or faxed before November 9 to:

American River Pump Station Project, Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite #110
Sacramento, CA 95825
FAX: 916-286-0957

Copies of the draft EIR are available at the Placer County Library. If you have questions regarding this meeting please contact:
Dave Kasberg: 823-2565 –or- Ben Troia: 823-5157

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-56

BETSY WOBUS
10310 Penn Oak Lane
Rough and Ready, CA
95975-9785
(530) 432-5690
(530) 432-5681 Fax
bwobus@netcze.com

November 4, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

Dear Friend,

Although I have only lived in the Auburn area a little over one year, I have already come to love riding on the many trails out of the Auburn Dam Overlook. I understand that one of these, the Coffer Dam Trail, is scheduled to be closed with the up-coming re-opening of the river.

A

Although we are all in favor of returning the American River to its natural course (and strongly opposed to building a real dam there!), most of my riding friends, as well as trail bikers and hikers feel that closing the Coffer Dam Trail would be a real mistake. This would leave No Hands Bridge as the only route between Auburn and Cool; not only would the bridge be overused, but also there would be many more problems with the convergence of multiple users at that one site.

Is it not possible somehow to provide another crossing once the river course is restored? Would it be that great an expense to build another bridge that could accommodate the many different users? We recognize that it could not be built "instantly," but at least including it in your planning would seem to be a prudent thing to do.

Thank you very much for your consideration of this issue.

Sincerely,

Betsy Wobus

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-57

Joan R. Dowis
6640 Dahlberg Court
Foresthill, CA 95631
(530) 367-4543
Email: jdowis@foothill.net

November 5, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Ste. 110
Sacramento, CA 95825

Re: Coffer Dam Area Trails Closure
BRIDGE ALTERNATIVE

Dear Sirs:

The Coffer Dam site is an area in which several multi-use trails converge, which allows access between Auburn and Cool for a variety of user groups. These trails provide access to the Western States Trail in Auburn and the Olmstead Loop in Cool. Both of these areas allow access to further trail systems. Closing this site to trail use will leave only the Western States Trail between Auburn and Cool, which is closed to bicycles due to narrow hillside trails that do not permit safe use by bicycles as they endanger the other trail users. These trails were not designed to handle the kind of traffic that the Coffer Dam trails can, and illegal user groups have caused serious problems in the past, which were greatly relieved by the opening of the Coffer Dam area.

A Installation of the American River Pump Station does not require the closure of the Coffer Dam tunnel. This portion of the project is in place solely to benefit the rafting industry. All other users have access to this area today. It seems grossly inequitable to close off all other user groups for the singular benefit of one group, the rafting industry. Granted the rafters may bring some economic benefit to the area, but all of the other user groups certainly do also, in fact, no doubt to a much greater extent as the rafters do not tarry in Auburn or Cool – they are rapidly bused out when their trip is complete.

The PCWA claims that the Auburn-to-Cool trail loss is a significant but unavoidable impact of the river restoration and pump station project. The statement that the problems created by the project cannot be mitigated is untrue. This entire problem can be mitigated by the construction of a pedestrian/equestrian/bicycle bridge at the river, and retention of the trails through the area. This will allow the restoration of the river to a more natural course for the rafters, plus maintain the current ability of the other area users with access to the many and varied trail systems.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel. CDPR is not proposing or permitting commercial rafting use in this section of the river as part of this project. Additionally, boating within the project area currently is prohibited in the reach ½-mile upstream of the bypass tunnel inlet to 1/2–mile downstream of the bypass tunnel outlet (CDPR posted order No. 318-02-91).

L-57, pg. 2

A (cont)

The Auburn area gave birth to both the Western States 100 Miles One Day Ride (the Tevis Cup) and the Western States 100 Mile Endurance Run, both of which are world famous and the standard for excellence for both sports. The area in question is a significant part of the training trails available to athletes who come from many areas to condition for these competitions.

The inclusion of a bridge into the project would add a very minor percentage to the cost of the overall project, one that could well be afforded. Rather than attempt to prevent the closing of the tunnel and reopening of the river course, it makes much more sense to incorporate the bridge and make the canyon available to all user groups, rather than a select few.

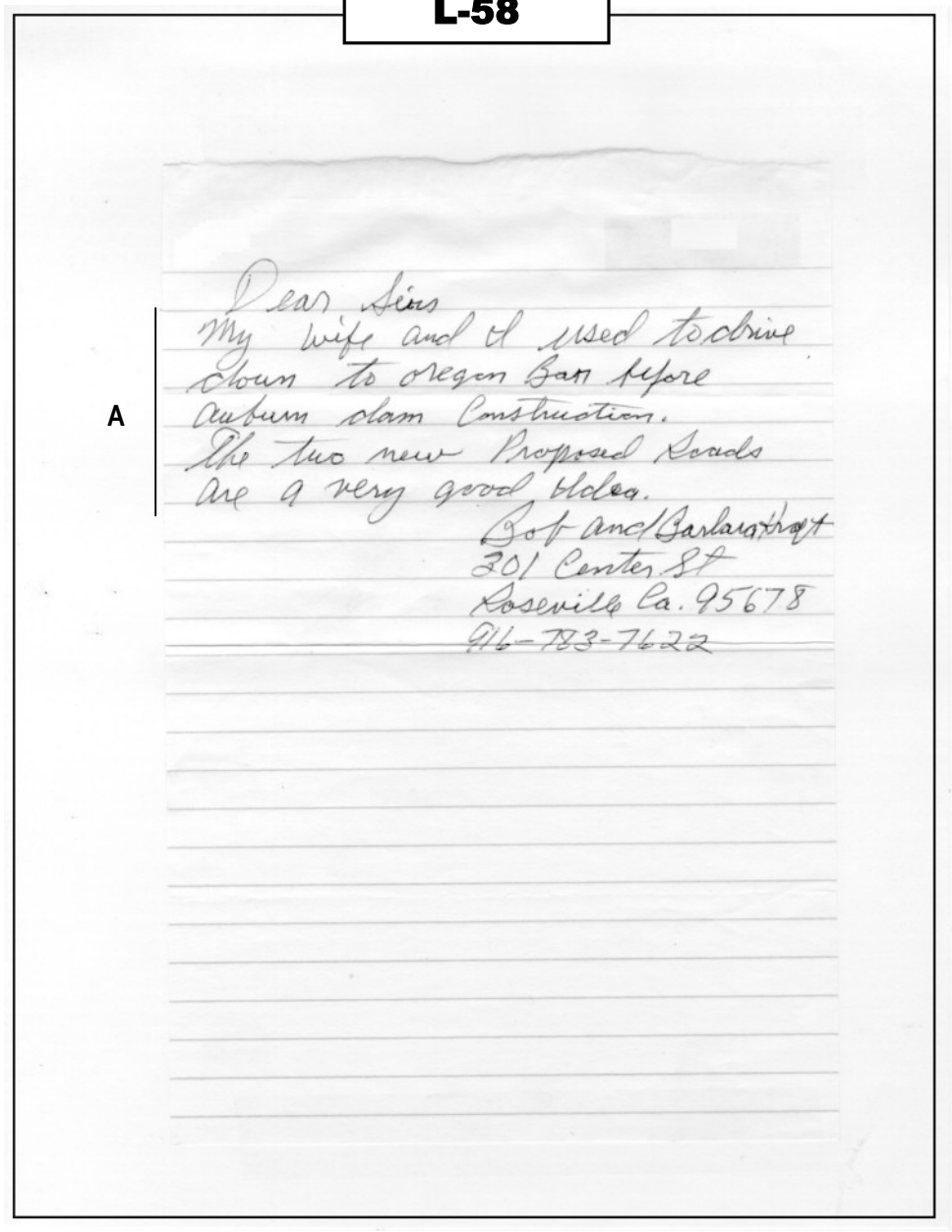
Thank you for your consideration.

Very truly yours,

Joan R. Dowis

JOAN R. DOWIS

L-58



Dear Sirs
My wife and I used to drive down to Oregon Gate before Auburn dam Construction.
The two new Proposed Roads are a very good Idea.

Bob and Barbara Hoyt
201 Center St
Roseville Ca. 95678
916-783-7622

A

A. Project support noted.

L-59

November 5, 2001

DRAFT EIS/EIR COMMENTS
Surface Water Resources, Inc.
2031 Howe Avenue
Suite #110
Sacramento, California 95825

Dear Sirs:

I am writing this along with my submitted comments to hopefully underscore the need for a bridge at the Coffer Dam site in question.

For background purposes I must tell you I moved my family up here to this area in search of a better life. That life was to be one with some wonderful outdoor recreation which this area has in abundance. Being the mother that I am I did not wish my daughters to "hang out in malls", nor grow up empty headed, non-compassionate, and superficial. The bay area has plenty of that and I did not want it any further for my family. Upon moving to this area one and a half years ago we were delighted with the beauty that surrounds us. As equestrians and bike riders we were looking so forward to becoming new users of our wonderful trail systems around here. Especially at Folsom Lake. We could boat, ride our horses or bikes or even combine them!

However, within this same time period I have seen things gradually begin to disappear. I have become saddened and disappointed to find trails being taken away one at a time. I am also speaking for countless others feeling the same way. What a significant loss it would be for our beloved area.

We applaud the return of the river. But what is the cost? This area has World Class Athletes that train on those trails. Not only for equestrians (endurance alone is fast becoming an Olympic sport in its own right-lots of them are permanent residents here), but also for bicycle riders, and runners as well. We have all used and learned to share these trails cooperatively and peacefully. We all pay taxes here and we live and die here. So why take something away that is so profound? People here put their hearts and finances into living here. They help small businesses prosper here. Trails add value to our area. And the beauty of nature speaks for itself! That is why recreation is so important here. We relax and regroup for the next work week. We socialize and try to keep active and healthy so we can all participate in contributing to our community and making it better...

Now... unless there is a bridge built that will allow us to continue in this rich heritage which we ALL deserve and do indeed use... that will be gone too. What really concerns me is that people WILL get hurt and no doubt killed without a bridge continuing the Coffer trail. You must ask yourselves this question:

L-59, pg. 2

A

What is the price of a human life to you people? Adults as well as family members will try to continue using what would be left of this trail; but it will be extremely dangerous and people will only be able to do so on a very crowded portion of trail that will be disconnected from a portion that worked well and was safe. Yet another question to ask is how are we treating our athletes which train here. Do we help them or hinder them? Do we ask how we can better help them? No…we take things away. These are individuals who eventually proudly represent our country…Don't we owe them a bridge? A place to continue to train and be proud of our town to boot? A place where our young people can become inspired by others paving their way and maybe their own future? We need this to remain!! Please build a bridge!!!

Another thought too…Can the volunteer patrol still help out? Not on pavement! Not on river rock! Not without a bridge! I urge you to walk, or ride this yourselves to see what we mean. Especially the portion that would be the result of not having a bridge. I'm positive it will change your perspective!

After September 11, 2001 it is even clearer that our patrols and even the public being out on these trails and extensions (especially including Coffer Dam) can contribute GREATLY to our safety by being extra eyes and ears! I would myself be not only out for an enjoyable ride, but keeping my eyes peeled to protect our community and its resources.

But the most important part is this…This land belongs to all of us. We ALL contribute in one way or another. We work hard and deserve this.

We need a bridge to SAVE LIVES!!! Who will pay for the loss of life? Maybe the ones that don't want a bridge? The reputation of our community? Or what?

We need a bridge to continue to allow our volunteer patrols for SAFETY AND TO SAVE LIVES!!

We need a bridge for our COMMUNITY to relax, regroup, and reflect with. We cannot be a safe, happy, healthy, contributing society without it.

I urge you to seriously take this matter to heart. Your community will be grateful and you'll be able to sleep at night knowing you made the right choice and a lot of people very happy!

Thank you for your attention in reading my opinion. I know it is long winded and passionate but I love it here. I love being an American and being able to express my feelings. Thank you. If you have any further questions please feel free to call. My private phone number is on the attached sheet.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-59, pg. 3

Thankfully,

Kathie A. Ford and Family
Bob
Tiffany
Kristy
Laurie and our equestrian friends.

PS (I myself may be doing the Tevis this year-if I have a place to train! It's my dream!)

Cc/homefile

Encl: comment page attached

L-59, pg. 4

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kathi Ford & Family
ADDRESS:	25267 Table Meadow Road
CITY/STATE/ZIP:	Auburn CA- 95602
BUSINESS AND/OR HOME PHONE/FAX:	530-269-1926 (private)
ORGANIZATION (IF APPLICABLE):	A.E.R.C. & Gold Country Trails Council

COMMENTS:

A (cont)

PCWA claims that the Auburn-to-Cool trail loss is significant but unavoidable. This is simply not true as there is a solution – PCWA needs to include the construction of a bridge in their plan.

Several thousand hikers, equestrians, mountain bikers, and runners have been using these trails for decades. If the Auburn-to-Cool trail is closed, the treacherous canyon trail to 'no hands' bridge will become overcrowded - presenting a seriously dangerous situation. This trail was not designed to handle the kind of traffic that the Coffer Dam trails can. The trails are narrow and the drop-offs are steep, rocky, and several hundred feet high. People and horses will be at a much greater risk for accidents involving collisions and falls.

Currently a volunteer mounted park unit patrols the Coffer Dam area. Equestrians will no longer have access to the area as the roads are being paved on the Auburn side and river rock is being piled on the Cool side. Who is willing to take on the expense and responsibility of patrolling this area when it becomes not so horse friendly??

The runners and equestrians will no longer have these hills for training for the world famous 100 mile Western States run, the 100 mile Tevis endurance race, or other events. Auburn is proud to host the finish lines of both of these and other prestigious races. How will people feel from other states and countries when they arrive prior to these events to acclimatize and train on these trails??

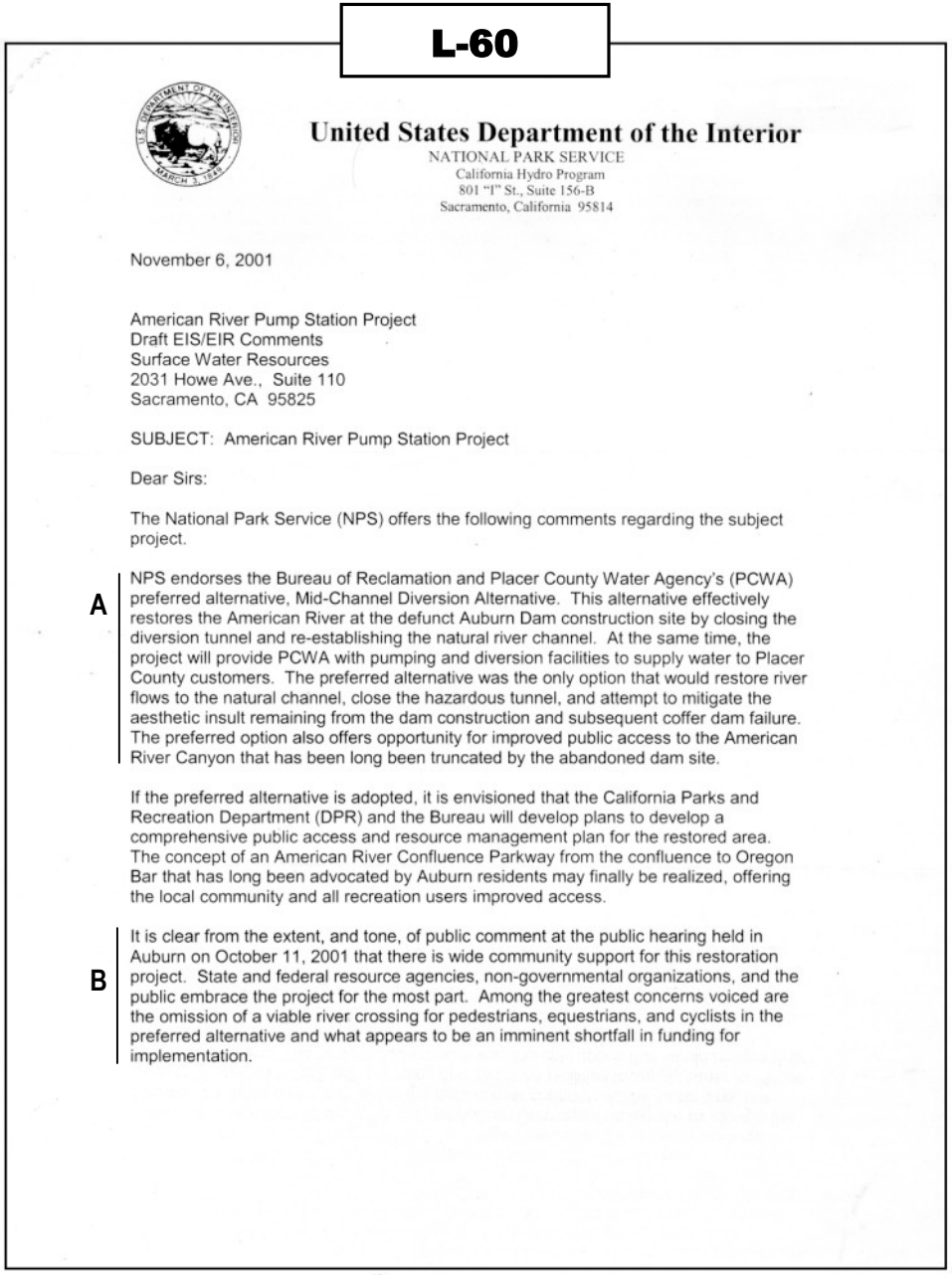
There are too many other significant impacts to mention in detail. They include mountain biker access (the Auburn-to-Cool trail is the only access they have to the trails in Cool from Auburn), the loss of one of the few loop trails (the Western States trail in Auburn, the Olmstead trail in Cool, and the Maidu area trails all merge at the Coffer Dam site) and the parking demands at the confluence will increase (they are already over-crowded).

Everyone wants to share in the joy and celebration of opening the river back to its natural course. We are asking PCWA to do the right thing and not take away the use of precious and beautiful canyon trails from our community. This can be achieved by building a bridge – a small price to pay when compared to the overall $31 million project budget. A small price to pay compared to the loss of trails that thousands of people have been using for decades.

Please see attached note w/additional notes & comments Thank you

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list*

L-60



United States Department of the Interior
NATIONAL PARK SERVICE
California Hydro Program
801 "I" St., Suite 156-B
Sacramento, California 95814

November 6, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources
2031 Howe Ave., Suite 110
Sacramento, CA 95825

SUBJECT: American River Pump Station Project

Dear Sirs:

The National Park Service (NPS) offers the following comments regarding the subject project.

A NPS endorses the Bureau of Reclamation and Placer County Water Agency's (PCWA) preferred alternative, Mid-Channel Diversion Alternative. This alternative effectively restores the American River at the defunct Auburn Dam construction site by closing the diversion tunnel and re-establishing the natural river channel. At the same time, the project will provide PCWA with pumping and diversion facilities to supply water to Placer County customers. The preferred alternative was the only option that would restore river flows to the natural channel, close the hazardous tunnel, and attempt to mitigate the aesthetic insult remaining from the dam construction and subsequent coffer dam failure. The preferred option also offers opportunity for improved public access to the American River Canyon that has been long been truncated by the abandoned dam site.

If the preferred alternative is adopted, it is envisioned that the California Parks and Recreation Department (DPR) and the Bureau will develop plans to develop a comprehensive public access and resource management plan for the restored area. The concept of an American River Confluence Parkway from the confluence to Oregon Bar that has long been advocated by Auburn residents may finally be realized, offering the local community and all recreation users improved access.

B It is clear from the extent, and tone, of public comment at the public hearing held in Auburn on October 11, 2001 that there is wide community support for this restoration project. State and federal resource agencies, non-governmental organizations, and the public embrace the project for the most part. Among the greatest concerns voiced are the omission of a viable river crossing for pedestrians, equestrians, and cyclists in the preferred alternative and what appears to be an imminent shortfall in funding for implementation.

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.3, Recreation Trail Access During Construction.

L-60, pg. 2

B (cont.)

Much of the comment at the October 11 meeting centered around the lack of mitigation for the loss of the existing river crossing, both during construction and afterwards. The Auburn-Cool trail receives considerable use by the local community and visitors alike. Yet there appears to be no provision in the preferred alternative for controlled access/crossing during construction of the diversion and pump facility (which could last 2-3 years). Following construction, there is no specific provision for a bridge to cross the river in the vicinity of the project or for new trails to mitigate for the loss of the existing trail. Although there is apparent disagreement and partisanship among the various users (hikers, equestrians, cyclists, and trail runners), we believe that an opportunity for compromise exists. Whether a compromise plan results in a bridge or new/improved trail, it should be integrated into the scope of the **current** project. Our concern is that if it is tacked on as an afterthought, it will never be funded and implemented leaving the community without safe passage and the trail connectivity they now enjoy. At the very least, we recommend that options be considered for phasing in a solution, perhaps by converting existing trails to multi-use until a final solution is implemented. There are plenty of examples where diverse users have peacefully coexisted on trail facilities.

We recommend that local hikers, cyclists, equestrians, trail runners, Protect American River Canyons (PARC), and the public be consulted for solutions to the river crossing issue. There is an incredible amount of knowledge, understanding, and expertise at the local level in Auburn and it should be recognized and tapped. Resource agencies such as the Bureau, DPR, and project consultants may be consulted on the technical aspects of the crossing. This is all achievable, but it must be done immediately in order to amend the scope of the preferred alternative.

In conclusion, we endorse the preferred alternative and urge the Bureau and PCWA to initiate a dialog with the community to find an acceptable solution to mitigate the loss of the river crossing. If you have any questions regarding our response, I can be reached at 916-414-2355.

Sincerely,

Harry Williamson
Northern California Hydro Coordinator

L-61

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Meggan Casarotti
ADDRESS:	4651 Thomas Rd
CITY/STATE/ZIP:	Sebastopol, CA 95472
BUSINESS AND/OR HOME PHONE/FAX:	707-829-2968
ORGANIZATION (IF APPLICABLE):	AERC

COMMENTS:

A **Please keep the trails open ** they are vital to the community!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND [redacted] COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS [redacted] SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-62

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MARK PERRY
ADDRESS:	376 AEOLIA DRIVE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A PLEASE RE-THINK YOUR PROPOSED EXPENDITURES FOR ROADWAYS AND/OR PARKING LOTS RELATED TO THE PROJECT. EITHER PARKING LOT MIGHT BE LEFT FOR LATER CONSTRUCTION, DEPENDING ON NEED - PREFERABLY THE PROPOSED 50-CAR LOT. A LOCKABLE GATE AT THE ENTRANCE TO THE RIVER ACCESS WOULD HELP REDUCE NIGHTIME USEAGE BY UNDESIREABLES WHO MAY WISH ONLY TO HAVE A REFUGE FROM POLICE DETECTION.

B MONEY FOR ROADWAYS AND PARKING WOULD BE BETTER SPENT ON A YEAR-ROUND PEDESTRIAN/EQUESTRIAN BRIDGE.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-63

November 7, 2001

American River Pump Station Project, Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite #110
Sacramento, CA 95825
Fax: 916-286-0957

A After the construction of the pump station and flood protection of these facilities is complete, let the river flow free and form its own natural course. We do not need to spend tax dollars on a "designer rafting river", nor do we need a convenient take-out point for commercial rafting interests. Rattlesnake Bar is already a developed recreation site downstream that can be used as a take-out facility.

B The proposed access and parking facility will only destroy a beautiful hiking, fishing, equestrian, and biking area used by thousands of people every year. Let this area return to its pre-dam construction natural state. By opening up this area to vehicular travel and parking facilities, the wildland fire danger will increase. History tells us that where ever there is vehicle access to a remote, or unsupervised recreation area in the American River Drainage, wildland fire will occur. One only needs to visit the Confluence of the North and Middle Forks, Mammoth Bar, Iowa Hill Road, or Drivers Flat areas to witness what wildfire leaves us. The biggest difference between these areas and the proposed access area, is the proximity to residential and commercial structures within the city of Auburn. The rim of the canyon above the proposed recreation area is densely populated, whereas the aforementioned areas are not. The potential for loss of life and property damage from a wildfire is tremendous.

C

D The route up Maidu Drive in the city of Auburn to access this area is a terrible idea. Not only is this area heavily populated, but an elementary school is also accessed by using this two lane street. Don't add to an already congested road.

Thank you for your consideration.

Bill & Jill Zander

Bill & Jill Zander
11101 Tanglewood Drive
Auburn, CA 95603
530.888.7838

NOV- 8-01 THU 8:05 AM 530 885 5508 TOTAL P.02
P. 2

A. CDPR is not proposing or permitting commercial rafting use in this section of the river as part of this project. Please refer to Master Response 3.1.6, Public River Access Features for additional background regarding the provision of public river access upstream of Rattlesnake Bar.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.9, Fire Management.

D. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-64

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

11/8/01

NAME:	URSULA + HERB JOHNSON
ADDRESS:	1945 VISTA DEL LAGO
CITY/STATE/ZIP:	AUBURN, CA. 95603
~~BUSINESS AND/OR~~ HOME PHONE/FAX:	530-823-9126 FAX - SAME
~~ORGANIZATION (IF~~ APPLICABLE):	

COMMENTS:

OUR COMMENTS following ATTENDANCE AT SKYRIDGE School 11/7:

WE BUILT OUR HOME IN MONTICELLO 6 YEARS AGO. WE CHOSE THIS AREA SPECIFICALLY for THE PRISTINE QUALITY, QUIETNESS, + CLOSENESS TO NATURE. OUR CONCERNS ON project AS PROPOSED:

1. WE ARE AGAINST PROJECT AS PROPOSED.
2. FIRE HAZARDS WOULD INCREASE.
3. WE DO NOT NEED EXTRA TRAFFIC, NOISE, + LITTER ON MAIDU + CANYON. **A**
4. We QUESTION WHETHER MAIDU IS ONLY ACCESS TO PROJECT.
5. MAIDU-AUBURN FOLSOM INTERSECTION WOULD BE EVEN MORE DANGEROUS THAN IT IS NOW.
6. OUR PROPERTY VALUES IN MONTICELLO WOULD PLUMMET.
7. WE HAVE NO OBJECTION TO PUMP STATION ALONE.
8. LEAVE RIVER AND TUNNEL AS IS! **B**

WE AND OTHERS ENJOY HIKING TO RIVER IN ITS PRESENT CONDITION. WHY WASTE MONEY!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

Nov. 08 2001 09:08AM P1 FAX NO. : 8239126 FROM : HCJ

A. Please refer to Master Response 3.1.9, Fire Management and Master Response 3.1.6, Public River Access Features.

B. Leaving the river "as is" would not meet the objectives of the lead or responsible agencies.

L-65

Robert Heaney
190 Lubeck Road
Auburn Ca 95603

To Whom It May Concern:

A

I wish to register my strong opposition to motorized public access at the Diversion Tunnel site.

Five locations for automobile access already exist within minutes of Auburn:

- Upper Lake Clementine
- Ruck-A-Chucky
- Lower Lake Clementine
- Mammoth Bar
- The confluence of the north and middle forks of the American River.

One opportunity remains near Auburn for good trail access to the river without the tremendous impact that motor vehicles would bring. Many runners, hikers, equestrians and cyclists seek out these trails precisely because of the relative quiet and sense of solitude that exists on this part of the river. We implore you--no automobile access to the Diversion Tunnel site.

B

Add the many other concerns raised: the significant traffic impact on Maidu Drive, introduction of automobile traffic into a popular mixed-use trail system, introduction of pollution and litter in an area that currently has no significant litter problem, the large increase in fire danger. The conclusion is that the greater public good simply is not served by this proposal. No motor vehicle access there, please.

Thank you for your time.

Yours Truly,

Robert Heaney

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

L-66

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	LEON D STANLEY
ADDRESS:	575 RIVERVIEW DR
CITY/STATE/ZIP:	AUBURN, CA 95603-6110
BUSINESS AND/OR HOME PHONE/FAX:	530-889-1147
ORGANIZATION (IF APPLICABLE):	

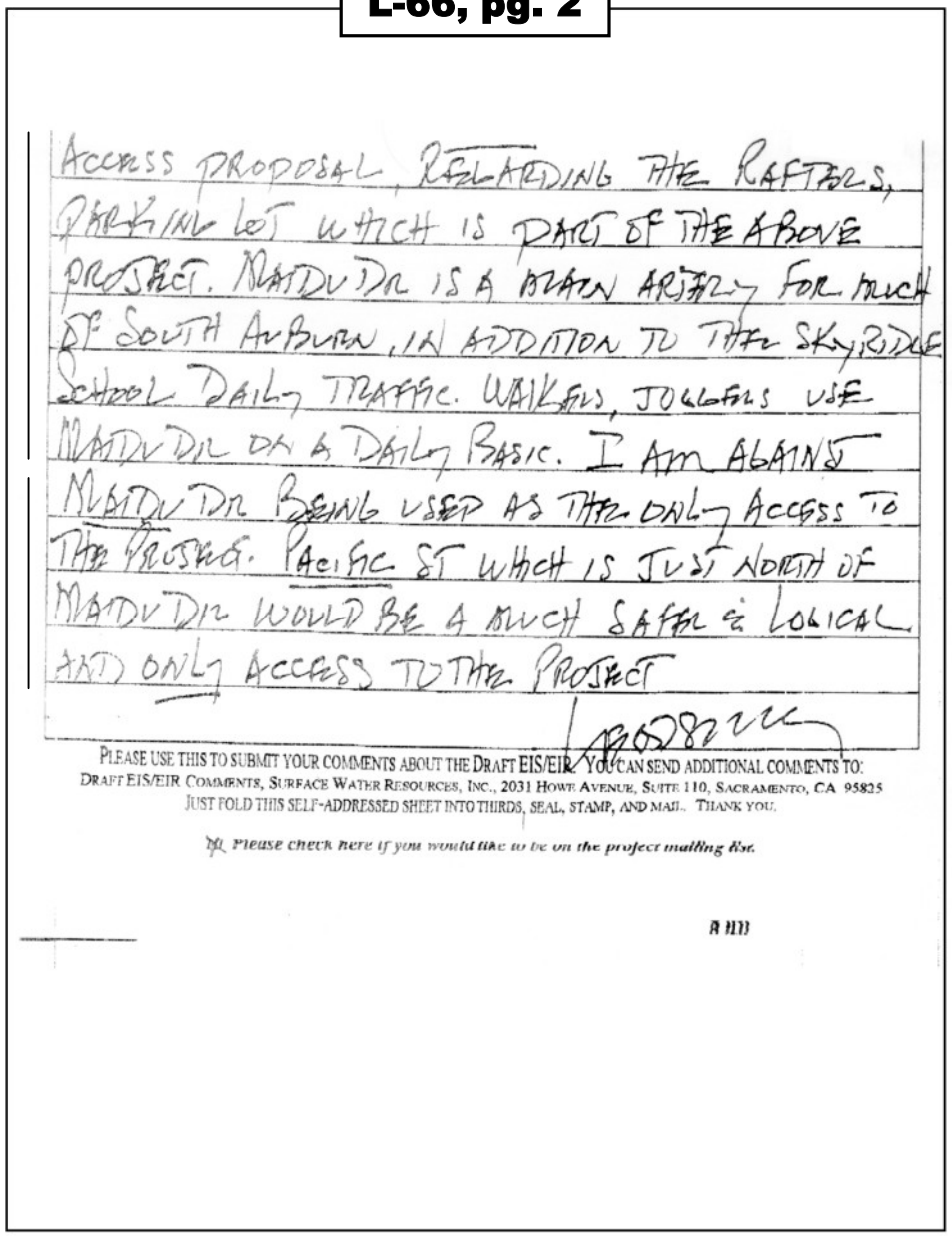
COMMENTS: 11-8-01

On 11-7-01 my wife & I ATTENDED A NEIGHBORHOOD MEETING AT THE SKY RIDGE ELEM. SCHOOL IN AUBURN. ABOUT 100 PEOPLE ATTENDED WITH ABOUT 95% AGAINST THE MAIDU DR. ACCESS PROPOSAL, REGARDING THE RAFTERS, [illegible]

A

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

L-66, pg. 2



ACCESS PROPOSAL REGARDING THE RAFTERS, PARKING LOT WHICH IS PART OF THE ABOVE PROJECT. MAIDU DR IS A MAIN ARTERY FOR MUCH OF SOUTH AUBURN, IN ADDITION TO THE SKYRIDGE SCHOOL DAILY TRAFFIC. WALKERS, JOGGERS USE MAIDU DR ON A DAILY BASIC. I AM AGAINST MAIDU DR BEING USED AS THE ONLY ACCESS TO THE PROJECT. PACIFIC ST WHICH IS JUST NORTH OF MAIDU DR WOULD BE A MUCH SAFER & LOGICAL AND ONLY ACCESS TO THE PROJECT

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

A

B

B. Please refer to Master Response 3.1.10, Project Access.

L-67

1835 Franklin Road
Carson City, NV 89706
(775) 883-1698
eltigre@powernet.net

Thomas E. Gray

October 18, 2001

American River Pump Station Project

Draft EIS/EIR Comments

Surface Water Resources

2031 Howe Avenue, Suite 110

Sacramento, CA 95825

Dear Sir or Madam:

A Please include this letter as a comment on the Draft EIS/EIR for the American River Pump Station Project. I fully support the "Mid-Channel Diversion Alternative." The key points of this alternative are closure of the Auburn Dam diversion tunnel, and restoration of boatable conditions and flows to the now dry reach of the river.

I have been a private kayaker and rafter now for twelve years, and consider it a great shame that I have never had the opportunity to run the Confluence Parkway -- the long-closed reach of the American River from the confluence of the North and Middle Forks of the American River to the Folsom Reservoir. And now, with my daughter turning six, I am looking for mellow rafting runs like the Confluence Parkway, that we can enjoy together. Please don't prevent my daughter and the rest of her generation from experiencing the joy of floating this river. The Auburn Dam is unnecessary for flood control or power; therefore its construction would be purely for profit. This would be very shortsighted, indeed. I say that we can get more out of this river by returning its management to nature.

Sincerely,

Thomas E. Gray
Kayaker, Rafter, and California Registered Geologist #6375

A. Project support noted.

L-68

The American River
Pump Station Project, Draft EIS/EIR Comments, Surface Water Resources, 2031
Howe Avenue Suite 110, Sacramento, CA 95825.

October 3, 2001

People,

A I understand the Bureau and the Agency are seeking public comment on the CLOSE THE AUBURN DAM DIVERSION TUNNEL AND RESTORE THE AMERICAN RIVER restoration proposal.

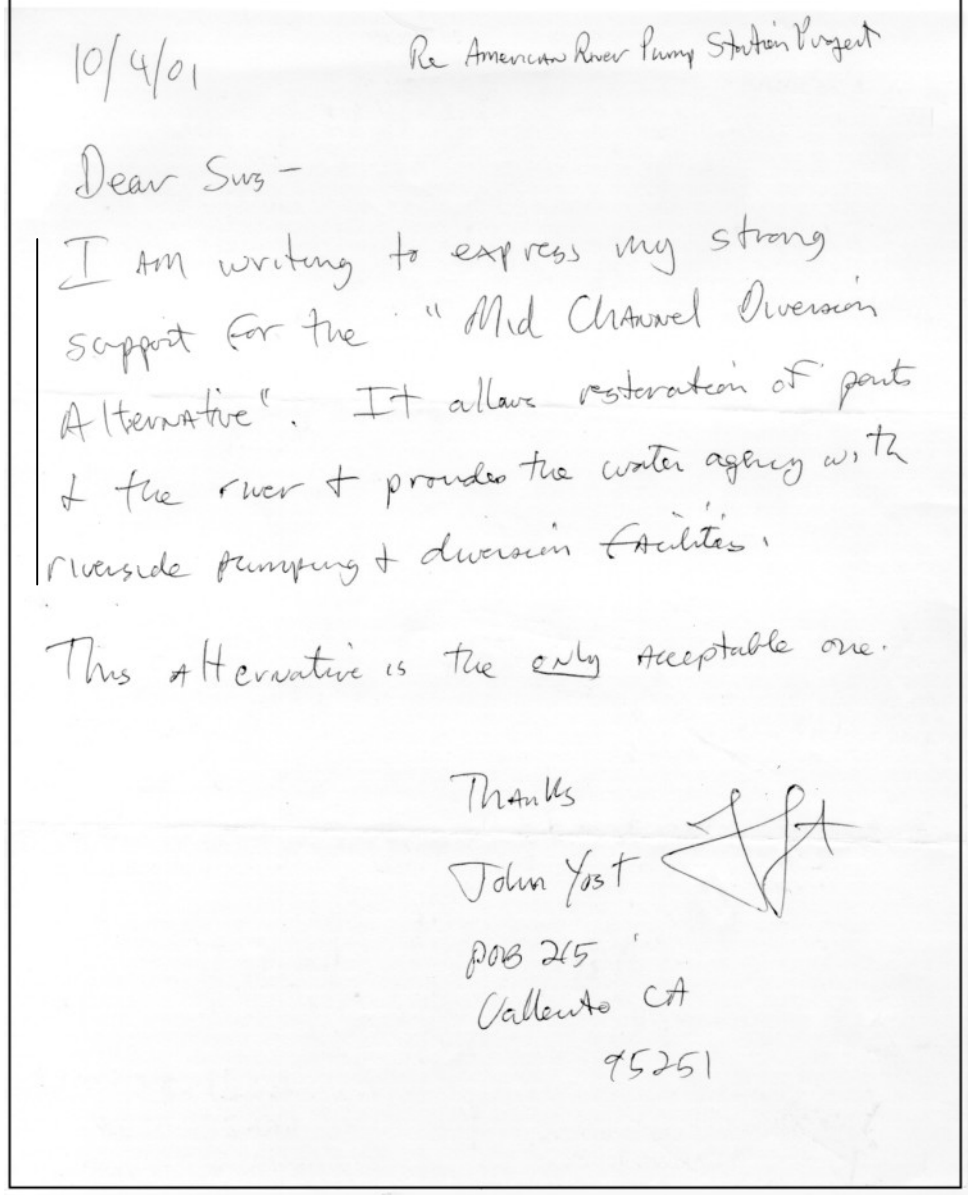
The preferred alternative restores BOATABLE CONDITIONS AND FLOWS to this now dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway - the long closed reach of the American River from the confluence of the North and Middle Forks of the American River to Folsom Reservoir. I strongly approve of the Bureau's preferred alternative; the "Mid-Channel Diversion Alternative," which is also supported by Friends of the River.

Thank you,

Diane Monson

A. Project support noted.

L-69



10/4/01

Re American River Pump Station Project

Dear Sirs -

I am writing to express my strong support for the "Mid Channel Diversion Alternative". It allows restoration of parts of the river & provides the water agency with riverside pumping & diversion facilities.

This alternative is the only acceptable one.

Thanks

John Yost

POB 215

Vallecito CA

95251

A

A. Project support noted.

L-70

Eric Arons
410 Elizabeth St.
San Francisco, CA 94114

4 October, 2001

The American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources
2031 Howe Avenue Suite 110
Sacramento, CA 95825

To whom it may concern,

A I am writing regarding the Tunnel & Pump Station Draft EIR/EIS. I would like to enter into the public record that I support the BLM's preferred alternative, also known as the "Mid-Channel Diversion Alternative." This alternative restores boatable conditions and flows to this now dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway - the long closed reach of the American River from the confluence of the North and Middle Forks of the American River to Folsom Reservoir. As a recreational boater and lover of nature, I believe it is high time the diversion tunnel was closed, and the river was returned to its natural state, thus ending the boondoggle that is the Auburn Dam.

Sincerely,

Eric Arons

- 1 -

A. Project support noted.

L-71

14 Manteca Court
Sacramento, CA 95831

October 8, 2001

American River Pump Station Project, Draft EIS/EIR Comments
Surface Water Resources
2031 Howe Avenue, Ste.#110
Sacramento, Ca 95825

Re: Mid-Channel Diversion Alternative

Dear Sirs:

A I am in favor of the preferred alternative. I strongly support the proposed restoration of the American River. I urge you to take advantage of this opportunity to restore a free flowing American River.

Thanks for your attention to this matter.

Sincerely,

Steve Healow

A. Project support noted.

L-72

October 18, 2001

RE: American River Tunnel Closure- Support Closure and Restoration

To whom it may concern:

I would like to register my support for closure of the diversion tunnel on the North Fork American River. I understand public comment is now being solicited. Please consider this letter as my official comments and enter it into the official record.

A

I support the preferred alternative (the "Mid-Channel Diversion Alternative") because it will return water to the natural riverbed and restore the river channel, as well as close the tunnel. The other alternatives proposed offer no river restoration and no tunnel closure.

The preferred alternative also restores boatable conditions and flows to this now-dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway - the long closed reach of the American River from the confluence of the North and Middle Forks of the American River to Folsom Reservoir.

I have spent some time hiking the area and would like to see water returned to its natural course. I was in the area Sept of '98 & '99 and really enjoyed the hiking opportunities. This is a fantastic area and the diversion tunnel should be closed. .I feel most of us (hikers, bikers, boaters) agree on this issue and would bring added tourist dollars to the area.

It is time to restore the river so that everyone can use it again. Thank you for considering my input.

Sincerely,

Scott Olsen

Scott Olsen

8512 E 24th Pl
Tulsa, Okla]

A. Project support noted.

L-73

The American River Pump Station Project,
Draft EIS/EIR Comments
Surface Water Resources
2031Howe Avenue Suite 110
Sacramento, CA 95825

10/23/01

A

As an avid paddler, hiker, and horseback rider in the American River area, I urge you to approve the "Mid-Channel Diversion Alternative". The other alternatives proposed offer NO river restoration and NO tunnel closure.

PLEASE CLOSE THE AUBURN DAM DIVERSION TUNNEL AND RESTORE THE AMERICAN RIVER at the Auburn Dam construction site to its natural channel, and also provide the water agency with riverside pumping and diversion facilities to supply water to customers in Placer County.

This preferred alternative also restores BOATABLE CONDITIONS AND FLOWS to this now dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway.

Please let me know of future actions on this issue.

Thank you,
Suzanne Ferroggiaro
9270 Oak Leaf Way
Granite Bay, CA 95746

A. Project support noted.

L-74

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Ken Magee
ADDRESS:	13165 Lamborn Lane
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A The Mid-Channel Diversion should be restored to the original flow and close the diversion tunnel so PCWA can set up permanent pump stations. To provide the needed water resources for the area.

Thank you
Ken Magee

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

L-75

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Jim Ewing
ADDRESS:	10425 Blue Light Ln
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-886-8569
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

10-16-01

A I support the Amer. River Pump Station & River Restoration Project - I hope you do too - J. Ewing

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

L-76

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Marla Jensen
ADDRESS:	10425 Blue Light Lane
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 823-7017
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

10/16/01

A I am voicing my support for the American River Pump Station & River Restoration Project.

Please support this too.

Marla Jensen

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

L-77

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	BOBBY TUDSBURY
ADDRESS:	250 HAINES RD
CITY/STATE/ZIP:	AUBURN CA 95602
BUSINESS AND/OR HOME PHONE/FAX:	530 878-7949
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A | The "mid-channel" diversion Alternative of the "American River Pump Station" Project I support.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

L-78

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Fran Haynes
ADDRESS:	2235 Hidden Acre Rd.
CITY/STATE/ZIP:	Meadow Vista, Ca. 95722
BUSINESS AND/OR HOME PHONE/FAX:	530-878-0228
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A Please let the American River run by supporting the mid channel alternative.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

L-79

Patrick Huber
721 E. 11th St.
Davis, CA 95616

Dear Bureau of Reclamation:

A I would like to take this opportunity to comment on the future of the American River. As a resident of the Sacramento area, I have a great desire to see the future health of such an outstanding natural place like the American River. It is one of our greatest natural treasures in this area. A plan to restore it to more natural conditions is a timely and appropriate idea. As such, I fully support the "Mid-Channel Diversion Alternative" being proposed by BuRec and the Placer County Water Agency. In these days of massive human expansion in the I-80 and US 50 corridors, the American River is a vital natural pathway for animal populations traveling between the Central Valley and higher Sierra Nevadas. Any action that maintains or increases this use is welcome and necessary if we are to have any possibility of maintaining natural communities in the years to come.

Sincerely,

Patrick Huber

A. Project support noted.

L-80

4 November 2001

American River Pump Station Project
Draft EIS/EIR Comments
c/o Surface Water Resources, Inc.
2031 Howe Ave. Ste. 110
Sacramento CA 95825

To Whom It May Concern:

A As a long-time resident of Auburn and a daily user of the recreational opportunities in the American River Canyon, I support the "Preferred Alternative" (the "Mid-Channel Diversion Alternative") for the American River, from the confluence of the north and middle forks to Folsom Reservoir. It is crucial to return the river to its natural state and allow recreational access.

B A footbridge connecting the trails at the confluence would also be wonderful.

Thank you for your consideration.

Sincerely,

Linda F. Yaffe

Linda Frederick Yaffe (author, High Trail Cookery and The Well-Organized Camper)
PO Box 4820
Auburn CA 95604-4820

email: sly@vfr.net

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-81

Kelsey Schwind
239 Ross St.
Santa Cruz, CA 95060

American River Pump Station Project
Draft EIS/EIR Comments, Surface Water Resources
2031 Howe Avenue Suite 110
Sacramento, CA 95825.

11/6/2001

To Whom It May Concern:

The Bureau of Reclamation and the Placer County Water Agency released their long awaited proposal to close the Auburn Dam Diversion Tunnel and restore the American River at the Auburn Dam construction site to its natural channel, while at the same time providing the water agency with riverside pumping and diversion facilities to supply water to customers in Placer County.

A

I am writing to voice my support for this "Mid-Channel Diversion Alternative," which restores boatable conditions and flows to this now dry reach of river, and begins to set the stage to provide public access to the Confluence Parkway. It is time to move on from the impractical and unsafe plans of the Auburn Dam, the proposed site of which crosses an earthquake fault line, itself may contribute to earthquakes, and may turn into a potential terrorist target.

If the Bureau adopts this restoration plan, additional plans to develop a comprehensive public access and resource management plan are expected to be developed by the California Department of Parks and Recreation and the U.S. Department of the Interior. All these improvements will bring more recreational opportunities and sales tax revenue to the area.

The proposed restoration of the American River has widespread and enthusiastic public support. Let's have a restored and free flowing American River!

Sincerely,

Kelsey Schwind, California native and river boater

A. Project support noted.

L-82

403 Gold Street
Auburn, CA 95603
December 11, 2001

RECEIVED
PCWA
DEC 13 2001
ENGINEERING DEPT.

Placer County Water Agency
144 Ferguson Road
Auburn, CA 95603

RE: Environmental Impact Report-Pumping Station/American River
and Proposed Road Passage and Parking for Future Recreational Use

Gentlemen:

We are writing to notify you of our concerns regarding several of the proposed recreation aspects associated with the permanent installation of water pumps on the American River at the Auburn Dam site.

A Our first concern is fire. As residents of Auburn living on the canyon we are very fearful of fire. We watched from our home as the helicopters fought the canyon fire this past year. We feel you will be placing our homes and families in extreme jeopardy with the inclusion of two parking lots and the associated traffic using the ingress and egress on the river for "rafters." This plan for parking is not needed, in our opinion.

B We wish to go on record in opposition to the construction of both of the proposed parking lots, which were discussed at the Auburn City Council meeting on December 10, 2001. We believe that section of the river does not necessitate a "take-out" for river rafters after they float/raft a mere four miles of class II rapids, with the put-in being at the confluence of the north and middle forks of the American River, as stated at the aforementioned meeting.

C We are also concerned by the proposal to use Pacific Avenue as the main thoroughfare to reach such "take-out" site. The extension of Pacific Avenue into the canyon is used by hikers, bikers, horse riders and the general population, not to mention the high usage of the Auburn Recreation District's Railhead Park and the skate park both located on Pacific Avenue. By using Pacific Avenue and its extension into the canyon as your main river access you would be literally destroying its current capacity for use by all these

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

L-82, pg. 2

recreational users. This would be a tragedy for all of us who spend so much time at the parks and in the canyon.

D

My husband and I are, and have been, river rafters for the past fourteen years. We raft locally and travel the western portion of the United States to raft. We are of the mind that rafters using this portion of the river during the summer, when the flow from Oxbow reaches this stretch of river during the afternoon, will not have a five mile "flat water" row out to reach Rattlesnake Bar, as was stated at the Auburn City Council meeting. The flow will carry rafters much farther down the river because of lowered water levels of Folsom Lake during the summer, thus the Rattlesnake Bar take-out is a viable, and much more desirable, alternative to the proposed Auburn take-out.

A,C (Repeat)

It is our opinion that plans for ingress and egress to the river and parking as referenced at the City Council presentation using either Pacific Avenue or Maidu Drive has been inadequately addressed. Fire in Auburn is of paramount proportions and should not be taken lightly. There are far too many variables and unanswered questions to even consider this facet of the plans in conjunction with the permanent pumping station. We believe you should shelve these plans immediately.

Please proceed with this project very, very carefully, as Auburn has a great deal to lose, and will continue to lose for a very long time if your decisions are erroneous. Please delete these projects completely from your plans for a permanent pumping station, immediately.

Yours truly,

John Rietjens

Heidi Rietjens

D. Please refer to Master Response 3.1.6, Public River Access Features for an explanation regarding the State of California's interest in providing a river take-out above Rattlesnake Bar.

L-83

November 7, 2001

Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Dear Water Resources Staff:

A As a resident of the Georgetown Divide, and a person who has spent 20 years hiking in the American River Canyons, I am pleased to see a plan for the North Fork Canyon that promotes river restoration and tunnel closure. I strongly support the "Preferred Alternative."

Sincerely,

Carol von Borstel

Carol von Borstel
P.O. Box 959
Georgetown, CA, 95634

A. Project support noted.

L-84

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MARTHA CADENASSO
ADDRESS:	1720 Vista Del Monte
CITY/STATE/ZIP:	Auburn, CA 95060
BUSINESS AND/OR HOME PHONE/FAX:	530-889-1872
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A I support building of pump station and restoration of the dams site river area.

B I oppose opening of this area to public motor vehicle use because:
- it would interfer with the current recreational use of area involving hiking, running trails, bikings and equestrain use of roads and trails.

Sincerely,

Martha J Cadenasso

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features.

L-85

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Richard Cadenasso
ADDRESS:	1720 Vista Del Monte
CITY/STATE/ZIP:	Auburn, CA 95060
BUSINESS AND/OR HOME PHONE/FAX:	530-885-1872
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A I support building of pump station and restoration of dam site river bed.

B I oppose opening of that area to motor vehicle usage (public) because it would conflict with current recreational uses associated with:
- Hiking
- Running of roads + trails.
- equestrian use of roads + trails

Sincerely,
Richard B Cadenasso

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features.

L-86

November 8, 2001

American River Pump Station Project
Draft EIS/EIR Comments, Surface Water Resources
2031 Howe Avenue Suite 110
Sacramento, CA 95825

RE: Comments on said project

To whom it May Concern,

A I write this letter as an Auburn resident who attended the public hearing on the American River Pump Station Project. I would like to express my comments for the record. I appreciate all the work you have done to plan this project.

I am in support of the mid-channel diversion alternative. I want to see this go into effect so that the old riverbed can be restored. I also want to see the huge mess from the cofferdam failure cleaned up. I also support the access that may be provided to the American River Confluence parkway.

B There is one aspect of the plan that seems vague: the actual tunnel closure. It was stated at the hearing that the plan is to cover it up with rocks, but not fill it in. I want to see it filled in. I urge you to consider this option.

It is exciting to think that in a few years, that stretch of the American River will be returned to its original flow.

Thank you for your consideration.

Sincerely,

Julie M O'Connor

Julie Mitchell O'Connor

A. Project support noted.

B. As described in the Draft EIS/EIR (page 2-21) the bypass tunnel closure design would allow closure for an indefinite period of time; however, it would allow for readily reopening the tunnel in the event that Congress reauthorizes the Auburn Dam project. Filling the tunnel, or installing a concrete plug would accomplish the safety objectives, but would make it more difficult and more costly to reopen the tunnel at a later date, if needed.

L-87

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

RE: **Coffer Dam area trails in Auburn CA**

I am writing ***to implore you*** to add a **bridge crossing** from Auburn to Cool to the American River Pump Station Project. Additionally **I am begging you to add dirt trails alongside the roads** that you are paving so those trails aren't lost as well.

The Coffer Dam site is one of the few places where several trails merge and provide access to other trail systems (the Western States trail in Auburn, the Olmstead trail in Cool, and the Maidu area trails). If the PCWA river project doesn't include a bridge in your plan now, it

A ***will never happen*** and we will lose the Coffer Dam area trails, three of our best training hills, and a major trail system connection FOREVER.

Several thousand hikers, outdoor enthusiasts, equestrians, mountain bikers, and runners use these trails annually. If the Auburn-to-Cool trail is closed, the treacherous canyon trail to 'no-hands' bridge (Western States Trail) will become overcrowded - presenting a seriously dangerous situation. This trail was not designed to handle the kind of traffic that the Coffer Dam trails can. The trails are narrow and the drop-offs are steep, rocky, and several hundred feet high. People and horses will be at a much greater risk for potentially deadly accidents involving collisions and falls.

The Auburn-to-Cool trail loss is not just a trail, but also a merging of 3 canyon hills where athletes have been training for years. Runners and equestrians will no longer have these hills for training for the world famous 100-mile Western States run, the 100-mile Tevis endurance race, or other events. Auburn is proud to host the finish lines of both of these and other prestigious races.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-87, pg. 2

A (cont)

Mountain biking access to the American River Canyon below Auburn is already limited. In fact, the Auburn-to-Cool trail is the only access they have to the trails in Cool from Auburn. It is not fair to take their only access route away from them. The canyon represents many user groups that include water use AND land use. The PCWA project needs to support all canyon user groups and recognize the value of keeping the canyon access available to everyone.

Most people want to share in the joy and celebration of opening the river back to its natural course. We are asking PCWA to do the right thing and not take away the use of precious and beautiful canyon trails from our community. This can be achieved by building a bridge a small price to pay when compared to the overall $31 million project budget. **A small price to pay compared to the permanent loss of trails that thousands of people have been using for years.**

Thank you for this opportunity to comment.

Patricia and Robert Peterson
7050 Morningside Drive
Granite Bay, Ca. 95746



L-88

October 31, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

Dear Sir or Madam;

Thank you for letting me respond to the PWCA American River Pump Station and Restoration Project. I have lived in the Auburn/Greenwood area for twenty-five years. My property backs up to Bureau land and I am a current runner, mountain biker and equestrian.

I understand the need for additional water for Placer County, but should the public lose recreational uses because of this. The Placer County planners are to blame for the influx of people (new residential building). There are just too many people in the county. The State Attorney General said that the Diversion Tunnel must be closed for safety reasons. I believe that he was pressured by the rafter community to close the tunnel and restore the river to its' natural flow. With these two items the consultant's proposal is based on water recreation and completely left out other recreation users. This proposal also states that California Department of Parks and Recreation will supply the enforcement in this new area. ASRA currently does not have the rangers to provide enforcement for the existing area. With this new project they will need to increase their staff. There needs to be monies included in this proposal for additional staffing in the ASRA. **A**

Instead of going with the consultants proposed project, maybe you should look at Alternative 1 (Upstream Pumping Location). Also, could you consider a downstream pumping station and block the tunnel with some type of protective screen. I am sure there have been other similar projects that have used protective screening for tunnels. **B**

I am for restoring the river to its' natural state but am against eliminating the trail from Auburn to Cool. This project will satisfy one user group (rafters) and close the current trail used by Mountain Bikers, Runners and Equestrians. If this project proceeds there must be a bridge constructed to replace the lost trail. **C**

Respectively,

R. Joseph Larkin
2550 Hoboken Creek Road
Greenwood CA 95635

cc:
Jacqueline Ball
Jill Dampier
James Micheaels

A. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

B. The lead agency decision-makers have the option of selecting the Proposed Project, one of the alternatives (including No Project/No Action) or some other combination. Downstream locations for a pump station were considered and evaluated in the 1997 Value Planning Study. These alternatives were found to be either technically, economically, or environmentally inferior to the alternatives selected for evaluation in the Draft EIS/EIR. Alternative ways of eliminating the safety hazards of the tunnel were also evaluated in the value planning study, including protective screens, and none of the alternatives were found satisfactory except for blocking the tunnel. Another safety concern associated with screening the tunnel entrance is that the screen itself would be a hazard to boaters and swimmers because people in the water could get stuck or tangled on the screen and trapped underwater. Additionally, screening the tunnel would not meet the federal and state project objective of restoring the river channel. Furthermore, any effort to screen the tunnel inlet would involve constructing a "trash rack" of structural steel that would be strong enough to withstand impacts from logs and the forces exerted when smaller debris backs up. Such a screening device would necessitate constant cleaning of the debris that would collect at the tunnel inlet. Furthermore, impacts from logs and other debris have previously resulted in flow-related problems. Accumulation of these materials in front of the tunnel would create a potential public safety hazard.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-89

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	JOHN REED
ADDRESS:	1695 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-887-9305
ORGANIZATION (IF APPLICABLE):	HOMEOWNER

COMMENTS:

A

MY HOME BACKS UP TO MAIDU DRIVE.
PLEASE CONSIDER ROUTING CONSTRUCTION TRAFFIC TO THE PACIFIC STREET ACCESS AS WELL AS A FUTURE CONTROL POINT FOR PARK USE.
MAIDU DRIVE IS ALREADY ADVERSELY IMPACTED BY JUST HAVING THE PCWA CORPORATION YARD THERE. ROAD NOISE HAS REALLY INCREASED SINCE.
PACIFIC STREET ACCESS IS MUCH CLOSER TO AUBURN-FOLSOM ROAD AND WOULD IMPACT FAR LESS RESIDENTS.
THIS WOULD BE A VIABLE & EASY CHANGE.
INCREASED TRAFFIC ON MAIDU ALSO POSES A CONSIDERABLE SAFETY RISK TO CHILDREN CROSSING MAIDU ON THERE WAY TO SKYRIDGE SCHOOL!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

L-90

TMG Group, L.L.C. 267B Silver Bend Way Auburn, Ca. 95603
(800) 431-7030
(530) 887-9298
(530) 887-8226 fax
email: tmggroup@jps.net

November 7, 2001

To Whom It May Concern,

A I have been a vehement opponent of Auburn Dam for 20 years, and am glad to see consideration given to restoring the river to its former state.

Put me down as being strongly in favor of returning the North Fork American to boatable conditions and flows. I believe this preferred alternative is called the Mid Channel Diversion Alternative. Thanks.

Sincerely,

Randy Porpiglia

RANDY PORPIGLIA

A. Project support noted.

L-91

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Mr & Mrs Michael Sprouse
ADDRESS:	11165 Rosemary Drive
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	888-9265
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

We do not object to the river returning to its original status, nor do we object to the pumping station. We do, however object to the recreational facilities being planned. The Pacific Ave. overlook area would seem more desirable since there are not many residences around there, nor a school. The fire hazard is another consideration at the end of Maidu since we've already had serious fires there. Another reason we object is the proximity of the school close by as well as the many homes all around the area. Traffic would become a major problem as well as noise, crime such as vandalism. We suggest since there are other options along the river to open up to places where there is less population. Everyone in this area is definitely against this project & we will do all we can to stop it from being built.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-92

Bay Area Trails Preservation Council

November 6, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Suite 110
Sacramento, CA 95825

I am writing on behalf of the members of the Bay Area Trails Preservation Council. While the majority of our members reside in counties that make up the greater San Francisco Bay Area, we actively and routinely frequent recreational areas in the Gold Country hiking, horseback riding, mountain biking and pursuing various water sports.

The Auburn/Cool area is an especially popular destination, being only a couple hours drive from most Bay Area communities. The news that recreation in this area could experience severe restrictions due to the proposed project caused us great concern.

The presence of the Western States Trail alone draws a large number of individuals. Many of the participants of both the Western States run and the Tevis Cup ride reside in the Bay Area. They condition and train on the Westerns States Trail year round.

A We urge you to take whatever steps are necessary to minimize any impact on currect recreational opportunities. This is an important and prime recreation destination for a large part of Northern California.

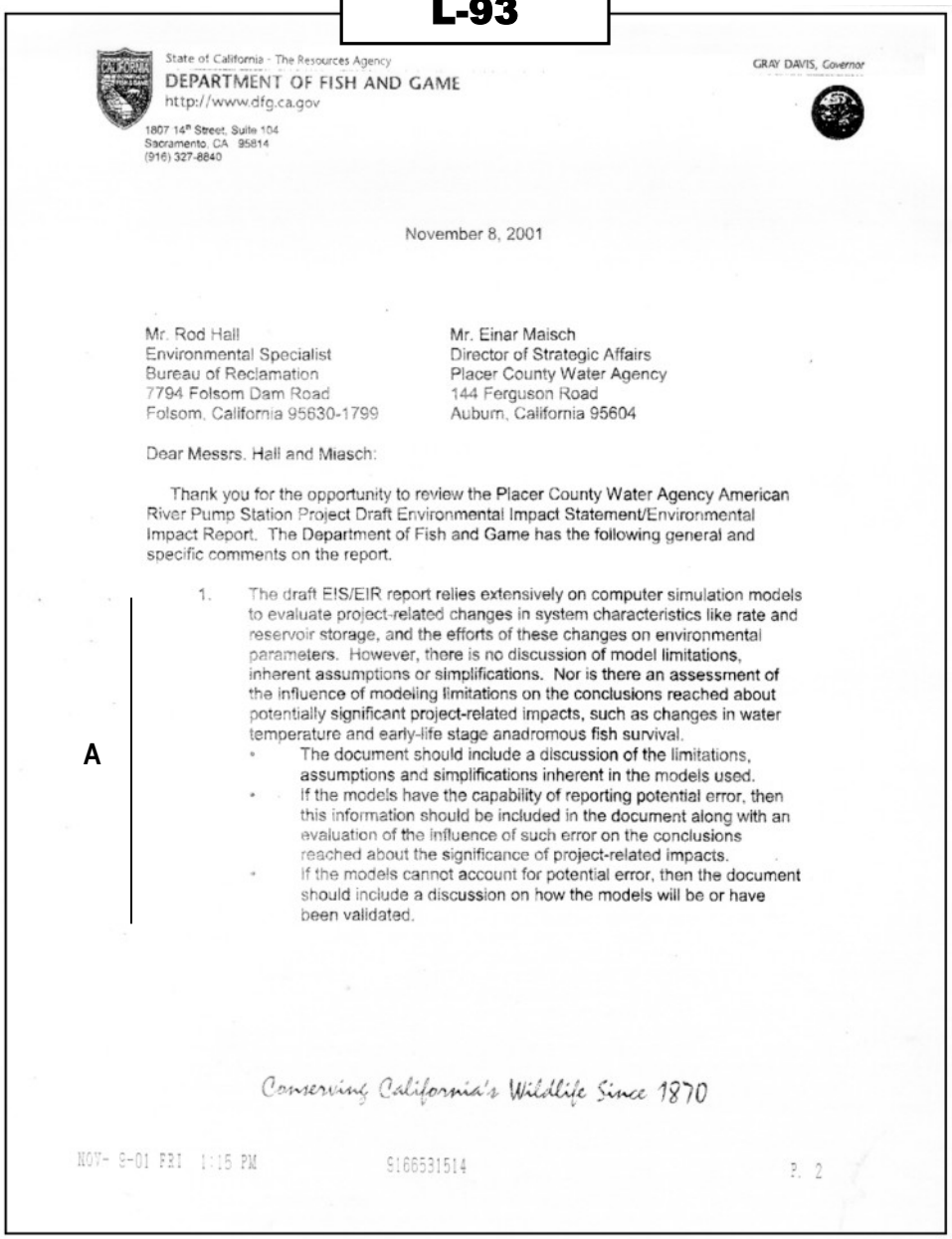
Most Sincerely,

Nancy Sandy
President

P.O. Box 153
Corte Madera, CA 94976

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-93



State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov

GRAY DAVIS, Governor

1807 14th Street, Suite 104
Sacramento, CA 95814
(916) 327-8840

November 8, 2001

Mr. Rod Hall
Environmental Specialist
Bureau of Reclamation
7794 Folsom Dam Road
Folsom, California 95630-1799

Mr. Einar Maisch
Director of Strategic Affairs
Placer County Water Agency
144 Ferguson Road
Auburn, California 95604

Dear Messrs. Hall and Maisch:

Thank you for the opportunity to review the Placer County Water Agency American River Pump Station Project Draft Environmental Impact Statement/Environmental Impact Report. The Department of Fish and Game has the following general and specific comments on the report.

1. The draft EIS/EIR report relies extensively on computer simulation models to evaluate project-related changes in system characteristics like rate and reservoir storage, and the efforts of these changes on environmental parameters. However, there is no discussion of model limitations, inherent assumptions or simplifications. Nor is there an assessment of the influence of modeling limitations on the conclusions reached about potentially significant project-related impacts, such as changes in water temperature and early-life stage anadromous fish survival.
   - The document should include a discussion of the limitations, assumptions and simplifications inherent in the models used.
   - If the models have the capability of reporting potential error, then this information should be included in the document along with an evaluation of the influence of such error on the conclusions reached about the significance of project-related impacts.
   - If the models cannot account for potential error, then the document should include a discussion on how the models will be or have been validated.

A

Conserving California's Wildlife Since 1870

NOV- 9-01 FRI 1:15 PM 9166531514 P. 2

A. A discussion of the assumptions, limitations, and simplifications inherent in the modeling techniques utilized in the fish resources impact analyses can be found in the Draft EIS/EIR (pages 3-57 and 3-58).

Modeling represents the traditional approach to analyzing complex, long-term water distribution issues in California, but the modeling outputs can only serve as planning tools. The modeling outputs used in the Draft EIS/EIR analyses can be used only for comparative purposes, in which the relative potential impacts of two management actions (alternatives) can be evaluated. As stated in the Draft EIS/EIR (pg. 357), modeling outputs used in the analyses are not intended for predicting actual river conditions at specific locations at specific times. Therefore, the implication in the comment that validation of modeling outputs with actual future river conditions is inconsistent with the intended use of model ouputs solely as comparison of alternative operational scenarios.

B. The PROSIM and the water temperature models utilized in the impact analysis in the Draft EIS/EIR use mean monthly flows and water temperatures. The models do not allow for the quantification of daily flow and water temperature changes. While a model using daily timesteps may provide a greater degree of sensitivity, at this time, such a model does not exist. Therefore, the flow and water temperature models are not intended to predict actual conditions which may exist under a project scenario. Rather, the PROSIM and water temperature models are employed to provide a "relative index" for the potential impacts of two separate project scenarios. Biases are equal among alternatives and therefore allow the public and decision-makers to make meaningful comparisons of alternatives. A description of the model assumptions, limitations, and simplifications can be found in the Draft EIS/EIR on pages 3-57 and 3-58.

The PROSIM and temperature models represent the best tool available and an accepted method of comparing potential actions and alternatives. For example, resource agencies utilize similar monthly timestep models in their analyses of potential impacts when preparing biological opinions. In addition, USFWS recently utilized a PROSIM modeling technique to evaluate water resources impacts in the Trinity River Mainstem Fishery Restoration DEIS/EIR.

The use of monthly timestep models is appropriate for the discussion of impacts in a comparative manner. Creating an entirely new approach, or to have analyzed impacts in an entirely qualitative fashion would not have been sufficient. Absent any suggested better method, the extensive modeling of the project scenarios is adequate for the NEPA and CEQA-related impact assessments of the Proposed Project and alternatives. The materials and analysis presented in the Draft EIS/EIR utilize the best available scientific information and methodologies to assess potential project-related impacts.

L-93, pg. 2

B

2. The draft EIS/EIR report evaluates all project-related changes to water temperature and water flow in terms of mean monthly values. Mean monthly values can obscure potentially significant variations in both parameters.
   - We recognize that daily flow and temperature data may not be available for all water bodies in the area of potential project impact or for the entire 69-year period of record considered. However, wherever daily data is available - for example, on the lower American River - it should be used to evaluate and compare modeled results and conclusions about project impacts on the critical life stages of the species of concern.

C

3. Page 2-44, Section 2.4, Table 2-7, Summary of Alternatives and Impacts:
   - The term "***Cumulative Conditions***," is defined further along in the document as including all reasonably foreseeable future actions and/or probable future projects. The term should be defined here as well.

D

4. Page 3-16, paragraph 1: "The goal is to develop a flow release pattern that more closely matches the needs of ***anadromous fish,*** which need more cool water in the fall and ***are not present in the American River in the summer.***"
   - Steelhead are present in the river year round. This fact should be acknowledged by replacing "anadromous fish" with "chinook salmon."

E

5. Page 3-43, paragraph 2: "PCWA return flows ***at the confluence between the American and Sacramento River*** would alter the water balance downstream, which may result in a reduction of required Folsom Reservoir releases."
   - PCWA return flows are via the Natomas East Main Canal to the Natomas Cross Canal, which returns to the Sacramento River just Downstream of the Feather River not the American River confluence.

C. Clarification regarding the impact and environmental protection measures summary table is provided in the Final EIS/EIR, Chapter 2.0, Description of Alternatives. This change does not alter the conclusions presented in the Draft EIS/EIR.

D. The goal presented in the Draft EIS/EIR (pg. 3-16, paragraph 1) is not correct. The actual goal of the lower American River Flow Management Plan is to increase the minimum release requirement for the river in conjunction with establishing an adaptive management process for Folsom Reservoir and lower American River operations, geared toward the protection and enhancement of fish species of priority management concern. Chapter 3.0, Section 3.3.2.1, Hydrologic Framework, Lower American River, (pages 3-15 to 3-16) includes this correction. This change does not alter the conclusions presented in the Draft EIS/EIR.

E. Information regarding PCWA's return flows has been corrected in the Final EIS/EIR, Chapter 3.0, Section 3.4, Water Supply. This change does not alter the conclusions presented in the Draft EIS/EIR.

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If you have questions about these comments or require additional information, please contact Kris Vyverberg, Engineering Geologist-Fisheries Engineering Program, at (916)653-8711.

Sincerely,

Larry Week

Larry Week, Chief
Native Anadromous Fish and Watershed Branch

cc: The Resources Agency
Tim Ramirez
1416 Ninth Street, Suite 1311
Sacramento, Ca. 95814

Department of Fish and Game
Sacramento Valley and Central Sierra Region
Banky Curtis
John Hiscox
1701 Nimbus Road
Rancho Cordova, Ca. 95670

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Headquarters
Diana Jacobs, Directorate
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1416 Ninth Street, 12th Floor
Sacramento, Ca. 95814

Department of Parks and Recreation
Goldfields District
Jim Michaels
1416 Ninth Street
Sacramento, Ca. 95814

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Department of Water Resources
Headquarters
Jonas Minton, Deputy Director
Bill Peach
1416 Ninth Street
P.O. Box 942835
Sacramento, Ca. 94514

L-94

State of California • The Resources Agency — Gray Davis, *Governor*
DEPARTMENT OF PARKS AND RECREATION — Rusty Areias, *Director*

Gold Fields District
7806 Folsom Auburn Road
Folsom, CA 95630
(916) 988-0205, FAX (916) 988-9062

November 9, 2001

Rod Hall, Environmental Specialist
Bureau of Reclamation
7794 Folsom Dam Road
Folsom, CA 95630-1799

Einar Maisch, Director of Strategic Affairs
Placer County Water Agency
144 Ferguson Road
Auburn, CA 95604

Re: American River Pump Station Project – Draft EIS/EIR Comments

Dear Sirs,

The Department of Parks and Recreation (DPR) has reviewed the draft EIS/EIR for the American River Pump Station Project. The Department supports the Proposed Project, the Mid-Channel Diversion, which meets all three of the project purposes. Those purposes are: 1.) Installing a permanent pump facility for Placer County Water Agency (PCWA); 2.) Eliminating the hazard of the diversion tunnel; And 3.) allowing for all pre-Auburn Dam construction beneficial uses of the de-watered section of river by restoring the river to it's historic channel.

The Department does have some specific concerns regarding the proposed project and the information and analysis in the draft EIS/EIR. Attached are the specific and detailed comments DPR has regarding this project and document. DPR has worked closely with the lead agencies on this project to date and looks forward to working with these agencies and the project consultants in addressing public concerns raised in the review of this document. Please contact the District Planner Jim Micheaels at (916) 988-0513 if you have questions regarding these comments. Thank you.

Sincerely,

Jacqueline Ball

Jacqueline Ball
District Superintendent
Gold Fields District

L-94, pg. 2

Cc: Carol Brown, Surface Water Resources, Inc
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Ron Brean, Chief
Northern Field Division

Jill Dampier, Sector Superintendent
Auburn State Recreation Area

Tim Ramirez, Water Policy and Science Advisor
Resources Agency
State of California

L-94, pg. 3

Attachment: California Department of Parks and Recreation,
Gold Fields District, Auburn SRA

Comments on the
American River Pump Station Project – Draft EIS/EIR

Background
The American River Pump Station Project is located on the North Fork of the American River at the Auburn Dam site. The project has three objectives: 1.) To provide permanent facilities for the Placer County Water Agency (PCWA) to convey its water entitlement to the Auburn Ravine Tunnel; 2.) To eliminate the safety issue with the Auburn Dam bypass tunnel; and 3.) To restore the river to its pre-construction channel to allow all of the beneficial uses of the river in what is now a de-watered channel, including recreation, navigation, fish passage and other beneficial uses. A draft EIR/EIS was issued in August 2001 analyzing three alternatives for the project. The proposed project, the Mid-channel Diversion Alternative, would install the diversion in the middle of the restored river channel near the site of the failed coffer dam, close the tunnel and restore the river to it's pre-construction channel. As part of this alternative some minimal access for recreation would be created in the project area to safely accommodate and manage the river use that will occur as a result of the restored river. The No Action and Upstream Diversion Alternatives would not close the tunnel nor return the river to it's channel and hence would not meet all of the project purposes.

Department of Parks and Recreation Interest
The Auburn State Recreation Area (SRA) is managed by California State Parks through a lease agreement with the Bureau of Reclamation. The SRA includes most of the lands withdrawn for the proposed Auburn Dam and reservoir. The project area, the dam site, is not part of the lease area and is primarily closed to public use (approximately ½ mile upstream of the abutments and ½ mile below). Exceptions to this closure have been made for specific trails that pass through the area. The most recent direction for the management of Auburn SRA is provided in the Interim Resource Management Plan completed in 1992.

I. Support for the Proposed Project

A The Department supports the proposed project. Closure of the diversion tunnel and restoration of the river to its historic channel will provide many benefits to the natural resources and human uses of the Auburn SRA. The closure of the tunnel will eliminate the safety hazard this structure poses, and permit river recreation use below the confluence of the North and Middle Forks of the American River. This section of river has the potential to be a very popular recreation opportunity due to the character of the whitewater (Class 2), the high scenic quality of the canyon, and the proximity of the river segment to Auburn and the greater Sacramento metropolitan area. Returning the river to the de-watered channel will also benefit natural resources along the river including allowing fish passage (and the passage of other aquatic wildlife), creating the opportunity for the natural

A. Project support noted.

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recovery of riparian vegetation and the re-establishment of riparian habitat for variety of wildlife species.

DPR fully supports the multiple objectives of the river restoration including restoration of the de-watered channel to appear and function like a natural river, enhancement of fish and wildlife habitat and providing recreation opportunities. DPR is also supportive of the proposed "Coanda Chute" diversion design that project consultants are developing. This diversion structure will allow the river to look and function like a natural river while still permitting PCWA to divert its water entitlement.

While DPR supports the primary elements of the proposed project, the Department does have a number of comments and concerns regarding the details of the proposed project and the environmental analysis in the DEIR/DEIS.

B

II. Description of the Alternatives

Alternative 3, the upstream diversion alternative (p. 2-29), was included as an alternative considered in detail even though it did not meet two of the three stated project purposes: closure of the diversion tunnel to eliminate the safety hazard it poses; and returning the river to its historic channel to allow all of the pre-Auburn Dam construction beneficial uses of the river to be realized. DPR is concerned that this alternative was considered in detail and yet is does not meet the project purposes.

C

III. Alternative 2, the Mid-Channel Diversion – Public River Access

The document adequately describes the vehicle access and parking proposed as part of the project (p. 2-24). While DPR believes public access is an important component of the project, DPR remains flexible regarding the location and extent of that access. DPR recognizes that a number of concerns have been raised by the public regarding the vehicle access component and looks forward to working with the project proponents to shape this portion of the proposal, as needed, to address relevant public concerns.

D

IV. Auburn State Recreation Area – Recreation Use

The document under estimates recreation use in the Auburn SRA in the Affected Environment (p. 3-201). DPR provided information indicating current use of the SRA was estimated to be 850,000 visitors. While the document does describe whitewater recreation use of the Middle Fork of the American, the document also does not correctly portray the importance of whitewater recreation use on the North Fork of the American (p. 3-202). Above Lake Clementine, from the Iowa Hill Bridge to the Ponderosa crossing the North Fork is an intensively used whitewater run in spring and early summer, both by private users and commercial outfitters. DPR has provided project consultants with more complete information regarding whitewater use in the area. The document also refers to three runs on the Middle Fork of the American River. The Tunnel Chute and Mammoth Bar runs are well established (Class IV and Class II respectively) runs

B. As indicated in the Draft EIS/EIR, the lead agencies acknowledge that the Upstream Diversion Alternative would not meet the river restoration or public river access objectives of the federal and state stakeholders. However, the lead agencies determined that the Upstream Diversion Alternative is an appropriate and viable option because the bypass tunnel and dewatered reach of the river remain part of an authorized federal action (Draft EIS/EIR, page 2-6). The Upstream Diversion is especially important for CEQA purposes. As CEQA lead agency, PCWA appropriately focused on the project purpose most directly affecting its own interests: the need for construction of a permanent pump station. Although PCWA has worked closely with Reclamation to prepare a joint CEQA/NEPA document addressing the related impacts associated with a joint program that involves a proposed tunnel closure, river restoration, and the construction of a permanent pump station, PCWA has no particular stake of its own in the first two of these objectives. It therefore made sense from a CEQA standpoint to address an alternative might be viable even if, for whatever reason, Reclamation and the State of California chose not to pursue the first two objectives. Even so, PCWA decision makers are under no obligation to insist upon an upstream diversion if they decide, after weighing environmental factors and various policy considerations, that they want their agency to help Reclamation and the State of California to pursue their goals of restoring the river and closing the tunnel.

C. Since publication of the Draft EIS/EIR, the lead agencies and CDPR have continued to work cooperatively to respond to public concerns raised regarding the proposed public river access features of the Proposed Project. CDPR and Reclamation have participated in several public stakeholder sessions to further discuss these concerns with residents and others in the community. As a result of these efforts, additional information and changes to the proposed public river access facilities have been prepared and are part of the Final EIS/EIR. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management. The updated description of the public river access features is provided in the Final EIS/EIR, Chapter 2.0, Description of Alternatives. This change does not alter the conclusions presented in the Draft EIS/EIR.

D. Additional information regarding Auburn SRA recreation use provided by CDPR is presented in the Final EIS/EIR, Chapter 3.0, Section 3.8, Recreation. These additions do not alter the conclusions in the Draft EIS/EIR.

L-94, pg. 5

on this river. DPR does not recommend the "Murderer's Bar" run because of the out-of-character Class V-VI rapid on this short section of river. Nor in DPR experience is this stretch of river much used.

E

Project Area Trail Use and Other Recreation Uses

The document only recognizes the Auburn to Cool Trail and the Western States Trail within the immediate project area. There are other recognized system trails in the project vicinity, including the Cardiac Hill Trail, the Pioneer Express Trail and the Robie Point Firebreak Trail. Also, despite the "official" closure of the area to public use, except for a few recognized trails, the area has many unofficial trails and construction roads that are used by the public. Many neighborhoods are adjacent to the project area and since the halt of Auburn Dam construction activities these informal trails and roads are used widely by the public.

Other uses in the project area include fishermen who use the river below the diversion tunnel, swimmers and others who use of the beach area along the river below Robie Point, and use of the stretch of river between the confluence and the dam site by hikers, sunbathers and anglers. DPR would like to work with the document preparers to give a more accurate description of recreation use within the project area. A more accurate map of all the trails in the project area would be helpful for the document.

F

V. Analysis of Recreation Impacts

The document follows the model for assessing cumulative impacts for fisheries in the recreation section by looking at potential impacts to recreation in other reservoirs and rivers including the Sacramento River, the Delta, Oroville, Shasta and Trinity Reservoirs. In all cases the impact, due to the PCWA diversion, are minimal or non-existent. DPR believes more analysis could have been conducted regarding the impacts to recreation within the immediate project vicinity and less analysis regarding the insignificant impact of this relatively small diversion on these other bodies of water.

Specifically, the document should address the change in the quality of the recreation experience and character of the canyon that will occur as a result of introducing vehicle access to this portion of the canyon, the impact of the increase in recreation use in this portion of the canyon, and the range of potential uses that may be attracted to the new access areas. This also should include discussion of the impact that new river recreation use may have on existing uses of the section of river between the confluence and Oregon Bar (sunbathing, fishing, swimming). Public notification of the changes in allowed use may be appropriate to avoid conflicts with existing users. Some discussion of measures to prevent misuse and illegal activities would also be appropriate for the document. DPR looks forward to working with project proponents and consultants on these issues.

E. Updated project area trail and other recreation use information provided by CDPR is included in the Final EIS/EIR, Chapter 3.0, Section 3.8, Recreation These changes do not alter the conclusions presented in the Draft EIS/EIR.

F. The Draft EIS/EIR indicates that the public river access features included as part of the Proposed Project are to serve as mitigation of the anticipated impacts associated with increased use (boating) along the North Fork American River due to rewatering the river channel through the project study area. It is stated in the Draft EIS/EIR that this measure provides only an interim, temporary solution to the anticipated increased recreational demands potentially associated with rewatering the North Fork American River in the project area. As permitted by CEQA, the assessment of potential impacts associated with this mitigative feature of the Proposed Project is not described in as much detail as other recreation impacts. It is ultimately the responsibility of Reclamation and CDPR to provide further consideration, development, and evaluation of the long-term recreation planning and facilities for the Auburn SRA as these agencies are responsible for the management of the Auburn Dam project lands for recreation purposes. Please also refer to Master Response 3.1.6, Public River Access Features for additional discussion on inappropriate and illegal activities.

L-94, pg. 6

Diversion Related Impacts – Middle Fork American River

G

The document acknowledges that the existing typical flow pattern on the Middle Fork of the American River is about 1,100 cfs released from Ralston Afterbay during the dry season (3-33). This flow level is what commercial and private whitewater boaters on the Middle Fork have come to expect over the years, and is about the minimal acceptable level for an adequate boating experience. In the section of the document assessing effects to river recreation on the Middle Fork, the document indicates that the duration of daily releases for recreation may be reduced by up to 8 hours per month from June through October. The table which (Table 3.8-2) details this information uses 850 cfs as a baseline condition in assessing the reduction in the duration of recreation flows, not 1,100 cfs. It is not evident from the document why this lower flow level, 850 cfs was used as the baseline, when in long practice 1,100 cfs is the typical flow released down the river. There are potentially large impacts to river recreation if 850 cfs is used as the minimum flow released for recreation from Ralston, rather than the current typical release of 1,100. DPR would like a clearer explanation and understanding of this discrepancy and a full assessment of effect, if in fact a lower release from Ralston is anticipated.

Auburn to Cool Trail Issue

The EIR/EIS recognizes that the proposed project would result in the closure of the Auburn to Cool Trail and that this closure would be considered potentially a significant impact (p. 3-210). The document states that no feasible mitigation measures have been identified to reduce this impact to a less than significant level. DPR proposes working with the other involved agencies to look at options to mitigate the loss of this trail. DPR would also like to provide further information quantifying existing use of the trail to better understand and display the extent of the impact of trail closure.

H

This has emerged as a key issue in the review and comment of the EIR/EIS. At the October 11 public hearing, the primary concern people had with the project was the loss of the trail route. Many different types of trail users (equestrians, mountain bikers, hikers, runners) called for the agencies involved to construct a multi-use trail bridge across the canyon in the vicinity of the project site as mitigation for the project impacts on this trail.

The Auburn to Cool Trail was officially recognized and approved for public use in 1996. In granting DPR authority to open the Auburn to Cool Trail to public use the Bureau of Reclamation stated that the trail could be closed at any time to meet Reclamation's needs and purposes regarding the Auburn Dam project. Despite the relatively recent official recognition of the trail in 1996, the route across the Canyon has likely been used informally since the diversion tunnel was constructed. Use of the closed area around the dam site was consistently enforced when construction operations were active. Following the end to active construction at the dam site in 1977-78, enforcement of the closure has been less of a priority and public use of the many trails and roads that run through the

G. The 850 cfs minimum flow threshold was developed based on information from "California Whitewater: A Guide to the Rivers" (Cassady & Calhoun 1995), which identifies recommended boating flow levels of 800 to 2000 cfs and in consultation with John Anderson, recreation consultant, and the Auburn Whitewater Recreation officer at the time of analysis (T. Reed 1998). Please also refer to Response L-5.E for additional information explaining anticipated impacts on Middle Fork American River whitewater boating opportunities. As is evident from Response L-5.E, the use of a baseline of 850 cfs was intended to be conservative, and to avoid any possibility that the impact analysis might understate the severity of environmental effects.

H. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-94, pg. 7

dam site area has grown. Use of the Auburn to Cool trail route likely gained additional popularity when the "No Hands Bridge" was closed for a year in 1996-7.

H

A key element in this issue is that currently this is the only trail access from Auburn to Cool for mountain bikes. Other routes across the Canyon for mountain bikes involve riding portions of Highway 49, which has numerous tight turns and is heavily used. Equestrians and pedestrians can cross the river at the historic "No Hands" bridge, and have several trail options on both sides of the Canyon, including the Western States Trail. While mountain bikes would lose their only all-trail route across the Canyon, equestrians are concerned that if mountain bikes lose this route, they will be more likely to illegally ride the Western States Trail and other equestrian/pedestrian routes. The primary concern of mountain bikers is a trail route across the canyon, which does not involve riding on Highway 49. They feel there is sufficient room for bikes to actually cross the river on the Highway 49 bridge, and do not necessarily need to cross the river at the "No Hands" Bridge.

Some options to mitigate the loss of the Auburn to Cool Trail that should be analyzed include: a trail bridge; construction of new trail to provide a route across the canyon for mountain bikes (cross at "No Hands" or the Hwy 49 bridge); and a removable seasonal low-water bridge. DPR looks forward to working with project proponents and consultants to develop and analyze a range of potential mitigation measures for the closure of this trail. If a trail bridge is analyzed as a mitigation measure, a complete evaluation of the visual impact of this option needs to be completed.

I

Increase in Recreation Use at the Confluence

The document recognizes that at peak use time recreation demand currently exceeds parking capacity at the confluence. The document also acknowledges that the opening of the river below the confluence will increase demand for parking and access at the confluence, however the document concludes that this is a potentially significant but unavoidable impact (p. 3-212). In previous discussions and input to lead agencies and project consultants, DPR recommended construction of a staging area for river users putting on the river at the confluence to help mitigate the impact of this increased use. Establishing a convenient and efficient location for river users to drop off and launch craft will help prevent congestion due to this increase in use. DPR would like to work with project consultants and proponent in shaping and defining this mitigation measure.

J

VI. Transportation and Circulation

The document provides estimates of traffic volume at the intersection of Maidu and Auburn-Folsom Road (p. 3-288), but not for Maidu Road itself, which is the primary concern regarding the impacts of increased traffic. The City of Auburn

I. Based on further discussion with CDPR planning staff, regarding the limited nature of public river access in the project area, the potential increases in use at the North/Middle Fork confluence, relative to existing conditions, would not be considered substantial. However, as noted in the Draft EIS/EIR on peak summer weekends, current user demand at the confluence exceeds capacity.

Reclamation and CDPR have indicated concern about the current level of use and existing demands at the confluence, and will address these issues in future long-term comprehensive planning studies. As part of this future planning effort (i.e., a combined General Plan/Resource Management Plan for Auburn SRA), CDPR would conduct recreation use studies and surveys and gather recreation trend and demand information to help determine existing use levels and patterns of recreation demand for various activities. CDPR and Reclamation will begin collecting recreation and resource information within Auburn SRA within the next year.

J. The City of Auburn Public Works Department was contacted during preparation of the Draft EIS/EIR to obtain all available project study area roadway traffic counts. Since publication of the Draft EIS/EIR, the City has developed updated counts on roads within the project study area (December 2001 and January 2002). This information has been incorporated into Chapter 3.0, Section 3.14.2.4, Impact Analysis, of the Final EIS/EIR. Please also refer to Master Response 3.1.6, Public River Access Features for discussion of results from a supplemental traffic study performed for the intersection of Maidu Drive/Burlin Way. This information does not alter the conclusions presented in the Draft EIS/EIR.

L-94, pg. 8

has estimates of traffic volume on Maidu and these should be included in the analysis.

K

The document (3-293) also may have underestimated the peak summer day use of the parking areas provided as part of the project and hence the potential for increased traffic. It is possible that these parking spaces may be used by two visitors on a peak summer day, resulting in more vehicle trips along Maidu. A description of the likely use pattern would also help with this analysis. The typical flow pattern for the daily releases from Oxbow Reservoir in the summer would result in optimal boating flows at the confluence at 3-4pm in the afternoon. This release pattern would likely influence how the area is used. Another factor regarding traffic patterns is that people completing a river trip may drop several vehicles off at the proposed parking areas and take a single vehicle back up to the confluence.

L

Residents of the neighborhoods along Maidu have expressed concern about the recreation access component and the potential increase in traffic. Given this concern, DPR recommends analyzing alternate access routes, including Pacific Avenue and the railway undercrossing that ties into the main construction road into the project area where the proposed parking facilities are located. While there is a residential neighborhood along Pacific Avenue, it is less extensive and the impact (though assessed to be less than significant in the DEIR/DEIS) may be less at this location.

VII. Public Health and Safety

The document recognizes that increased access may result in some increased risk of wildfire (p. 3-329). The document provides a brief description of fire history in the canyon. The increased risk of wildfire due to additional human activity in the canyon is a concern that has been raised by the public in the review of the DEIR/DEIS. Because of the level of concern, it may be appropriate to include additional information in the final document on the frequency of fire and the exact causes of fires in the canyon (which human activities have caused the most fires), to assess the extent to which the proposed access might increase risk of ignitions.

M

The document states that a comprehensive fire management plan is being prepared (by DPR, CDF and Reclamation) and that shaded fuel breaks would be constructed adjacent to access roads (including Maidu) and the proposed parking areas. What is specifically currently being prepared by these three agencies is a set of prescriptions for three types of fuel breaks to be used at demonstration sites with criteria on selecting where these fuel breaks might be implemented. While fuel breaks may be an appropriate action associated with the proposed project, the Department is not aware that specific decisions have been made regarding the location of shaded fuel breaks. Further, while there is the desire on the part of these agencies to complete a true comprehensive fire management plan for the entire Auburn SRA, funding and staff to complete such

K. Please refer to Master Response 3.1.6, Public River Access Features.

L. Please refer to Master Response 3.1.10, Project Access.

M. Please refer to Master Response 3.1.9, Fire Management.

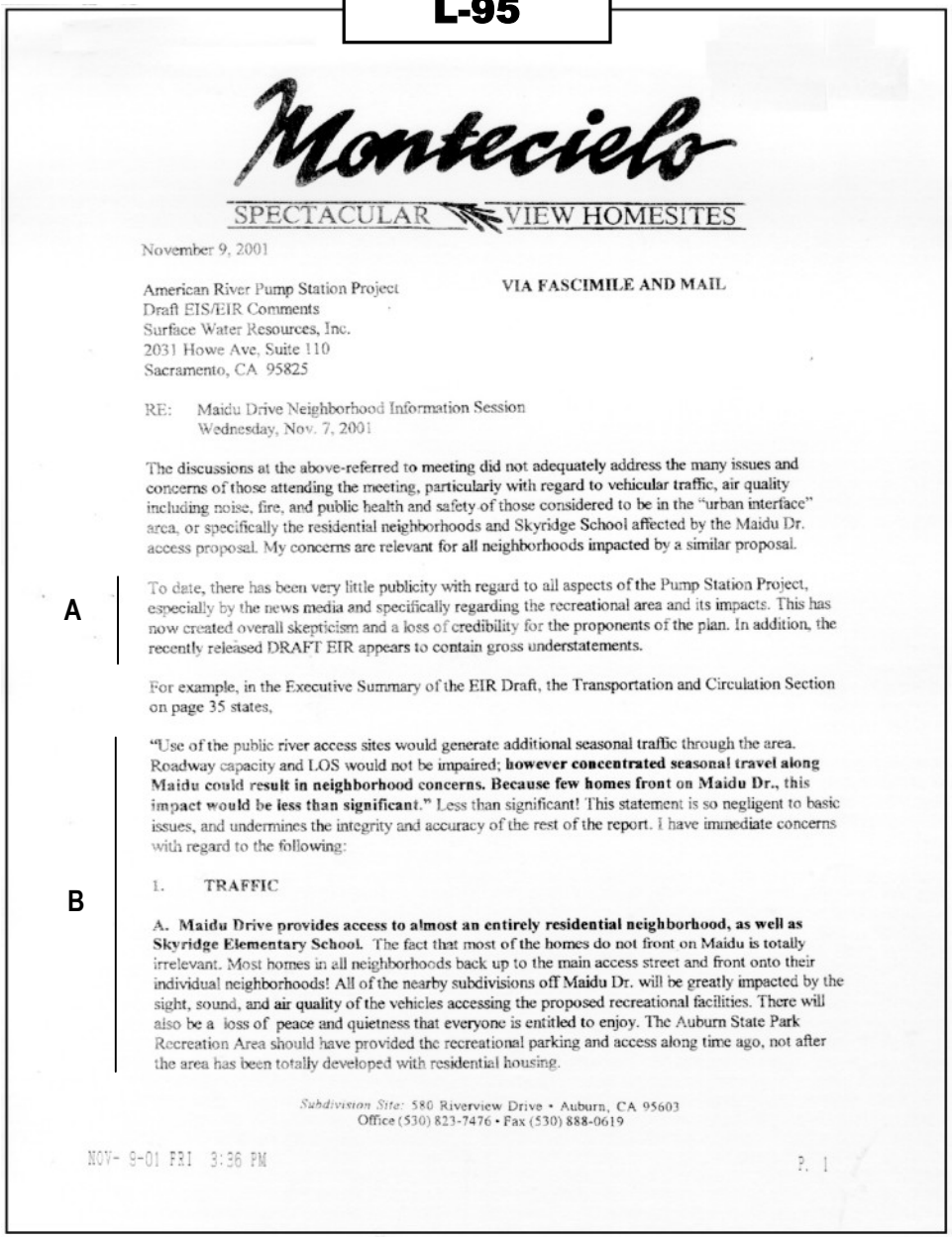
L-94, pg. 9

M

a plan have not yet been clearly identified, nor is there a definite plan completion date.

To address the concerns addressed regarding the potential increased risk of wildfire, one option would be to commit to completing a comprehensive fire management plan prior to opening the area to greater public access. Committing to this would require clear identification of funding and staff, agreement on what a true comprehensive fire plan would include and a schedule for completion. This level of commitment and detail has not yet been reached.

L-95



Montecielo

SPECTACULAR VIEW HOMESITES

November 9, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA 95825

VIA FASCIMILE AND MAIL

RE: Maidu Drive Neighborhood Information Session
Wednesday, Nov. 7, 2001

The discussions at the above-referred to meeting did not adequately address the many issues and concerns of those attending the meeting, particularly with regard to vehicular traffic, air quality including noise, fire, and public health and safety of those considered to be in the "urban interface" area, or specifically the residential neighborhoods and Skyridge School affected by the Maidu Dr. access proposal. My concerns are relevant for all neighborhoods impacted by a similar proposal.

A To date, there has been very little publicity with regard to all aspects of the Pump Station Project, especially by the news media and specifically regarding the recreational area and its impacts. This has now created overall skepticism and a loss of credibility for the proponents of the plan. In addition, the recently released DRAFT EIR appears to contain gross understatements.

For example, in the Executive Summary of the EIR Draft, the Transportation and Circulation Section on page 35 states,

B "Use of the public river access sites would generate additional seasonal traffic through the area. Roadway capacity and LOS would not be impaired; **however concentrated seasonal travel along Maidu could result in neighborhood concerns. Because few homes front on Maidu Dr., this impact would be less than significant.**" Less than significant! This statement is so negligent to basic issues, and undermines the integrity and accuracy of the rest of the report. I have immediate concerns with regard to the following:

1. TRAFFIC

A. Maidu Drive provides access to almost an entirely residential neighborhood, as well as Skyridge Elementary School. The fact that most of the homes do not front on Maidu is totally irrelevant. Most homes in all neighborhoods back up to the main access street and front onto their individual neighborhoods! All of the nearby subdivisions off Maidu Dr. will be greatly impacted by the sight, sound, and air quality of the vehicles accessing the proposed recreational facilities. There will also be a loss of peace and quietness that everyone is entitled to enjoy. The Auburn State Park Recreation Area should have provided the recreational parking and access along time ago, not after the area has been totally developed with residential housing.

Subdivision Site: 580 Riverview Drive • Auburn, CA 95603
Office (530) 823-7476 • Fax (530) 888-0619

NOV- 8-01 FRI 3:36 PM P. 1

A. The public involvement activities including public information sessions and environmental issue scoping for the project are described in the Draft EIS/EIR in Chapter 4.0, Consultation and Coordination, Section 4.2, Public Involvement. As stated therein, the lead agencies have invited public involvement and participation in the planning and environmental review process since 1995. Public notices regarding these opportunities and activities have been provided through local news media as well as the *Federal Register*, as appropriate and required by CEQA and NEPA. Public notice of the availability of the Draft EIS/EIR included publication in the *Federal Register* and media notices in four newspapers of general circulation within the project study area. These publications included: The Sacramento Bee, Auburn Journal, Press Tribune, and The Mountain Democrat. Reclamation also published the Notice of Availability and Notice of Public Meeting in the *Federal Register* on September 10, 2001. Additionally, the public notice provided information regarding the availability of the Draft EIS/EIR for viewing at the lead agencies offices and eight public libraries throughout the study region.

The Draft EIS/EIR was initially circulated for a 63-day public review period (September 10 to November 13, 2001). Reclamation's NEPA handbook requires a 60-day public review period and CEQA requires a 45-day review period. In response to public comments, and other requests, the public review comment period was extended another 30 days and closed on December 13, 2001. The lead agencies provided public notice of the review period extension as required by CEQA and NEPA. The Draft EIS/EIR public review comment period therefore extended 93 days, from September 10, 2001 to December 13, 2001. In addition, since publication of the Draft EIS/EIR, lead agency and resource agency personnel have participated in numerous public stakeholder meetings to provide additional information regarding the Proposed Project.

B. The Draft EIS/EIR presented the preliminary information regarding the public river access facilities at the time of document publication (September 2001). Since that time, and in response to public concerns expressed in comment letters, at the October 11, 2001 public meeting, and at various public stakeholder sessions attended by Reclamation and CDPR representatives, the lead agencies, in consultation with CDPR have developed additional specific information related to the design, operations and maintenance of the public river access facilities. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management. These modifications have been incorporated into Chapter 2.0, Section 2.2.2, Proposed Project Mid-Channel Diversion Alternative. These changes do not alter the conclusions presented in the Draft EIS/EIR.

L-95, pg. 2

B (cont) B. Maidu Dr. dead ends or loops back to the older section of Riverview Dr., which also either dead ends, weaves through other rural streets or leads back through the the Montecielo Subdivision. The point is the road configurations surrounding Maidu Dr. could create real traffic and parking problems outside the proposed park unless more thorough traffic studies and mitigation can be made **prior to a final EIR, not after.**

C. The following traffic impacts have been totally ignored and need to be addressed::

C a. The increased traffic and unknown transient vehicles regarding the safety of children in the Skyridge School area, especially close to the rural area and park.

D b. Off site parking violations and disturbances encroaching into adjacent neighborhoods when the parking lot is full.

E c. Impacts from recreational vehicles, boats, rafts, camping, etc, noise, and possibly bumper to bumper traffic

F d. How will you monitor unsafe and illegal activities which will occur as a result of opening these lands? How will you maintain Maidu Dr. with regard to road debris, maintenance, and all the problems dealing with the recreational public when accessing through a quiet neighborhood?

G e. The entire South Auburn area is almost exclusively residential with very few convenience stores and services.Auburn-Folsom Rd to Douglas Blvd.in Granite Bay is also almost exclusively lower density residential. It seems public park access would be more appropriate near highway service areas and not in established residential areas.

H f. What traffic impacts will occur if rafters decide to use this area over already existing river access sites?

I g. On page 33, the report mentions there will be 54 heavy pieces of construction equipment and 50 workmen during the course of construction. The number of workmen seems to be very low considering the scope of the proposed work. How accurate is that number and corresponding vehicular traffic?

J h. What other existing river access sites were reviewed as less impacting than Maidu Dr?

K **2. AIR QUALITY**. On pages 35 & 36 the report refers to significant emissions during the construction phase with inconslusive ability to reduce or control the emissions. The suggested

L Monitoring and documentation procedures as a remedy do not eliminate the problem and is an inadequate solution. The increase from vehicular traffic and emissions from the recreational area are not adequately represented.

M **3. NOISE.** Noise by increased traffic activities is not adequately addressed in the report.

C. Additional information regarding the operation and management of the public river access area and how this relates to the proximity of Skyridge Elementary School is provided in Master Response 3.1.6, Public River Access Features.

D. The proposed public river access parking area would be expected to reduce the occurrence of off-site parking that occurs outside of the project area. Please refer to Master Response 3.1.6, Public River Access Features.

E. The proposed public river access would not be anticipated to result in bumper-to-bumper traffic along Maidu Drive or other project study area roadways. Use of the public river access features associated with the Proposed Project would occur under limited hours of operation; no camping would be permitted. Please refer to Master Response 3.1.6, Public River Access Features.

F. Please refer to Master Response 3.1.6, Public River Access Features.

G. The proposed public river access features at the project site were developed by the lead agencies in cooperation with CDPR to mitigate for the anticipated increase in river boating due to rewatering of the North Fork American River near Auburn, California. These facilities provide only an interim solution for a specific need identified by CDPR. Convenience stores and services are located along Auburn-Folsom Road, within one mile from the project area.

H. Please refer to Master Response 3.1.6, Public River Access Features.

I. The Draft EIS/EIR describes the phasing of proposed construction activities. Construction of the Proposed Project primarily involves extensive earthwork activities to prepare the area for placement of the water supply facilities and to excavate a channel to accommodate flows that currently pass through the bypass tunnel.

The estimate of 54 pieces of heavy construction equipment and 50 workers represents a peak number that would only occur if access road construction, channel excavation, and pumping plant site preparation were to occur simultaneously and then only for a short period. Based on preliminary construction and design phasing, it is more likely that the access road construction and initial rough grading for the river restoration would occur prior to any activity associated with pump station construction, and the number of workers and pieces of equipment evaluated in the Draft EIS/EIR represent a conservatively high estimate. The number of trips associated with construction worker travel therefore also is considered conservative; the actual number of trips and related traffic impacts likely would be less than described in the Draft EIS/EIR. Please also refer to Master Response 3.1.6, Public River Access Features.

L-95, pg. 3

N O | 4. **ALTERNATIVES OF THE PLAN.** The other options in the EIR were not discussed in the meeting and merit more discussion. There also seems to be discrepancy between the Federal and State opinons regarding closing the tunnel. This needs further clarification.

The above items only begin to address some of the key issues affecting the neighborhood and which need further study and input before the EIR can accurately represent the impacts of this proposal.

In an effort to stay focused on the solid legitimate impacting issues, I think it would be beneficial for representatives of Placer Water Agency and Bureau of Land Management to work closely with the City of Auburn Dept. of Public Works and Planning Dept., togetherwith the neighborhoods surrounding the proposed project in an effort to mitigate the concerns prior to completing the EIR.

Thank you for the opportunity to express my opinions.

Sincerely,

John Di Manto
Montecicio Property Owner

cc: City of Auburn Dept. Public Works
City of Auburn, Dept.of Planning
City of Auburn, City Manager
City of Auburn Fire Department
City of Auburn Police Department
Placer County Water Agency
Bureau of Land Management

NOV- 9-01 FRI 3:38 PM P. 3

J. Please refer to Master Response 3.1.10, Project Access.

K. The Draft EIS/EIR, Chapter 3.0, Section 3.15, Air Quality, describes potential construction-related air pollutant emissions and the environmental protection measures incorporated into the Proposed Project by the lead agencies to mitigate such impacts to the extent feasible. The determination of appropriate and adequate mitigation for construction-related air quality impacts was done in consultation with local air pollution control districts. Because this element of the mitigation program depends upon site-specific conditions throughout the construction period, some uncertainty remains regarding the level of NO_x emissions, therefore, the Draft EIS/EIR makes a conservative impact statement.

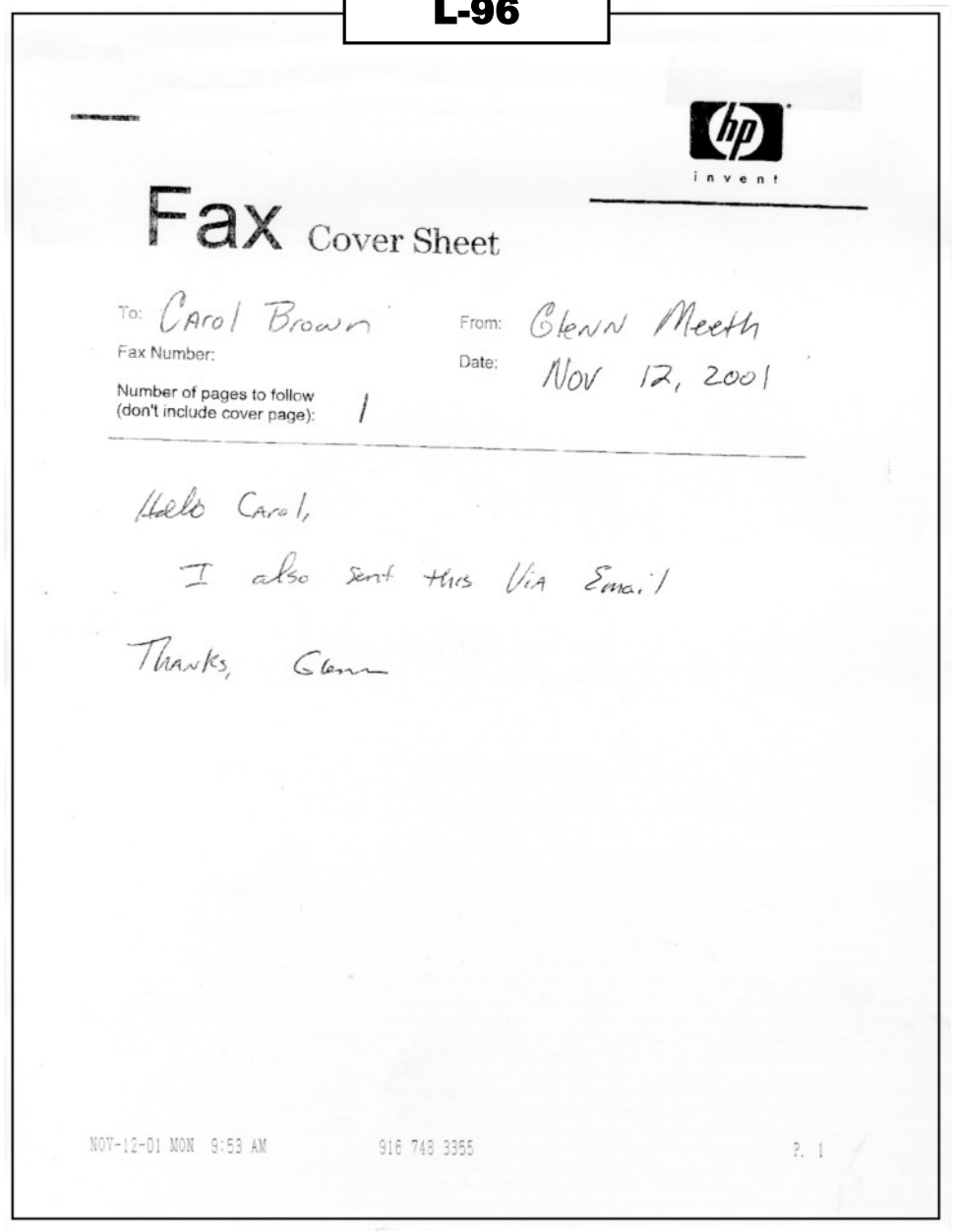
L. Please refer to Response L-3.C.

M. Please refer to Master Response 3.1.6, Public River Access Features.

N. The November 7, 2002 meeting referenced by the commenter was a specially-held session to discuss Maidu Drive neighborhood concerns relative to the Proposed Project and the public river access features, in particular. The No Action/No Project Alternative and Upstream Diversion Alternative do not include development of the pubic river access features. These alternatives are fully described and evaluated in the Draft EIS/EIR.

O. The Draft EIS/EIR provides an explanation of the State of California interest in closing the Auburn Dam project bypass tunnel (page 1-5). As described in the Draft EIS/EIR, the Proposed Project would meet this objective of the State of California while also addressing the needs and objectives of the lead agencies, Reclamation (federal) and PCWA (local). The agencies do not agree that there is any discrepancy, both federal and state agencies are interested in remediating the hazards associated with the bypass tunnel. Please also refer to Master Response 3.1.6, Public River Access Features.

L-96



invent

Fax Cover Sheet

To: Carol Brown
From: Glenn Meeth
Fax Number:
Date: Nov 12, 2001
Number of pages to follow (don't include cover page): 1

Hello Carol,

I also sent this via Email

Thanks, Glenn

NOV-12-01 MON 9:53 AM 916 743 3355 P. 1

L-96, pg. 2

November 10, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

To whom it may concern;

A Firstly, I'd like to acknowledge the efforts by the U.S. Bureau of Reclamation and the Placer County Water Agency (PCWA) to close the Auburn Ravine tunnel at the Auburn dam construction site. I think the overall plan is great and will definitely benefit everyone.

B However, I am concerned with the loss of the Auburn to Cool trail (ACT) as a result of the American River Pump Station Project. The ACT provides the only safe and legal trail for mountain bicyclists to ride between Cool and Auburn. The only other route requires riding on at least 2 miles of State Hwy 49 that has no shoulders and has high traffic speeds.

I'm sure the constructions of a bridge connecting the ACT trail across the North Fork American River will a large cost. I believe a better and lower cost alternative would be the construction of a new trail. There are several alternate routes that could be created. Improving a portion of the WST trail for multiuse with the construction of a small section of a new trial could create one alternate route, for example.

Please consider all or partial funding of a new trail as an alternate mitigation for closing the existing ACT.

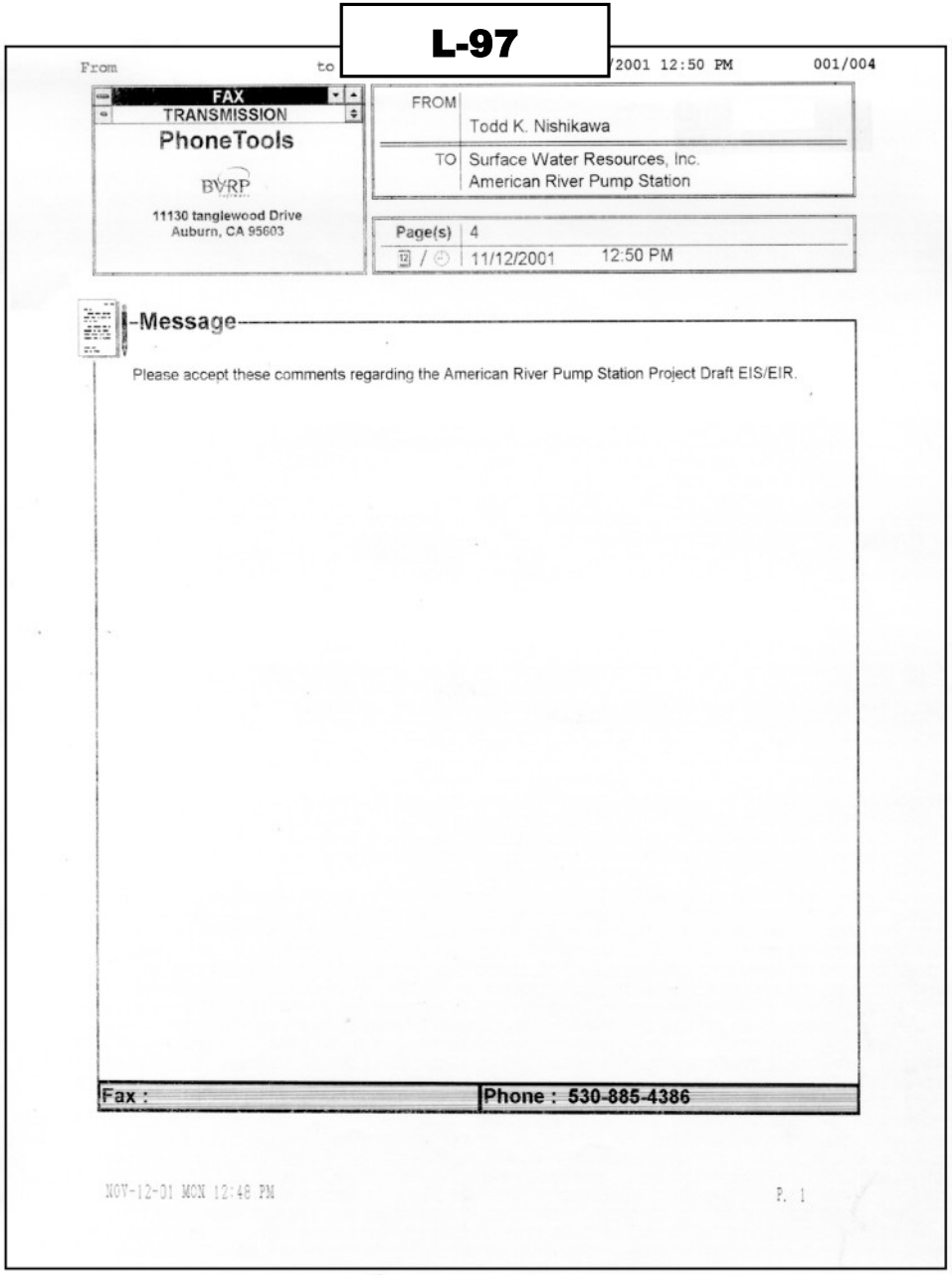
Signed,

Glenn Meeth
PO Box 812
Cool, California 95614
gmeeth@yahoo.com

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-97



From to /2001 12:50 PM 001/004

FAX
TRANSMISSION
PhoneTools
BVRP
11130 tanglewood Drive
Auburn, CA 95603

FROM: Todd K. Nishikawa
TO: Surface Water Resources, Inc.
American River Pump Station

Page(s): 4
11/12/2001 12:50 PM

Message

Please accept these comments regarding the American River Pump Station Project Draft EIS/EIR.

Fax :
Phone : 530-885-4386

NOV-12-01 MON 12:48 PM P. 1

L-97, pg. 2

From to /2001 12:50 PM 002/004

November 12, 2001 FAXED

American River Pump Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: Comments Regarding American River Pump Station Project

As a resident and homeowner on Tanglewood Drive, off of Maidu Drive, I am primarily concerned with the increased traffic that will be created on Maidu Drive, the proposed access, during construction activities and over the long-term due to the development of recreational area parking and access. Overall, I think that utilizing infrastructure improvements that will be needed for the pumping station project to provide new and enhanced public access to the American River is an intelligent use of public funds. As a life long Auburn resident who has a great affection for the River, I am not opposed to the general concept of the new recreational area access. I would like to make sure that the "best" access route is chosen and not merely the route that is currently viewed as being the least expensive, and I am concerned that traffic estimates do not take into consideration all factors, particularly the possibility of commercial rafting.

Fully Evaluate Pacific Avenue Versus Maidu Drive: Access by Pacific Avenue is apparently not preferred due to required upgrading being more costly than a Maidu Drive access and in order to minimize traffic-related impacts on a future camping area near the American River Canyon (Dam) Overlook. The reasoning seems to be incomplete in their apparent failure to consider:

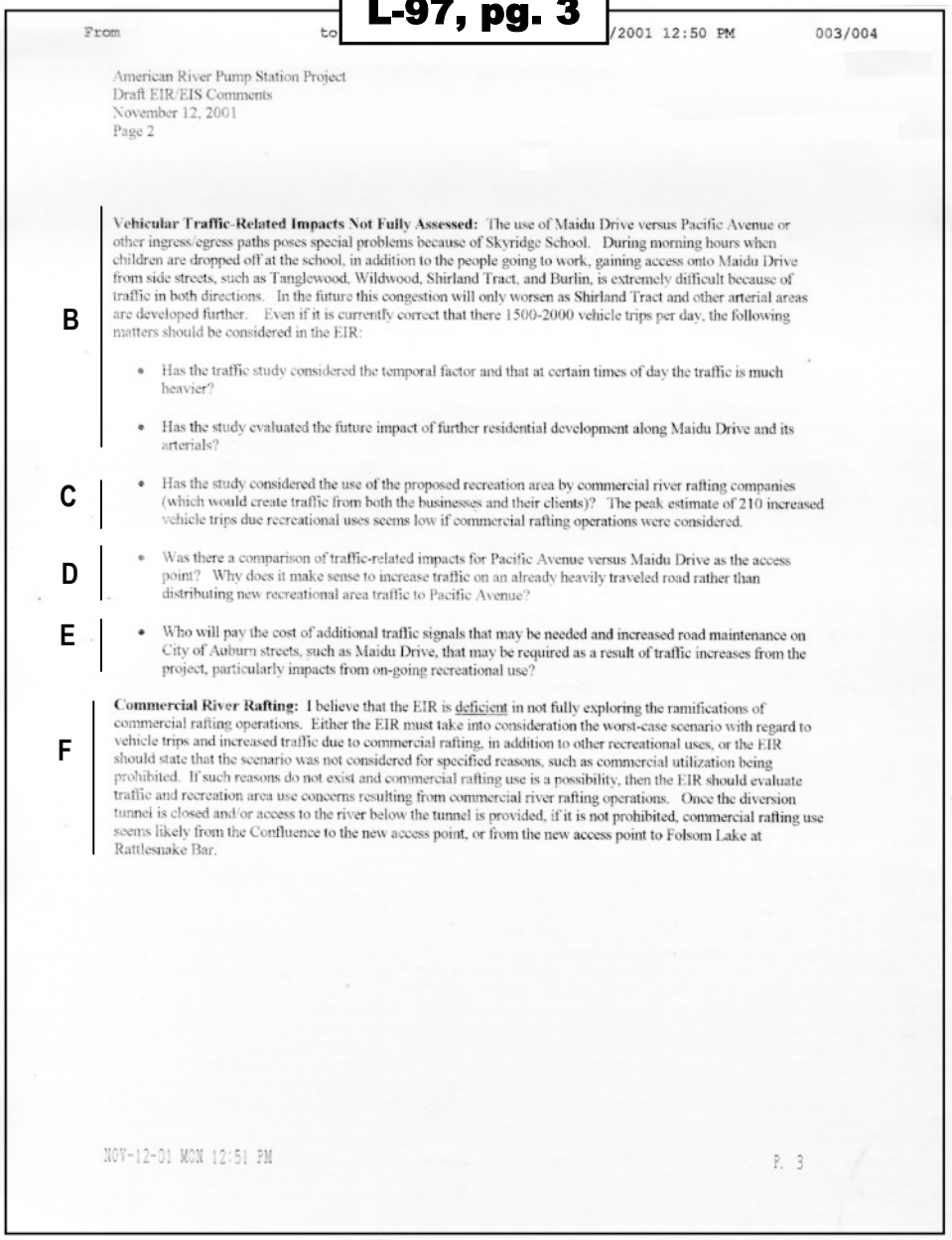
A

- Whether an access via Pacific Avenue is more suitable and in keeping with existing uses - such as the existing American River Canyon (Dam) Overlook site; and
- The fact that "existing" residential impacts should have first consideration if traffic-related impacts are to be minimized - not a "future" camping area; and
- Existing and future traffic scenarios should be examined fully for a Pacific Avenue versus Maidu Drive.
- What are the increased "costs" of access via Pacific Avenue? How do these costs compare to traffic-related improvements that will be needed over time to the already often congested Maidu Drive?

NOV-12-01 MON 12:50 PM P. 2

A. Please refer to Master Response 3.1.10, Project Access. Houses located along Pacific Avenue face the street, are not separated by fencing, and have direct driveway access to the road.

L-97, pg. 3



From to /2001 12:50 PM 003/004

American River Pump Station Project
Draft EIR/EIS Comments
November 12, 2001
Page 2

B **Vehicular Traffic-Related Impacts Not Fully Assessed:** The use of Maidu Drive versus Pacific Avenue or other ingress/egress paths poses special problems because of Skyridge School. During morning hours when children are dropped off at the school, in addition to the people going to work, gaining access onto Maidu Drive from side streets, such as Tanglewood, Wildwood, Shirland Tract, and Burlin, is extremely difficult because of traffic in both directions. In the future this congestion will only worsen as Shirland Tract and other arterial areas are developed further. Even if it is currently correct that there 1500-2000 vehicle trips per day, the following matters should be considered in the EIR:

- Has the traffic study considered the temporal factor and that at certain times of day the traffic is much heavier?
- Has the study evaluated the future impact of further residential development along Maidu Drive and its arterials?

C
- Has the study considered the use of the proposed recreation area by commercial river rafting companies (which would create traffic from both the businesses and their clients)? The peak estimate of 210 increased vehicle trips due recreational uses seems low if commercial rafting operations were considered.

D
- Was there a comparison of traffic-related impacts for Pacific Avenue versus Maidu Drive as the access point? Why does it make sense to increase traffic on an already heavily traveled road rather than distributing new recreational area traffic to Pacific Avenue?

E
- Who will pay the cost of additional traffic signals that may be needed and increased road maintenance on City of Auburn streets, such as Maidu Drive, that may be required as a result of traffic increases from the project, particularly impacts from on-going recreational use?

F **Commercial River Rafting:** I believe that the EIR is deficient in not fully exploring the ramifications of commercial rafting operations. Either the EIR must take into consideration the worst-case scenario with regard to vehicle trips and increased traffic due to commercial rafting, in addition to other recreational uses, or the EIR should state that the scenario was not considered for specified reasons, such as commercial utilization being prohibited. If such reasons do not exist and commercial rafting use is a possibility, then the EIR should evaluate traffic and recreation area use concerns resulting from commercial river rafting operations. Once the diversion tunnel is closed and/or access to the river below the tunnel is provided, if it is not prohibited, commercial rafting use seems likely from the Confluence to the new access point, or from the new access point to Folsom Lake at Rattlesnake Bar.

NOV-12-01 MON 12:51 PM P. 3

B. The commenters' concerns regarding morning peak traffic periods and cumulative development impacts are noted. As more fully described in Master Response 3.1.6, Public River Access Features, the anticipated travel periods associated with the proposed public river access area do not overlap with peak commuter or school traffic trips.

C. CDPR is not proposing or permitting commercial use in this section of the river as part of this project. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

E. The City of Auburn requires payment of traffic impact mitigation fees to put toward these expenses. PCWA would provide mitigation fee payment commensurate with a residential development that would generate a similar level of travel along Maidu Drive (i.e., 214 trips). Because the projected number of project trips represents a peak number that would occur seasonally rather than year-round, this mitigation is considered to be an appropriate "fair share" contribution based upon the proportion of neighborhood impacts that could be associated with the Proposed Project. Please refer to Master Response 3.1.6, Public River Access Features.

F. The proposed public river access facilities were developed by the lead agencies, in cooperation with CDPR as an interim mitigation feature to minimize safety concerns related to anticipated increased boating use of the North Fork American River once it is rewatered. Long-range planning is within the authority and responsibility of CDPR and Reclamation. CDPR is not proposing or permitting commercial use for the rewatered stretch of the North Fork American River, as part of this project. Consideration of commercial rafting activities within the Auburn SRA and development of other recreation-related facilities falls under the responsibility of CDPR and Reclamation, would be part of their long-term comprehensive planning efforts, and not a part of the American River Pump Station Project.

L-97, pg. 4

I would appreciate your more fully weighing the option of access via Pacific Avenue, and what will be required to make ingress/egress safer for all parties, and the inclusion of a full consideration of commercial rafting as a likely possibility.

I would like to request that you add me to the Project Mailing List. Thank you.

Sincerely,

//s//

Todd K. Nishikawa
11130 Tanglewood Drive
Auburn, CA 95603

L-98

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	William J. Turner
ADDRESS:	10125 Snowy Owl Way
CITY/STATE/ZIP:	Auburn, CA. 95603
BUSINESS AND/OR HOME PHONE/FAX:	Tel. (530) 887-1475 Fax. (530) 888-7894 Email: Pmfwest@aol.com
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

The only facility of importance is the river pumping station and it appears that PWCA/USBOR have allowed that project to become diminished in relation to a recreational parking facility. I am opposed to construction of a recreational parking facility in the vicinity of, and in connection with, the river pumping station for many reasons. As example; fires in the American River Canyon caused by recreants, trash, contamination of water, traffic, noise, etc.

If, however, the recreational parking facility is going to be constructed over the objections of residents living in the South Auburn, CA., area, the ingress/egress over Maidu Drive is not appropriate. The EIS/EIR position of not using Pacific Avenue simply because of additional cost is ludicrous. A deference given to campers via Pacific Ave., over permanent residents in the Maidu Drive area!? Where is the good common sense in such planning?

Respectfully submitted,

William J. Turner

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

NOV-12-01 MON 2:44 PM P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features; Master Response 3.1.9, Fire Management; and Master Response 3.1.10, Project Access.

L-99

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR — BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	THOMAS W. TROTTER
ADDRESS:	402 RIVERVIEW DR
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-888-6634 (H) 530-888-7634 (Fax)
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A STATE PARK THAT IS THOROUGHLY THOUGHT THROUGH IS FINE BY ME. IT MUST HAVE ACCESS THAT IS NOT THROUGH A RESIDENTIAL AREA — MAIDA IS A RESIDENTIAL AREA; WAS SECURITY, NOT A PLACE FOR TRANSIENTS TO LOITER! PICK-UP THE TRASH WHICH IS CURRENTLY A PROBLEM THE BOTH P.C.W.A. & A.R.D. NEGLECT GROSSLY; IMPROVE AUBURN IN A GENERAL STATE — MORE HUMAN REVENUE TO THE CITY & STATE — BUILT IN THE PUBLIC INTEREST. I LIVE IN AUBURN INSTEAD OF SACRAMENTO BECAUSE OF THE PLACE & QUIET. CITY NOISE, POLLUTION & THE SECURITY OF HOME, FAMILY, & PROPERTY ARE ALL REASONS I LIVE HERE. A PARK & ACCESS ON MAIDA MAKES NO SENSE — PACIFIC AVENUE IS A BETTER OPTION.

T.W. Trotter
CAPT, USN, Ret.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

NOV-12-01 MON 11:36 AM 5599241234 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-100

TANYA MEETH, 11:03 AM 11/12/01, Tunnel Closure - American Rive

Date: Mon, 12 Nov 2001 11:03:21 -0800 (PST)
From: TANYA MEETH <tmeeth@yahoo.com>
Subject: Tunnel Closure - American River
To: brown@swri.net

Hello Carol,

Attached please find my comments to the EIR for the Tunnel Closure/American River project.

Please let me know if you cannot open the document (it is a Word document), and I will mail, fax or hand deliver it to your office.

Thank you very much for the opportunity to comment!

Regards,

Tanya Meeth
530-823-7448

Do You Yahoo!?
Find a job, post your resume.
http://careers.yahoo.com



Tunnel_closure.doc

L-100, pg. 2

November 12, 2001
American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

To Whom It May Concern:

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

A

My husband and I, residents of Cool, frequently use this trail to commute between Cool and Auburn. This trail is the only legal trail open to mountain bikers that connects the two towns. Riding on highway 49 is NOT an option. It is extremely dangerous, as it lacks a bike lane, has no shoulder, and has high traffic.

I realize that the cost of a bridge would be large. Another lower cost alternative to a bridge would be the construction of a new trail that goes from the dam Overlook to either hwy. 49 at the river, crosses the river at "no hands bridge" then continues up to Cool, linking up possibly to the Olmstead Loop trail.

I fully support the plan to restore the river back to its channel. This is something that should be done. However, there needs to be an alternate trail route made available to mountain bicyclists. Unlike the equestrians, runners, hikers, etc., who will still have access between Auburn and Cool by way of the Western States Trail and the "no hands bridge", mountain bicyclists will NOT have and optional trail route to take. Therefore, it is critical that a new trail alternative be made available to ALL user groups, including mountain bicylists.

I hope that mitigation for closing the existing trail would include all or partial funding for constructing a new trail. Additionally, I would hope that at the time the Auburn to Cool trail is closed, a new legal access trail be made available at that same time (even if it is only temporary, until a permanent trail could be constructed).

Sincerely,

Tanya Meeth
P.O. Box 812
Cool, CA 95614

530-823-7448

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-101

Fax Transmittal Cover Sheet

To: - Surface Water Resources, Inc.

From: Egli

Fax Number:

Date: Sat, Nov 10, 2001 • 9:21 AM

Pages, including cover: 4

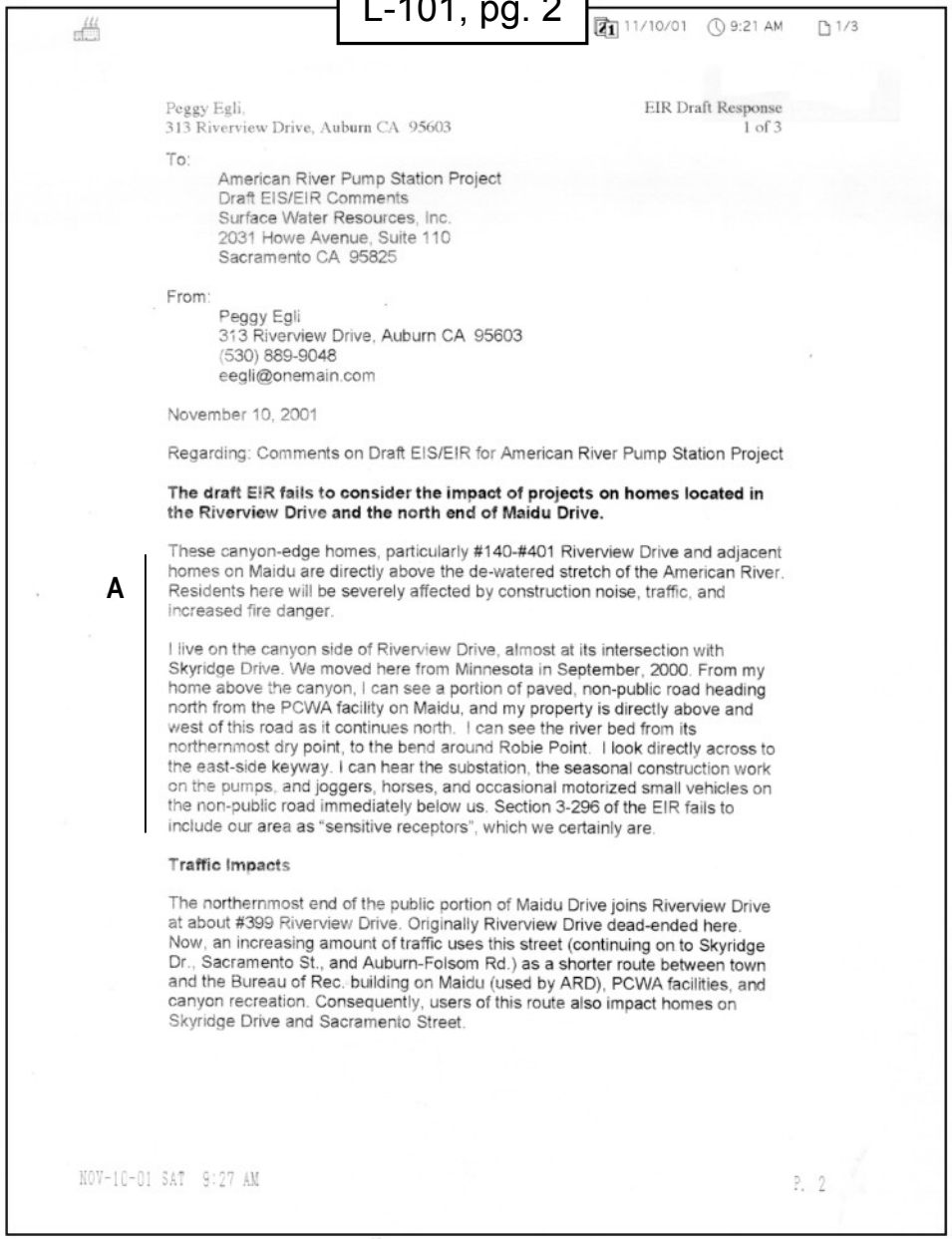
If there is difficulty with this transmission, please call: (530) 889-9048

Note:
Draft EIS/EIR Comments
American River Pump Station Project

from:
Peggy Egli
313 Riverview Drive
Auburn, CA 95603

NOV-10-01 SAT 9:26 AM P. 1

L-101, pg. 2



11/10/01 9:21 AM 1/3

Peggy Egli,
313 Riverview Drive, Auburn CA 95603

EIR Draft Response
1 of 3

To:
American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento CA 95825

From:
Peggy Egli
313 Riverview Drive, Auburn CA 95603
(530) 889-9048
eegli@onemain.com

November 10, 2001

Regarding: Comments on Draft EIS/EIR for American River Pump Station Project

The draft EIR fails to consider the impact of projects on homes located in the Riverview Drive and the north end of Maidu Drive.

A

These canyon-edge homes, particularly #140-#401 Riverview Drive and adjacent homes on Maidu are directly above the de-watered stretch of the American River. Residents here will be severely affected by construction noise, traffic, and increased fire danger.

I live on the canyon side of Riverview Drive, almost at its intersection with Skyridge Drive. We moved here from Minnesota in September, 2000. From my home above the canyon, I can see a portion of paved, non-public road heading north from the PCWA facility on Maidu, and my property is directly above and west of this road as it continues north. I can see the river bed from its northernmost dry point, to the bend around Robie Point. I look directly across to the east-side keyway. I can hear the substation, the seasonal construction work on the pumps, and joggers, horses, and occasional motorized small vehicles on the non-public road immediately below us. Section 3-296 of the EIR fails to include our area as "sensitive receptors", which we certainly are.

Traffic Impacts

The northernmost end of the public portion of Maidu Drive joins Riverview Drive at about #399 Riverview Drive. Originally Riverview Drive dead-ended here. Now, an increasing amount of traffic uses this street (continuing on to Skyridge Dr., Sacramento St., and Auburn-Folsom Rd.) as a shorter route between town and the Bureau of Rec. building on Maidu (used by ARD), PCWA facilities, and canyon recreation. Consequently, users of this route also impact homes on Skyridge Drive and Sacramento Street.

NOV-10-01 SAT 9:27 AM P. 2

A. Please refer to individual responses L-101.B through L-101.H.

B. Please refer to Master Response 3.1.6, Public River Access Features.

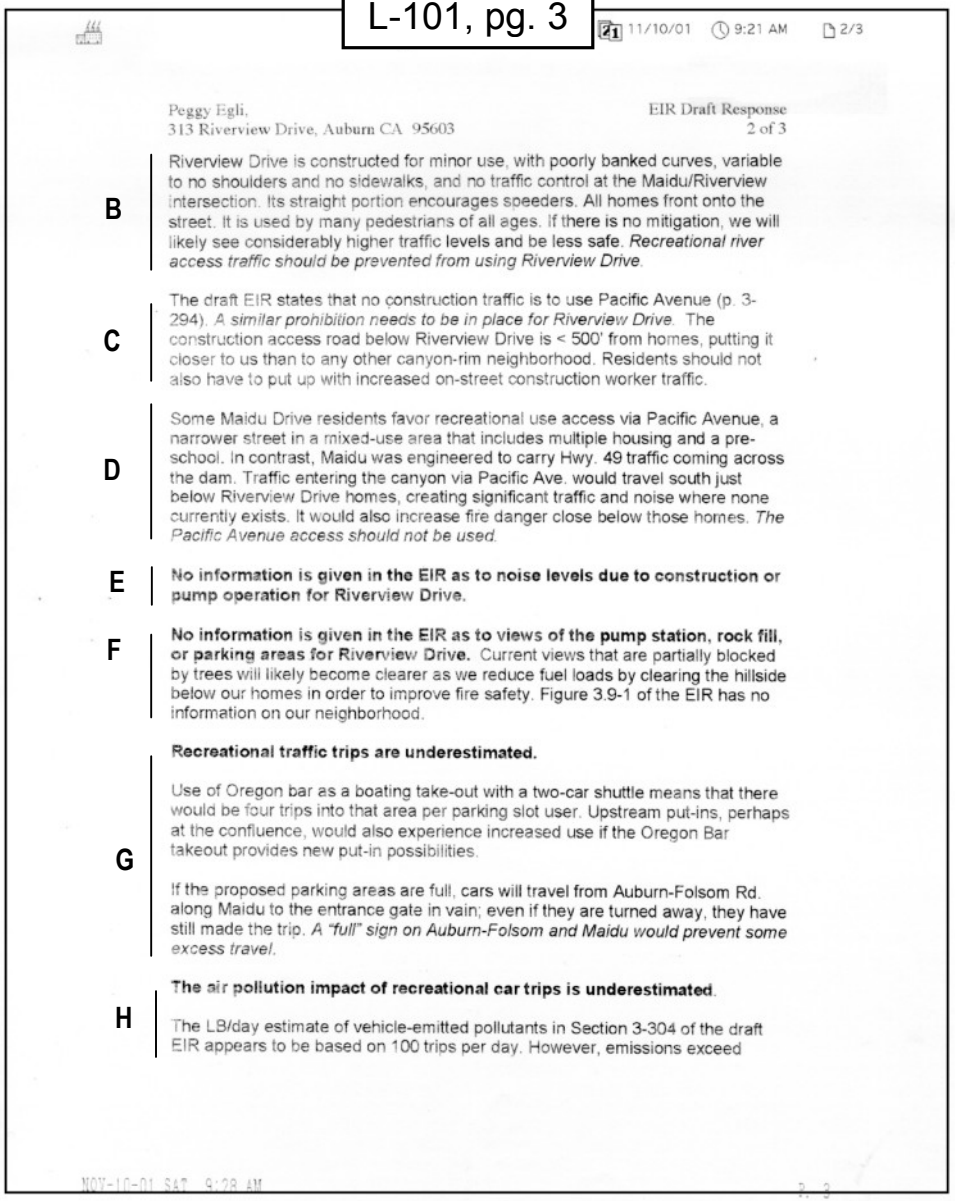
C. The construction access route for the Proposed Project as described in the Draft EIS/EIR avoids Riverview Drive. Additionally, the construction contractor specifications would include stipulations that require construction workers to only use the approved access route. This information is included in Chapter 3.0, Section 3.14.2.5, Environmental Protection and Mitigation Measures and in the Mitigation Plan (Appendix D). This change does not alter the impact conclusions presented in the Draft EIS/EIR.

D. Please refer to Master Response 3.1.10, Project Access.

E. The Draft EIS/EIR recognizes that the Proposed Project would result in potentially significant construction-related noise impacts upon residents within the City of Auburn and proposes environmental protection and mitigation measures, including noise monitoring and modification of construction activities, when necessary, to ensure compliance with the City of Auburn noise ordinance. The evaluation of noise impacts considers the anticipated noise level increase that might occur at the Ridgetop Homes because these were determined nearest to the project site; however, this evaluation does not dismiss the potential for impact at homes further from the site such as those along Riverview Drive. The proposed mitigation elements would benefit all residential areas affected by the project.

As described in the Draft EIS/EIR, the operational noise associated with the Proposed Project would be less than under current conditions (page 3-317) for all areas within hearing range of the project.

L-101, pg. 3



11/10/01 9:21 AM 2/3

Peggy Egli,
313 Riverview Drive, Auburn CA 95603

EIR Draft Response
2 of 3

B Riverview Drive is constructed for minor use, with poorly banked curves, variable to no shoulders and no sidewalks, and no traffic control at the Maidu/Riverview intersection. Its straight portion encourages speeders. All homes front onto the street. It is used by many pedestrians of all ages. If there is no mitigation, we will likely see considerably higher traffic levels and be less safe. *Recreational river access traffic should be prevented from using Riverview Drive.*

C The draft EIR states that no construction traffic is to use Pacific Avenue (p. 3-294). *A similar prohibition needs to be in place for Riverview Drive.* The construction access road below Riverview Drive is < 500' from homes, putting it closer to us than to any other canyon-rim neighborhood. Residents should not also have to put up with increased on-street construction worker traffic.

D Some Maidu Drive residents favor recreational use access via Pacific Avenue, a narrower street in a mixed-use area that includes multiple housing and a pre-school. In contrast, Maidu was engineered to carry Hwy. 49 traffic coming across the dam. Traffic entering the canyon via Pacific Ave. would travel south just below Riverview Drive homes, creating significant traffic and noise where none currently exists. It would also increase fire danger close below those homes. *The Pacific Avenue access should not be used.*

E **No information is given in the EIR as to noise levels due to construction or pump operation for Riverview Drive.**

F **No information is given in the EIR as to views of the pump station, rock fill, or parking areas for Riverview Drive.** Current views that are partially blocked by trees will likely become clearer as we reduce fuel loads by clearing the hillside below our homes in order to improve fire safety. Figure 3.9-1 of the EIR has no information on our neighborhood.

G **Recreational traffic trips are underestimated.**

Use of Oregon bar as a boating take-out with a two-car shuttle means that there would be four trips into that area per parking slot user. Upstream put-ins, perhaps at the confluence, would also experience increased use if the Oregon Bar takeout provides new put-in possibilities.

If the proposed parking areas are full, cars will travel from Auburn-Folsom Rd. along Maidu to the entrance gate in vain; even if they are turned away, they have still made the trip. *A "full" sign on Auburn-Folsom and Maidu would prevent some excess travel.*

H **The air pollution impact of recreational car trips is underestimated.**

The LB/day estimate of vehicle-emitted pollutants in Section 3-304 of the draft EIR appears to be based on 100 trips per day. However, emissions exceed

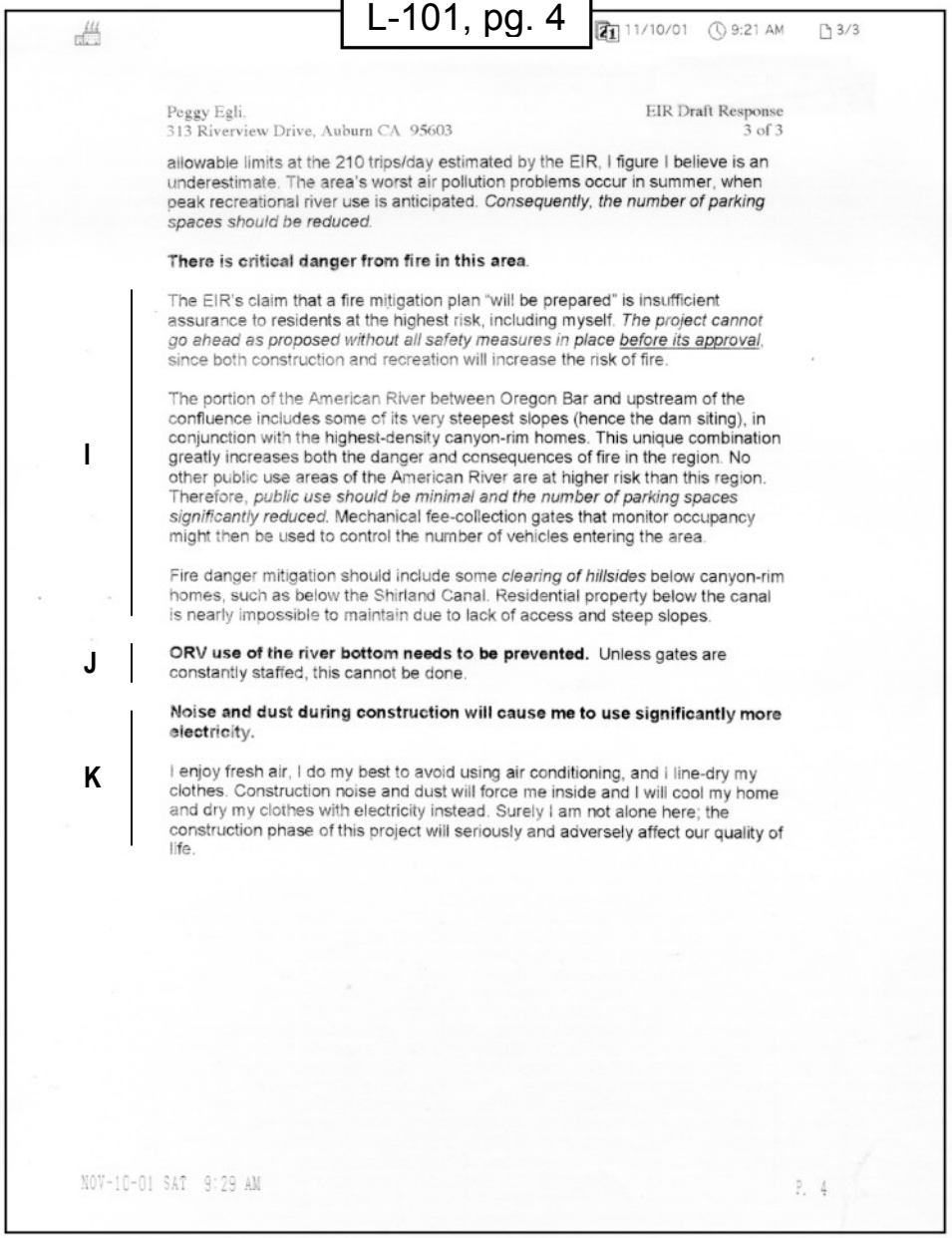
NOV-10-01 SAT 9:28 AM P. 3

F. Views selected for the visual analysis of the Proposed Project and alternatives were meant to be representative, rather than all-inclusive. Generally, the overall visual quality of the project site is expected to be enhanced due to careful architectural consideration of materials selected for construction of the pump station and related facilities, when compared to the seasonal pump station facility and above-ground transmission pipeline. Additionally, implementation of the river restoration component would be considered an improvement in overall visual quality, relative to existing or No Action/No Project Alternative conditions. The removal of fuel loads, and the potential impacts upon visual resources within the canyon are beyond the scope of this document and appropriately are under consideration as part of the Fire Management environmental review process.

G. Please refer to Master Response 3.1.6, Public River Access Features.

H. The lead agencies, in consultation with CDPR, have reduced the total number of parking spaces proposed at the site. Please refer to response L-3.C for an updated analysis of vehicle-related air quality emissions.

L-101, pg. 4



11/10/01 9:21 AM 3/3

Peggy Egli.
313 Riverview Drive, Auburn CA 95603

EIR Draft Response
3 of 3

allowable limits at the 210 trips/day estimated by the EIR, I figure I believe is an underestimate. The area's worst air pollution problems occur in summer, when peak recreational river use is anticipated. *Consequently, the number of parking spaces should be reduced.*

There is critical danger from fire in this area.

The EIR's claim that a fire mitigation plan "will be prepared" is insufficient assurance to residents at the highest risk, including myself. *The project cannot go ahead as proposed without all safety measures in place before its approval,* since both construction and recreation will increase the risk of fire.

I

The portion of the American River between Oregon Bar and upstream of the confluence includes some of its very steepest slopes (hence the dam siting), in conjunction with the highest-density canyon-rim homes. This unique combination greatly increases both the danger and consequences of fire in the region. No other public use areas of the American River are at higher risk than this region. Therefore, *public use should be minimal and the number of parking spaces significantly reduced.* Mechanical fee-collection gates that monitor occupancy might then be used to control the number of vehicles entering the area.

Fire danger mitigation should include some *clearing of hillsides* below canyon-rim homes, such as below the Shirland Canal. Residential property below the canal is nearly impossible to maintain due to lack of access and steep slopes.

J

ORV use of the river bottom needs to be prevented. Unless gates are constantly staffed, this cannot be done.

Noise and dust during construction will cause me to use significantly more electricity.

K

I enjoy fresh air, I do my best to avoid using air conditioning, and I line-dry my clothes. Construction noise and dust will force me inside and I will cool my home and dry my clothes with electricity instead. Surely I am not alone here; the construction phase of this project will seriously and adversely affect our quality of life.

NOV-10-01 SAT 9:29 AM P. 4

I. Please refer to Master Response 3.1.9, Fire Management.

J. Off-road vehicle use would not be permitted in the project area. The entrance booth would be staffed during all hours of operation and the gate would be closed and locked at all other times. Please refer to Master Response 3.1.6, Public River Access Features.

K. While it is recognized that the construction of the American River Pump Station Project likely would create higher noise levels in the study area, these are expected to be minimized by the implementation of the extensive environmental protection measures incorporated into the Proposed Project as described in the Draft EIS/EIR (Section 2.3, page 2-31). Implementation of these measures would include limited hours for activities that generate high noise levels. Excessive dust levels would not be expected during construction due to the rocky nature of the ground at the project site. However, applicable dust control measures are included in the Mitigation Plan (Appendix C) and identified in Chapter 2.0, Description of Alternatives, Section 2.3, Environmental Protection and Mitigation Measures in the Final EIS/EIR. Additionally, mitigation includes on-going monitoring for effectiveness of emission control measures, inspections by local air pollution control district authorities, and a public outreach element that would permit the public to obtain information and provide input regarding project construction activities.

L-102

FAX MEMO

November 9, 2001

To: American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 10
Sacramento, CA 95825

From: Mary Abbott
P.O. Box 6283
Auburn, CA 95604
(530) 346-7155 ph
(530) 346-7177 fax

RE: Draft EIS/EIR

I spoke briefly at the public hearing held in Auburn last month. I am faxing to you now a copy of my written comments, which I just emailed a few minutes ago to Carol Brown at your office. (I was told was okay when I called your office at about 1:00 p.m. today.)

I thought it best that I fax these as well, just to make sure you received them, complete with a signature.

NOV- 9-01 FRI 4:08 PM P. 1

L-102, pg. 2

Mary Abbott

From: Mary Abbott <mabbott@wizwire.com>
To: <brown@swri.net>
Sent: Friday, November 09, 2001 3:49 PM
Subject: RE: American River Pump Station Project

I am writing in response to the Draft EIS/EIR for the American River Pump Station Project.

A Overall, I believe this is a great project--increasing Placer County's water supply while improving safety and restoring a portion of river. However, it pits one recreation interest against another. While whitewater boaters will have a new section of river to run, hikers, bikers, runners and equestrians will lose access to miles and miles of trails. I would like to see the final EIS/EIR address this impact--the closure of the Auburn to Cool trail--more thoroughly. Presently, the document states that "Due to is popularity and use in special events, this closure would result in a significant unavoidable impact." My question is, whose conclusion is that this impact is "unavoidable"? There are solutions. One would be the construction of a bridge to cross the river and keep the Auburn to Cool trail open. A new alternative should be developed to address this so-called "unavoidable" impact. Additionally, I believe there needs to be more study of the amount of recreational use of this trail. Though I cannot claim to have read the entire document cover to cover, I did not find any thorough study of this issue. On page 3-204, there is a statement: "The anticipated construction, operation, and maintenance impacts on recreation were assessed in part by consulting with Reclamation and CDPR staff." These are knowladgeable professionals, still I believe there should have been more study and documentation of trail use.

The Auburn area is know nationwide--and even increasingly internationally--for the Western States 100 mile endurance run and equestrian Tevis Cup. Horsemen make a significant contribution to the local economy. Decreasing trail access from Auburn to Cool will have an economic impact. This too should be studied. Also, if the trail is closed, there will be more trailers driving from Auburn to Cool via Highway 49 to access Cool side trails. This will not make commuters and weekend motorists happy, as you would know if you have ever been stuck behind a gooseneck trailer on the uphill curves!

Re: the current preferred alternative. If new roadways and parking lots are to be constructed, please consider impact on equestrian trails. Please do not cover current trails with roadway. If trails must be covered, new dirt trails for equestrians should be constructed along side the roads. I am also wondering whether either of the two new parking areas (Auburn Site and Oregon Bar) will have spaces for horse trailers. I did not see such specifically mentioned in the Draft EIS/EIR. At least one of the new lots, I believe, should have horse trailer access for a minimum of six rigs. Currently, the trailhead at the Overlook is often packed with trailers on the weekend. If would be great to increase parking for horse trailers!

In summary, most important, I believe, is keeping the Auburn to Cool trail open. The plan to increase water supply while restoring the river is excellent. The plan, however, stops short of doing the best it can for our area. There should be no need to trade off one form of recreation for another. Many people live in Auburn because they love the quality of life in this region--which includes great recreational opportunities. The current preferred plan would, overall, decrease these opportunities. Let's take the plan a step further and meet the needs of ALL current recreationists, and not trade off one for another.

Thank you for considering my comments.

Mary Abbott
(Equestrian--who also hikes, runs, rides a mountain bike, and is a former professional raft guide!)
P.O. Box 6283
Auburn, CA 95604

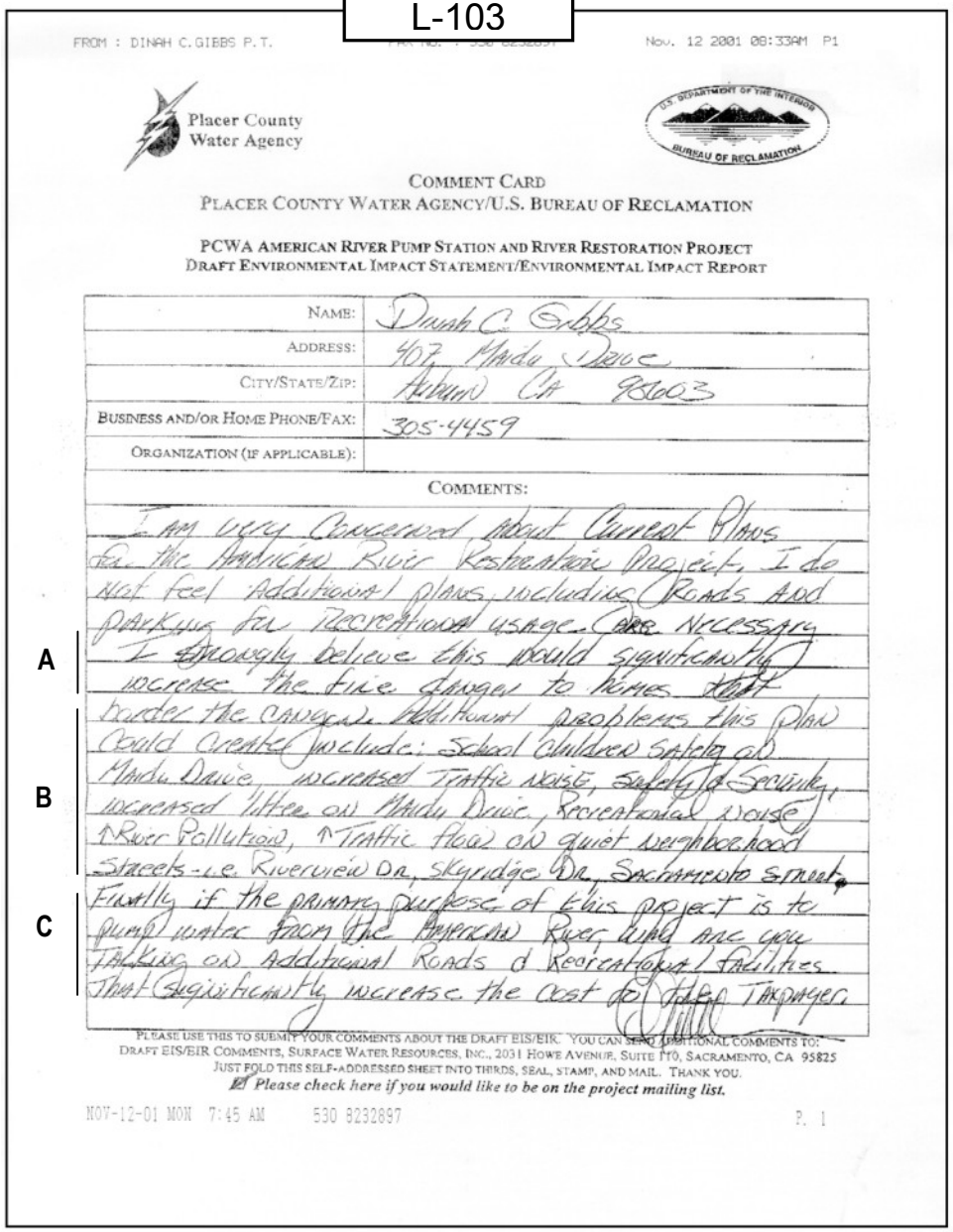
Mary Abbott

11/9/01

NOV- 9-01 FRI 4:08 PM P. 2

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-103



FROM : DINAH C. GIBBS P.T. Nov. 12 2001 08:33AM P1

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dinah C. Gibbs
ADDRESS:	407 Mardu Drive
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	305-4459
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I am very concerned about current plans for the Hodrickes River Restoration Project. I do not feel additional plans, including Roads and parking for recreational usage. Are necessary. I strongly believe this would significantly increase the fire danger to homes that border the canyon. Additional problems this plan could create include: School Children Safety on Mardu Drive, increased traffic noise, Safety & Security, increased litter on Mardu Drive, Recreational noise ↑River Pollution, ↑Traffic flow on quiet neighborhood streets - i.e. Riverview Dr, Skyridge Dr, Sacramento street. Finally if the primary purpose of this project is to pump water from the American River why are you talking on Additional Roads & Recreational facilities that significantly increase the cost to the Taxpayer.

A

B

C

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

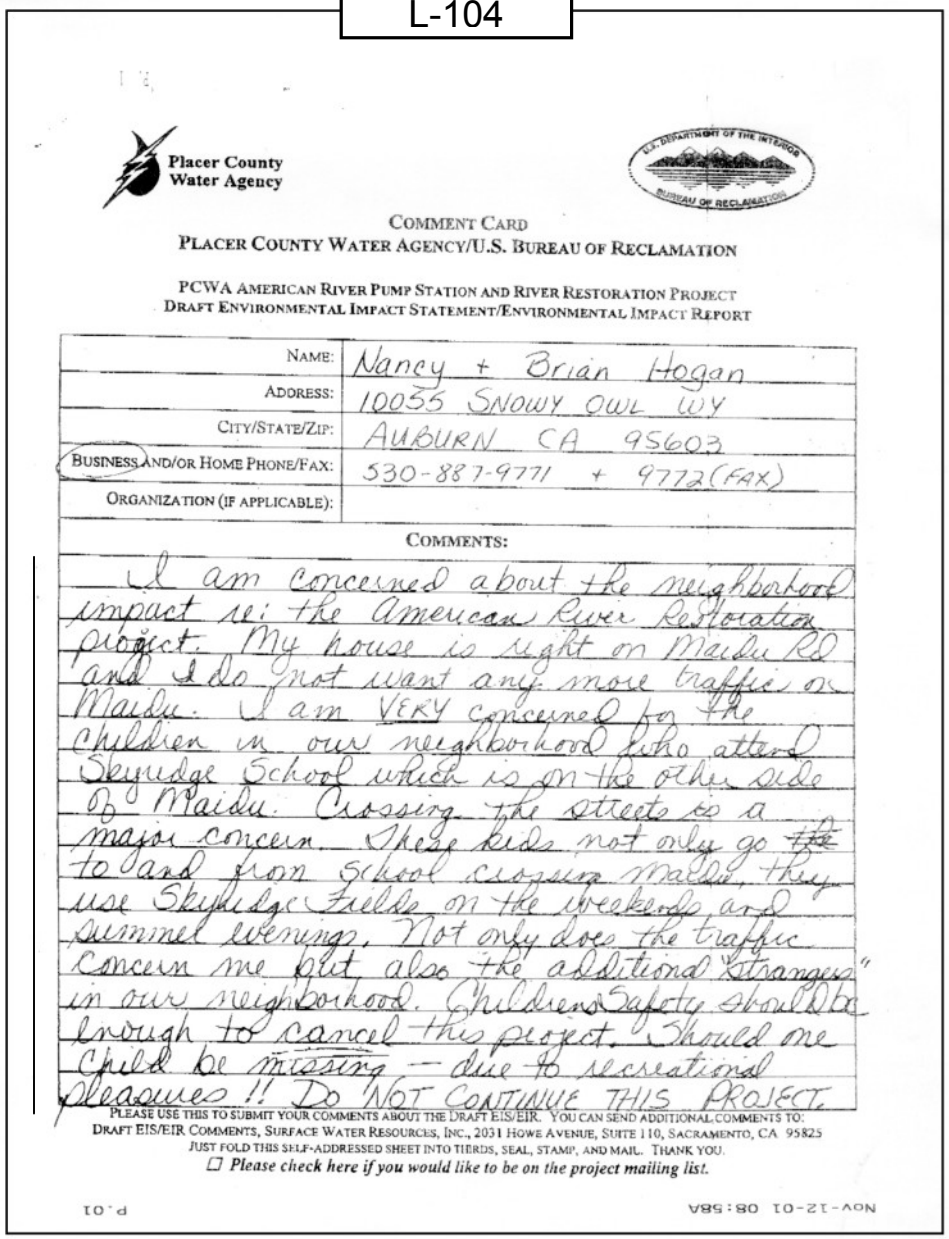
NOV-12-01 MON 7:45 AM 530 9232897 P. 1

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

C. The Draft EIS/EIR presents the threefold purpose of the project in Chapter 1.0, Introduction (page 1-1), which is not limited to the provision of a water supply diversion for PCWA's Middle Fork Project water entitlement, but also includes elimination of the public safety hazard created by the Auburn Dam bypass tunnel, and restoration of the river channel. The Draft EIS/EIR provides additional information supporting these project purposes in Section 1.3, Project Needs and Objectives (page 1-5). Although PCWA's primary purpose is to obtain a permanent pump station to divert American River water, Reclamation and the State of California have two additional purposes. Since the decision on where to locate the pump station would inevitably be affected by these entities' decisions with respect to these latter two purposes, it made sense to analyze possible alternative locations for the pump station as part of the same overall environmental review process, intended to satisfy by CEQA and NEPA.

L-104



Placer County Water Agency

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Nancy + Brian Hogan
ADDRESS:	10055 SNOWY OWL WY
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-887-9771 + 9772 (FAX)
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I am concerned about the neighborhood impact re: the American River Restoration project. My house is right on Maidu Rd and I do not want any more traffic on Maidu. I am VERY concerned for the children in our neighborhood who attend Skyridge School which is on the other side of Maidu. Crossing the streets is a major concern. These kids not only go to and from school crossing Maidu, they use Skyridge fields on the weekends and summer evenings. Not only does the traffic concern me but also the additional "strangers" in our neighborhood. Children's Safety should be enough to cancel this project. Should one child be missing — due to recreational pleasures !! DO NOT CONTINUE THIS PROJECT.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

P.01 NOV-12-01 08:58A

A

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-105

Ron Otto, 06:02 PM 11/11/01, PCWA Pump Station DEIR--Ophir

From: "Ron Otto" <ophir1@quiknet.com>
To: "Carol Brown" <brown@swri.net>
Subject: PCWA Pump Station DEIR--Ophir Area Property Owners Assoc Request to extend comment period
Date: Sun, 11 Nov 2001 18:02:53 -0800
X-MSMail-Priority: Normal
X-Mailer: Microsoft Outlook Express 5.50.4522.1200
X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4522.1200

OPHIR AREA PROPERTY OWNERS ASSOC., INC.

PO BOX 752

NEWCASTLE, CA, 95658

November 11, 2001 Via e-mail and fax

Re: Request to extend comment period DEIR/DEIS PCWA American River Pump Station

American River Pump Station Project

Draft EIR/EIS Comments

Surface Water Resources, Inc.

2031 Howe Avenue, Suite 110

Sacramento, CA 95825

Dear Ms. Brown:

A Our community organization, *the Ophir Area Property Owners Association, requests an immediate 30 day or more extension of the comment period for the proposed PCWA American River Pump Station Project DEIR/DEIS.* Proper notice was not- and most certainly should have been given us, so that we could participate as stakeholders and as directly affected residents along the Auburn Ravine. We deserve the same opportunity for public participation afforded numerous others on the distribution list, many of whom have far less at stake than do we.

As we learned of the close of comment and obtained a copy of the DEIR/DEIS not in a timely fashion, i.e. just a few days ago, we request an immediate response to this request.

Sincerely,

Ronald Otto for the Auburn Ravine Creek Preservation Committee, and Ophir Area Property Owners Association

Printed for "Carol Brown, Surface Water Resources, Inc." <br... 1

A. The public review period for the draft EIS/EIR was extended for an additional 30 days, for a total public review period of 93 days.

L-106

Mike Lee, Architect

3600 Seymour Avenue, West Sacramento, CA 95691
916-372-0313 voice - voicemail 916-372-8512 fax
mleeaia@jps.net email

11 Nov 01

American River Pump Station Project
Draft EIS/EIR Comments, Surface Water Resources
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Close the Auburn Dam Diversion Tunnel and Restore the American River

Dear Folks:

A My wife and I respectfully urge the adoption of the preferred "Mid-Channel Diversion Alternative" to provide for the closure of the Diversion Tunnel at the Auburn Dam construction site and restoration of the river into its natural channel. This will also facilitate water supply to customers in Placer County.

Sincerely,

Mike Lee Jude Lee

Licensed California Architect C25664

A. Project support noted

L-107

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

B

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Signed,
Ken Paradis

NOV-13-01 TUE 9:44 AM P. 2

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-108

11/13/2001 10:37 FAX 001

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

B

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Signed,
Juna Paradis

NOV-13-01 TUE 9:43 AM P. 1

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-109

Elizabeth G. Flynn
952 Campbell Circle
Woodland, CA 95776
(530) 406-8513

November 10, 2001

American River Pump Station Project
c/o SWRI, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Dear Gentlepersons:

A Legislation signed into effect by Governor Davis, in October 2001, has changed the way water suppliers and markets must interact. So, now PCWA has new responsibilities for the environmental impacts on water service programs in it's delivery. Therefore EIS/EIR, of the American River Pump Station Project, must fully consider the environmental impacts, alternatives and measures for avoidance and mitigation within the body of the CEQA & NEPA documentation.

More than ever PCWA is clearly responsible for indirect and cumulative impacts relative to water diversion and delivery from the prospered project.

B A fourth alternative of tunnel closure without a pump station project would meet part of the project purpose of restoring the river to its state-owned channel. EIS/EIR should be reissued to accommodate recent state legislation to include this fourth alternative. By Comparison, the alternative of a pump station without tunnel closure meets

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. The commenter suggested that the EIS/EIR should be reissued to accommodate recent state legislation to include the fourth alternative. Senate Bill 221 (SB-221) prohibits a city or county from approving a residential subdivision of more than 500 units unless there is written verification that a sufficient water supply is or will be available for the development. None of the alternatives discussed in the Draft EIS/EIR are proposing subdivision development and therefore SB-221 is not within the scope of this project, nor does its passage affect the analysis of the project or its alternatives.

L-109, pg. 2

Elizabeth S. Flynn
page 2

November 10, 2001

The project purposes, in part.

All alternatives need to be considered accordingly. Holding State water rights does not guarantee use of federal land and public trust resources for appropriation of the water rights.

C

I support no project alternative until the necessary corrections are made to the project EIS/EIR. However, the project alternative must also provide for mitigation of any loss to the Auburn Cool trail access by including a bridge over the river to prevent the loss of established access.

The loss of the Auburn-Cool trail would be highly significant. Significant in terms of recreation and transportation — but is not unavoidable.

D

Thank you for your consideration.

Sincerely,
Elizabeth S. Flynn

C. The commenter also stated "holding state water rights does not guarantee use of federal land and public trust resources for appropriation of the water rights" and this comment has been noted. The purpose of the proposed project is not simply to exercise water rights, but to utilize those existing rights to meet the water needs of the residents of Placer County and to prevent shortages or a building moratorium. Also, please see Response L-21.A and Response L-112.B.

D. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-110

GARY W. ESTES
3001 BOWIE AVE. • FORT COLLINS, CO • 80526-2399
PHONE: (970) 337-1621

November 13, 2001 VIA FAX TO (916) 286-0957

Ms. Carol Brown
Surface Water Resources, Inc.
ATTN: American River Pump Station Project
Draft EIS/EIR Comments
2031 Howe Ave., Suite 110
Sacramento, CA 95825

Re: REVISED COMMENTS TO REPLACE THOSE FAXED LAST NIGHT

Dear Ms. Brown:

Thank you for sending all the draft documents to me. I would like to receive a copy of the Final EIS/EIR and all appendices when completed. Please send them to the address above. Also will the final documents be available on a CD?

These personal comments are offered on the above referenced document. To reduce space requirements for making comments, I have abbreviated the Executive Summary as (ES) and the Draft EIS/EIR as (D).

A

1) I am very pleased to support the Proposed Project – Mid-Channel Diversion Alternative. This alternative represents a winning combination of solutions for a number of stakeholders. None of the other alternatives achieve this level of fulfilling the diverse interests of so many stakeholders:

- Placer County Water Agency (PCWA) obtains a year-round source of water while using its water rights in the American River.
- The U.S. Bureau of Reclamation receives a permanent solution to its water-pumping obligation to PCWA and removes the public safety hazard created by the Auburn Dam diversion tunnel.
- The environment wins with a ¾-mile section of the North Fork American River returned to productive use by fish and aquatic life forms.
- The environmentally superior project has been selected even though it is the most costly in short-term economic terms as measured by money.
- The recreational community loses easy access to the Auburn-to-Cool Trail, but wins with re-opening of 4.5 miles of river closed for over 25-years.
- This river re-opening honors the Public Trust Doctrine contained in California's Constitution, which protects the rights of citizens to have access and use of their rivers.

B

2) The table of contents of Appendix D indicates a "List of Acronyms and Abbreviations" on page A-1, but none was found in my copy.

C

3) The volume with Appendices A-G is made more difficult to follow due to the identification system for the appendices. Having Appendix D in Appendix D is an example of where confusion is created. Also having two appendices with the same letter in the same volume

A. Project support noted.

B. A list of acronyms and abbreviations is included in the List of Acronyms and Abbreviations of the Final EIS/EIR. This change does not alter the conclusions presented in the Draft EIS/EIR.

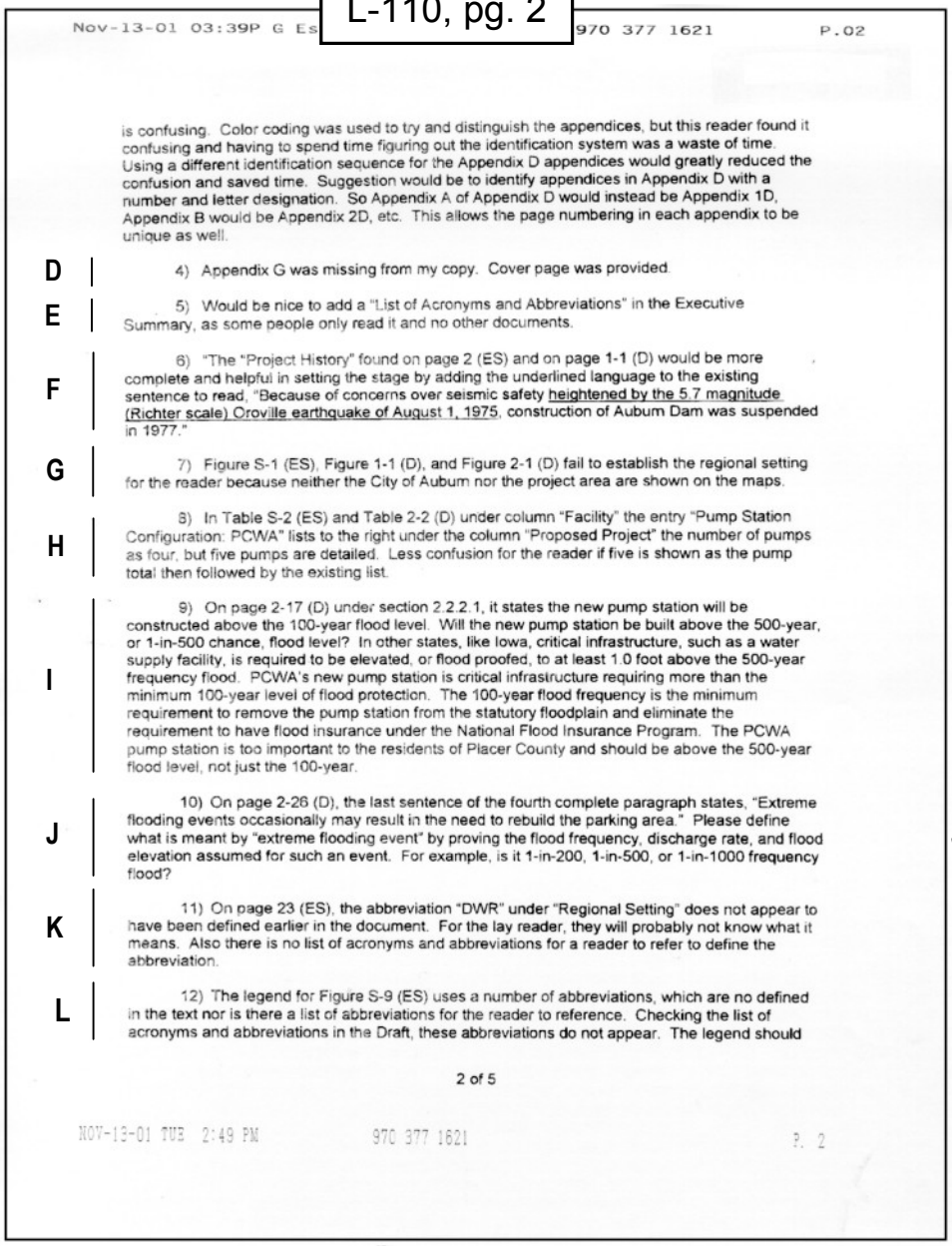
C. Comment noted.

D. Reclamation frequently includes the biological opinion in the Final EIS. Ultimately, Reclamation cannot issue the Record of Decision for an action until it has received the federal resource agencies' biological opinions. Appendix G, National Marine Fisheries Service Coordination and Consultation, is a placeholder for the agency's biological opinion.

E. Please refer to Response L-110.B.

F. The suggested revision regarding the Project History section is included in Chapter 1.0, Section 1.2, Project History of the Final EIS/EIR. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-110, pg. 2



Nov-13-01 03:39P G Es 970 377 1621 P.02

is confusing. Color coding was used to try and distinguish the appendices, but this reader found it confusing and having to spend time figuring out the identification system was a waste of time. Using a different identification sequence for the Appendix D appendices would greatly reduced the confusion and saved time. Suggestion would be to identify appendices in Appendix D with a number and letter designation. So Appendix A of Appendix D would instead be Appendix 1D, Appendix B would be Appendix 2D, etc. This allows the page numbering in each appendix to be unique as well.

D 4) Appendix G was missing from my copy. Cover page was provided.

E 5) Would be nice to add a "List of Acronyms and Abbreviations" in the Executive Summary, as some people only read it and no other documents.

F 6) "The "Project History" found on page 2 (ES) and on page 1-1 (D) would be more complete and helpful in setting the stage by adding the underlined language to the existing sentence to read, "Because of concerns over seismic safety heightened by the 5.7 magnitude (Richter scale) Oroville earthquake of August 1, 1975, construction of Auburn Dam was suspended in 1977."

G 7) Figure S-1 (ES), Figure 1-1 (D), and Figure 2-1 (D) fail to establish the regional setting for the reader because neither the City of Auburn nor the project area are shown on the maps.

H 8) In Table S-2 (ES) and Table 2-2 (D) under column "Facility" the entry "Pump Station Configuration: PCWA" lists to the right under the column "Proposed Project" the number of pumps as four, but five pumps are detailed. Less confusion for the reader if five is shown as the pump total then followed by the existing list.

I 9) On page 2-17 (D) under section 2.2.2.1, it states the new pump station will be constructed above the 100-year flood level. Will the new pump station be built above the 500-year, or 1-in-500 chance, flood level? In other states, like Iowa, critical infrastructure, such as a water supply facility, is required to be elevated, or flood proofed, to at least 1.0 foot above the 500-year frequency flood. PCWA's new pump station is critical infrastructure requiring more than the minimum 100-year level of flood protection. The 100-year flood frequency is the minimum requirement to remove the pump station from the statutory floodplain and eliminate the requirement to have flood insurance under the National Flood Insurance Program. The PCWA pump station is too important to the residents of Placer County and should be above the 500-year flood level, not just the 100-year.

J 10) On page 2-26 (D), the last sentence of the fourth complete paragraph states, "Extreme flooding events occasionally may result in the need to rebuild the parking area." Please define what is meant by "extreme flooding event" by proving the flood frequency, discharge rate, and flood elevation assumed for such an event. For example, is it 1-in-200, 1-in-500, or 1-in-1000 frequency flood?

K 11) On page 23 (ES), the abbreviation "DWR" under "Regional Setting" does not appear to have been defined earlier in the document. For the lay reader, they will probably not know what it means. Also there is no list of acronyms and abbreviations for a reader to refer to define the abbreviation.

L 12) The legend for Figure S-9 (ES) uses a number of abbreviations, which are no defined in the text nor is there a list of abbreviations for the reader to reference. Checking the list of acronyms and abbreviations in the Draft, these abbreviations do not appear. The legend should

2 of 5

NOV-13-01 TUE 2:49 PM 970 377 1621 P. 2

G. The text of the Draft EIS/EIR (page 3-5) provides further explanation of the regional study area. Key features of the study area (i.e., Folsom Reservoir and the American River) are shown on Figure 2-2, page 2-3.

H. Comment noted.

I. Pages 2-8 and 2-17 of the Draft EIS/EIR state that the Proposed Project would be built above the 100-year flood level at elevation 560 ft msl. At this elevation, the proposed pump station site is approximately 5 feet above the estimated 100-year flood level. This level of flood protection is considered the minimum requirement for this type of facility under common engineering practices. There are currently no requirements to construct water supply infrastructure above the 500-year flood level. Although this specification, as noted by the commenter, is federally-required for critical flood control infrastructure projects, the pump station is not a flood control structure. While PCWA considers the pump station to be critical infrastructure necessary to supply water to customers in its service area, economic considerations would prevent construction of the pump station above the 500-year flood elevation. It is more economical to design the pump station above the 100-year flood level, and design the structure to tolerate inundation from infrequent flood events. To reduce the risk of damage due to flooding, all portions of the diversion structure would be designed to tolerate inundation during flood events greater than the 1½ year, bank-full event. While damage during high flood events may occur, the risks to water supply reliability would be significantly decreased or eliminated, relative to the existing condition.

J. As described in Master Response 3.1.6, Public River Access Features, the lead agencies, in coordination with CDPR, have revised the proposed public river access features and propose only development of riverside parking to accommodate 3 handicap-accessible spaces and a vehicle turnaround area for loading and unloading equipment. It is anticipated that minor maintenance will be required each year.

K. An updated list of acronyms and abbreviations is provided in the Final EIS/EIR. The acronym DWR is used for the California Department of Water Resources. This change does not alter the conclusions presented in the Draft EIS/EIR.

L. The acronyms included on Figure S-9 are included in the updated acronym and abbreviation list provided at the front of the Final EIS/EIR.

L-110, pg. 3

stand-alone with the full names given without abbreviations. This is especially important in an executive summary.

M 13) On page 36 (ES) under "Public Health and Worker Safety," the third sentence from the bottom of is missing the word "in" between "be" and "place."

N 14) On page 39 (ES) in the first complete paragraph the acronym "VELB" is used, but no defined in the text. The common practice is to identify an acronym before using it.

O 15) Chapter 3.0 (D) is difficult to read, as there is no description in the "Introduction" as to where the figures and tables for the chapter are located. When reading the section "3.11 Power Supply," it took me awhile to figure out Table H-3.11-1 mentioned on page 3-268 is located in Appendix H. People do not read entire chapters, but focus on areas of specific interest. They will read the "Introduction" to understand how the chapter is organized and then move on to specific interest. Suggest language be added in the "Introduction" as to the location, or on each page where figures and tables are mentioned indicate where they are located.

P 16) Figure 3.8-2 (D) on page 3-205 only shows parts of the Auburn-to-Cool Trail and Western States Trail. The map does not indicate that the trails are incomplete and in fact extend further than shown. The map should correctly show the trails to the extend of the area depicted on the map or indicate that the trails are not shown to extend they actually exist on the ground in the area depicted.

17) On page 3-263 (D) under "Central Valley Project Hydropower System:

Q a) The first sentence describes the CVP hydropower system having eight power plants and two pump-generating plants for a total of ten plants. Reference is made to Table 3.11-1, which lists eleven plants. Please reconcile the different between text and table.

R b) The third sentence describes the installed capacity at 2,044,350 kilowatts. Reference is made to Table 3.11-1 showing total capacity at 2,085,350. Please reconcile the different between text and table.

18) The following comments refer to both Table S-3 (ES) and Table 2-7 (D) since they appear to contain the same information. My page references will be made to the Draft:

S a) My reading and understanding of the tables would have been easier and faster if some explanation had been provided when the tables were introduced. This could be achieved by taking some language on page 3-3 (D) under "Impact Analysis" and modifying it. Let me suggest the following:

"Table ___ presents the results of the assessment of potential environmental impacts and mitigation measures of the Proposed Project and alternatives. Environmental impacts are grouped as either Facilities-Related Impacts or Diversion-Related Impacts."

Then add the 3rd and 4th sentences of the first paragraph under "Impact Analysis." Replace "effects" in the 3rd sentence with "impacts." Follow this with the first sentence of the second paragraph. Replace "effects" at the beginning of the paragraph with "impacts." Then add the following:

M. This correction is noted in the Executive Summary to the Final EIS/EIR. This change does not alter the conclusions presented in the Draft EIS/EIR.

N. An updated list of acronyms and abbreviations is provided in the Final EIS/EIR. The acronym VELB is used for Valley Elderberry Longhorn Beetle. This change does not alter the conclusions presented in the Draft EIS/EIR.

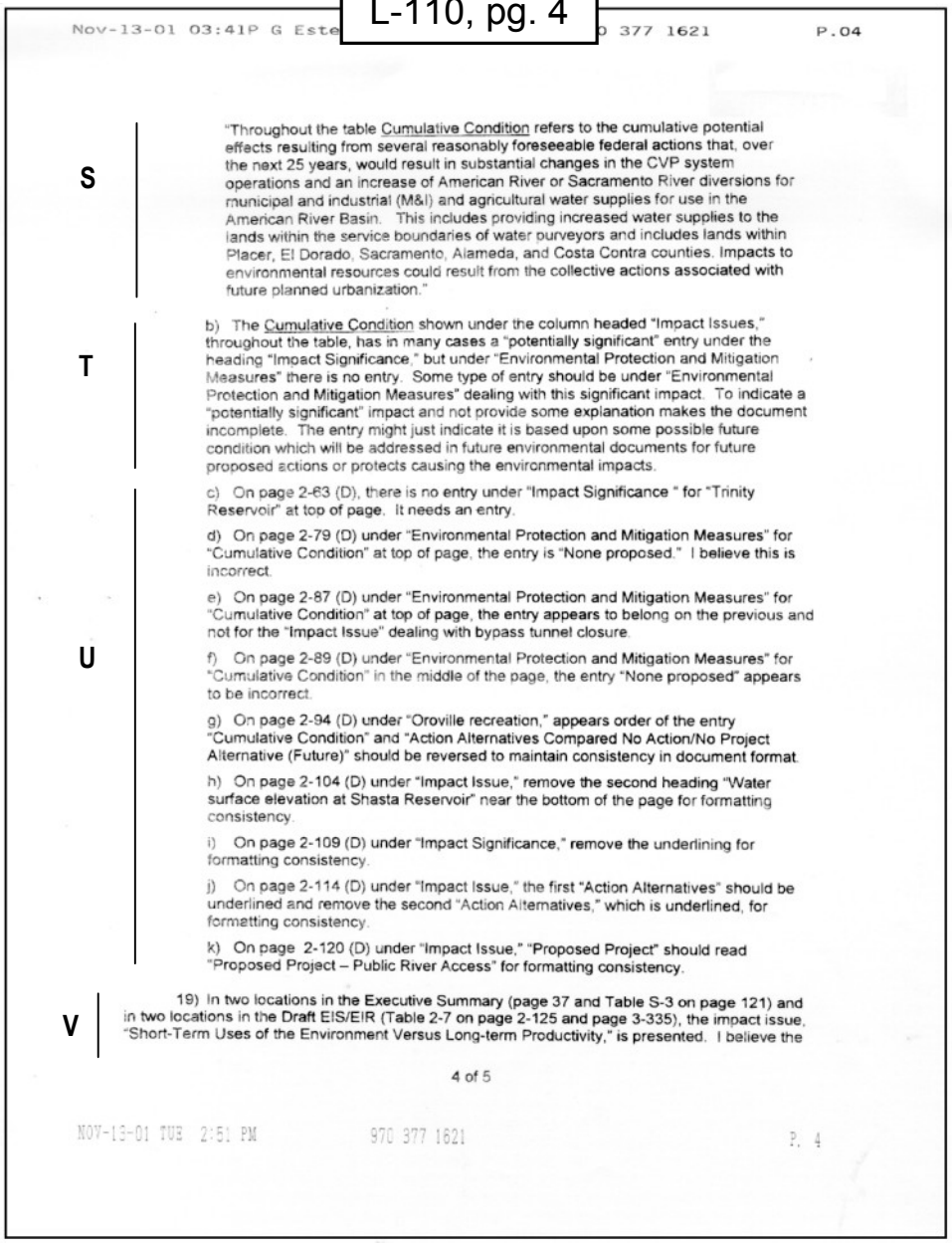
O. The Draft EIS/EIR makes reference to Appendix H in Chapter 3.0, Section 3.3.2, Diversion-related Analysis Framework, paragraph 3, page 3-14. Additionally, in most of the impact evaluation sections, Appendix H is indicated the first time a figure or table located in that appendix is referenced. However, to provide additional clarification, an additional explanation is provided in Chapter 3.0, Section 3.1.1.2, Environmental Consequences/Impact Analysis. This change does not alter the conclusions presented in the Draft EIS/EIR.

P. A revised trails map has been prepared and is included in Chapter 3.0, Section 3.8, Recreation, 3.8.1.2, Project Area Setting. This change does not alter the conclusions presented in the EIS/EIR.

Q. The correction to the description of the Central Valley Project hydropower system is included in Chapter 3.0, Section 3.11.1, Affected Environment. This change does not alter the conclusions presented in the Draft EIS/EIR.

R. The correction regarding the installed power capacity of the CVP hydropower system is included in Chapter 3.0, Section 3.11.1, Affected Environment. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-110, pg. 4



Nov-13-01 03:41P G Este 0 377 1621 P.04

S

"Throughout the table Cumulative Condition refers to the cumulative potential effects resulting from several reasonably foreseeable federal actions that, over the next 25 years, would result in substantial changes in the CVP system operations and an increase of American River or Sacramento River diversions for municipal and industrial (M&I) and agricultural water supplies for use in the American River Basin. This includes providing increased water supplies to the lands within the service boundaries of water purveyors and includes lands within Placer, El Dorado, Sacramento, Alameda, and Costa Contra counties. Impacts to environmental resources could result from the collective actions associated with future planned urbanization."

T

b) The Cumulative Condition shown under the column headed "Impact Issues," throughout the table, has in many cases a "potentially significant" entry under the heading "Impact Significance," but under "Environmental Protection and Mitigation Measures" there is no entry. Some type of entry should be under "Environmental Protection and Mitigation Measures" dealing with this significant impact. To indicate a "potentially significant" impact and not provide some explanation makes the document incomplete. The entry might just indicate it is based upon some possible future condition which will be addressed in future environmental documents for future proposed actions or protects causing the environmental impacts.

U

c) On page 2-63 (D), there is no entry under "Impact Significance " for "Trinity Reservoir" at top of page. It needs an entry.

d) On page 2-79 (D) under "Environmental Protection and Mitigation Measures" for "Cumulative Condition" at top of page, the entry is "None proposed." I believe this is incorrect.

e) On page 2-87 (D) under "Environmental Protection and Mitigation Measures" for "Cumulative Condition" at top of page, the entry appears to belong on the previous and not for the "Impact Issue" dealing with bypass tunnel closure.

f) On page 2-89 (D) under "Environmental Protection and Mitigation Measures" for "Cumulative Condition" in the middle of the page, the entry "None proposed" appears to be incorrect.

g) On page 2-94 (D) under "Oroville recreation," appears order of the entry "Cumulative Condition" and "Action Alternatives Compared No Action/No Project Alternative (Future)" should be reversed to maintain consistency in document format.

h) On page 2-104 (D) under "Impact Issue," remove the second heading "Water surface elevation at Shasta Reservoir" near the bottom of the page for formatting consistency.

i) On page 2-109 (D) under "Impact Significance," remove the underlining for formatting consistency.

j) On page 2-114 (D) under "Impact Issue," the first "Action Alternatives" should be underlined and remove the second "Action Alternatives," which is underlined, for formatting consistency.

k) On page 2-120 (D) under "Impact Issue," "Proposed Project" should read "Proposed Project – Public River Access" for formatting consistency.

V

19) In two locations in the Executive Summary (page 37 and Table S-3 on page 121) and in two locations in the Draft EIS/EIR (Table 2-7 on page 2-125 and page 3-335), the impact issue, "Short-Term Uses of the Environment Versus Long-term Productivity," is presented. I believe the

4 of 5

NOV-13-01 TUE 2:51 PM 970 377 1621 P. 4

S. Commenter's suggestion regarding clarification of the cumulative condition in the introduction to Draft EIS/EIR Table 2-7 is included in the Final EIS/EIR, Chapter 2.0, Section 2.4, Summary of Alternatives and Impacts. This change does not alter the conclusions presented in the Draft EIS/EIR.

T. An updated summary of impacts and environmental protection measures is provided in Final EIS/EIR, Chapter 2.0, Section 2.4, Summary of Alternatives and Impacts. Suggestions made by the commenter have been incorporated into the updated table. These changes do not alter the cumulative condition impact conclusions presented in the Draft EIS/EIR.

U. The suggested edits and corrections indicated by the commenter have been incorporated into the updated Summary of Impacts and Environmental Protection Measures presented in the Final EIS/EIR, Chapter 2.0, Section 2.4, Summary of Alternatives and Impacts. These corrections do not alter the conclusions presented in the Draft EIS/EIR.

V. The suggested revision to the discussion of "Short-term uses of the Environment versus Long-term Productivity" are provided in the Final EIS/EIR, Chapter 3.0, Section 3.18.5, Short-Term Uses of the Environment Versus Long-Term Productivity. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-110, pg. 5

discussion is limited to the productivity of the proposed project as it relates to impacts upon the human environment and economic viability. I agree with the conclusion:

"The project would have short-term impacts to air quality, habitat of wildlife species, recreation, and noise, but these impacts are not expected to alter the long-term productivity of the natural environment." (page 3-335)

V (cont)

However, I believe there are long-term benefits to the natural environment resulting from the proposed project, which should be recognized. These benefits are identified in the Draft EIS/EIR, but not included in the four locations identified above. I suggest adding the following language in the four locations. The language is based upon that found under Impact 3.5-9 (p. 3-85), Impact 3.5-10 (p. 3-86), and the last paragraph on page 39:

"The Proposed Project includes restoring a previously dewatered channel, resulting in increased habitat availability for fish resources in the project vicinity. This habitat alteration represents a long-term environmental beneficial effect on fish resources and aquatic habitat. Additionally, fish passage from upstream to downstream would be greatly improved through river restoration, resulting in a long-term beneficial impact for fish passage through the project vicinity.

"The Proposed Project would have long-term beneficial impacts on water supply, fish and terrestrial resources, and recreation. On balance, these long-term benefits outweigh the potentially significant short-term impacts to environmental resources in the project area."

20) The section, "Short-Term Uses of the Environment Versus Long-term Productivity," on page 37 (ES) would be more helpful and complete by replacing the existing one paragraph with the two paragraphs found in the Draft EIS/EIR on page 3-335 and by including the language recommended above.

21) The Draft EIS/EIR on page 3-212 states:

"In the interim, the unmet demand for increased parking at the confluence remains a potentially significant and unavoidable impact."

W

I believe there is a potential interim solution to this impact. The City of Auburn and Placer County each have a bus system. They should be contacted about the possibility of their buses being used during the peak summer months to provide transportation to the Confluence area. People go to the Confluence to recreate by swimming, hiking, birding, sunbathing, etc. A bus schedule with 2, 3, or 4-hour intervals might be possible. For example, the Auburn Mini-Bus might be able to change its bus route in the summer to include the Confluence. I think this should be included in the mitigation for this impact as something that will be evaluated. Appropriate changes will be required on page 3-212, Table 2-7 on page 2-87, and Table S-3 on page 83 (ES).

Thank you for considering my comments. Please call me if you have any questions about the comments.

Sincerely,

Gary W. Estes

Gary W. Estes

W. Please refer to Response L-94.I for a discussion of the North/Middle Fork American River confluence topics.

L-111

NOV-12-2001 06:22 PM SMI 530 888 6633 P.01

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dona Abderhalden
ADDRESS:	347 Riverview Drive
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-887-1802
ORGANIZATION (IF APPLICABLE):	

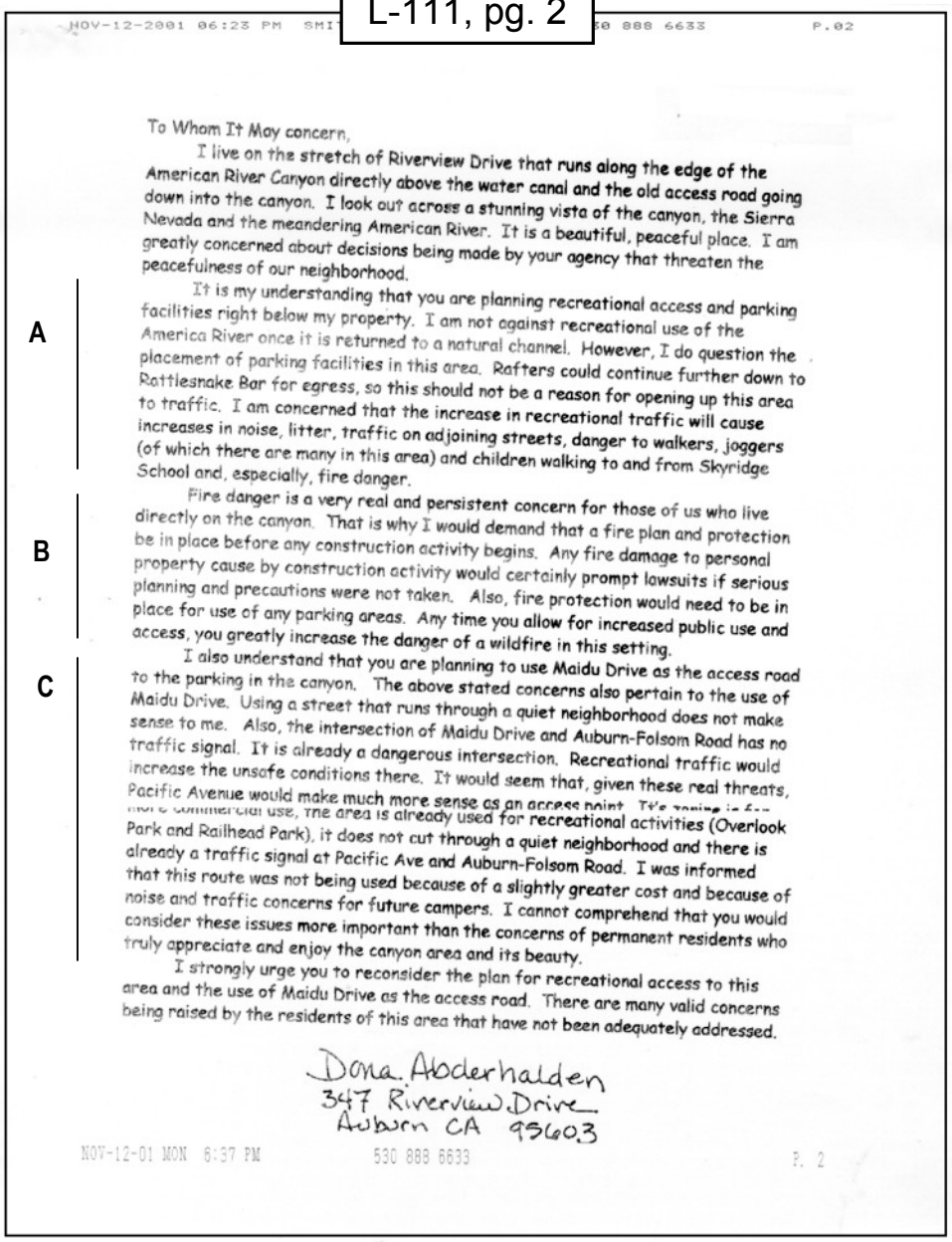
COMMENTS:

Please see 2nd sheet. I couldnt fit them all on this sheet.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

NOV-12-01 MON 6:36 PM 530 888 6633 P. 1

L-111, pg. 2



NOV-12-2001 06:23 PM SMI 530 888 6633 P.02

To Whom It May concern,

I live on the stretch of Riverview Drive that runs along the edge of the American River Canyon directly above the water canal and the old access road going down into the canyon. I look out across a stunning vista of the canyon, the Sierra Nevada and the meandering American River. It is a beautiful, peaceful place. I am greatly concerned about decisions being made by your agency that threaten the peacefulness of our neighborhood.

A — It is my understanding that you are planning recreational access and parking facilities right below my property. I am not against recreational use of the America River once it is returned to a natural channel. However, I do question the placement of parking facilities in this area. Rafters could continue further down to Rattlesnake Bar for egress, so this should not be a reason for opening up this area to traffic. I am concerned that the increase in recreational traffic will cause increases in noise, litter, traffic on adjoining streets, danger to walkers, joggers (of which there are many in this area) and children walking to and from Skyridge School and, especially, fire danger.

B — Fire danger is a very real and persistent concern for those of us who live directly on the canyon. That is why I would demand that a fire plan and protection be in place before any construction activity begins. Any fire damage to personal property cause by construction activity would certainly prompt lawsuits if serious planning and precautions were not taken. Also, fire protection would need to be in place for use of any parking areas. Any time you allow for increased public use and access, you greatly increase the danger of a wildfire in this setting.

C — I also understand that you are planning to use Maidu Drive as the access road to the parking in the canyon. The above stated concerns also pertain to the use of Maidu Drive. Using a street that runs through a quiet neighborhood does not make sense to me. Also, the intersection of Maidu Drive and Auburn-Folsom Road has no traffic signal. It is already a dangerous intersection. Recreational traffic would increase the unsafe conditions there. It would seem that, given these real threats, Pacific Avenue would make much more sense as an access point. It's zoning is for more commercial use, the area is already used for recreational activities (Overlook Park and Railhead Park), it does not cut through a quiet neighborhood and there is already a traffic signal at Pacific Ave and Auburn-Folsom Road. I was informed that this route was not being used because of a slightly greater cost and because of noise and traffic concerns for future campers. I cannot comprehend that you would consider these issues more important than the concerns of permanent residents who truly appreciate and enjoy the canyon area and its beauty.

I strongly urge you to reconsider the plan for recreational access to this area and the use of Maidu Drive as the access road. There are many valid concerns being raised by the residents of this area that have not been adequately addressed.

Dona. Abderhalden
347 Riverview Drive
Auburn CA 95603

NOV-12-01 MON 6:37 PM 530 888 6633 P. 2

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.10, Project Access.

L-112

November 12, 2001

Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, California 95825

Dear Project Manager:

Subject: Comments on the Draft Environmental Impact Statement for the American River Pump Station Project

I have reviewed the subject DEIS/EIR and offer the following comments:

General

A The document as written is nothing more than a thinly veiled attempt to justify a pump station in the American River canyon to supply water to PCWA. I found many of the analyses totally lacking in scientific merit, fundamentally flawed, and unable to biologically and scientifically support the conclusions reached. While NEPA requires documentation of the potential environmental impacts, CEQA requires a full consideration of alternatives that will

B meet the project's objectives. You have attempted to limit consideration of the project by narrowly defining one of the project's primary objective to providing water to PCWA from the Middle Fork Project. In fact, the objective should be to provide PCWA with the desired quantity of water in the least environmentally damaging way. Failure to actively consider the alternative of land conservation easements (which would meet CALFED objectives) which would allow water to be transferred among several entities and thus eliminate the need for additional diversion from the American River, eliminate construction related impacts, and forego the massive pumping costs in the future is a clear violation of the intent of CEQA. The document should be rewritten to incorporate a thorough analysis of this additional alternative. In addition, the

C fisheries and aquatic resources section in general should be completely redone to eliminate the indefensible and fatally flawed analyses. New analyses, using biologically relevant data and time steps should be incorporated into the FEIS/EIR.

Specific Comments

B Page 2-7, Table 2-1: The selection of alternatives fails to meet the requirement of CEQA since the project objective of supplying water to PCWA only from the American River is too narrowly defined and should be expanded to providing a given amount of water to PCWA from alternative sources. The project objectives should be rewritten to include the broader objective and eliminate the obviously biased and illegal narrowly defined objectives in the document.

Page 2-127, Table 2-8: Under the heading of Other Water Supply Considerations, Land fallowing or land retirement is dismissed with a totally false, and fundamentally flawed excuse. The reasons for elimination are totally false and could not be supported by anything less than a totally

A. Please refer to responses noted below addressing specific comments.

B. Conservation easements were not considered to be feasible alternatives to the project. The only apparent source for water from such easements would be agricultural land in western Placer County. Reducing deliveries to such lands would be antagonistic to Placer County's stated policy of protecting agriculture in the county. Additionally, it would likely induce or resort to groundwater pumping, exacerbating an existing overdraft in the basin, and would reduce flows in Auburn Ravine, since Auburn Ravine is used for conveyance of agricultural water supplies. The level of implementation of temporary and long-term land conversion in any alternative is dependent upon storage, conveyance, and water quality components of the alternative, as well as conditions in particular service areas (CALFED 2002). Because these actions would not support Placer County policy and have the potential to cause environmental degradation to groundwater and Auburn Ravine flows, they are not viable options for this project. While land fallowing and conservation easements can be instrumental to meeting CALFED objectives under certain conditions, they are not the sole means of achieving these goals.

Furthermore, as is explained in detail in Response L-21.A, PCWA must operate within a statutory framework that requires it to take steps to obtain all water supplies predicted to be needed for planned growth in Placer County and its incorporated cities over the next 20 years. The Proposed Project is not only necessary to serve that planned growth; it is only one of two major new supplies that will be required, the other being a new diversion of approximately 35,000 AFA from the Sacramento River. Importantly, both such water supplies are consistent with the Water Forum Agreement, which PCWA, along with other water suppliers and local agencies in the Sacramento region, worked out with representatives of the regional environmental community. The Water Forum Agreement provides a legal and contractual framework in which new American River diversion can occur in a manner that protects, to the greatest degree feasible, the environmental and recreational qualities of the lower American River.

For all of these reasons, the lead agencies disagree with the commenter that either NEPA or CEQA required them to define the primary project objective to be to "provide PCWA with the desired quantity of water in the least environmentally damaging way." Although the two agencies agree that minimizing the environmental effects of any new diversion is an extremely important consideration, and strongly believe that they are doing so through various mitigation measures, PCWA simply does not have the legal authority or duty to refuse to develop new water sources and instead to interfere with Placer County policies favoring continued viable agricultural operations in the non-urban portions of the County. If the commenter favors retiring agricultural land as a means of reducing long-term water demand, the commenter can voice his concerns to Placer County itself, or can participate in private-sector transactions in which a willing seller of agricultural land could agree to convey his/her/its interest to another entity that would agree to not irrigate such property. PCWA has an aggressive water conservation program; but its existence does not by any means obviate PCWA's legal obligations to identify and develop sources of water for planned growth within Placer County.

L-112, pg. 2

biased analysis. This biased analysis is clearly a violation of both NEPA and CEQA requirements regarding alternatives consideration. Also, providing bogus or misleading statements in a public document is both wrong and illegal.

D

Page 2-128, Table 2-9: This table indicates that a Corps of Engineers 404 permit under a nationwide program might be necessary. Reading the project description and the requirement for a Nationwide 3 permit, leads me to believe that this conclusion may not be supported by the facts. I suggest that the Nationwide 3 requirements be reviewed and the table adjusted if needed.

E

Page 3-23, Modeling Assumptions, Period of Record: Although the period of record is the standard used in many modeling assumptions, this period of record is not adequate or current enough to support the conclusions. The period of record should be extended to include the last decade of flow and operations, and then the results of the models evaluated. Having the most recent data in the period of record being over 10 years old and ignoring 12% of the available record is totally unprofessional and does not allow the reader or decision maker to have confidence in the modeling outputs. Redo the models using the complete period of record.

F

Page 3-40, last paragraph discussing shortages and Auburn Ravine: This paragraph states that a groundwater overdraft condition exists in Wester Placer County. This statement is not true. PCWA has continually assured public groups, that groundwater supplies in Western Placer County are not being overdrafted, except in the very southwestern corner of the County and that overdraft is coming from well use in Sacramento County. This paragraph draws the conclusion that groundwater is not a long term viable alternative. This conclusion is not based on fact, and highlights the bias in the entire document towards a pumping plant in the American River canyon. While the best alternative may well indeed be a pumping plant in the canyon, the documentation to support such a conclusion should be based on objective, credible analysis. The current document does neither. The document should be rewritten and supported with objective and credible objectives, analyses, impact assessment, and conclusions.

Page 3-50 and the Fish Resources Section in General: This section of the document suffers from several fundamental flaws:

G

1. The analysis of water temperature, using monthly time steps, has no scientific or biological credibility. Water temperatures are a critical factor in all of the flow and water source/temperature analyses. However, use of a one month time step, using calculated water temperature releases is unjustifiable. Fish do not experience a monthly average water temperature and exposure of fish or eggs to lethal temperatures for even a few hours may have a significant effect on survival. For example, exposing incubating salmonid eggs to water temperatures above 56 F for one day increases mortality. This sort of perturbation would never show up in a monthly time step model, but you certainly would have lower survival because of project impacts. I suggest that all of the water temperature analyses be redone using real data, and a shorter time step in the modeling. Trying to make the analyses look quantitative, only serves to mislead the reader and the ultimate decision maker. Impacts should be based on assessment of real conditions, not some modeling exercise that is only suitable for comparative planning purposes.

C. Please refer to Response L-93.B.

D. Since publication of the Draft EIS/EIR, the lead agencies have determined that a U.S. Army Corps of Engineers 404 Nationwide Permit No. 27 - Stream and Wetland Restoration Activities may be required for the Proposed Project. The permit application is pending completion of the Final EIS/EIR. Table 2-9, Anticipated Permits and Approvals for the Proposed Project is updated in Chapter 2.0 of the Final EIS/EIR. This change does not alter the conclusions presented in the Draft EIS/EIR.

E. The modeling found in the Draft EIS/EIR uses a period of record from 1922-1992. While the last nine years (i.e., 1993-2001) are not represented in the data set, the period of record utilized is the standard for environmental modeling for many reasons. First, the period of record utilizes only the data which has been determined reliable by experts; the hydrologic data available from periods prior to 1922 was not adequate to conduct the modeling exercises. Second, the period of record represents a full range of water year types and hydrologic and meteorological events, and captures certain extreme years, which represent likely periodic events of the future. The data set is not just a collection of hydrographs from the period of record; the data set has been normalized to account for the varied collection techniques and water distributions of the past. The normalization process is complex, and the corrected water data after 1992 was not available at the time of the Draft EIS/EIR analyses. The 1922-1992 period of record is that which has been approved for use in mass balance hydrologic modeling of CVP-wide actions. In addition, fisheries resources agencies, USFWS and NMFS, were consulted regarding the analysis period of record as part of the scoping for the project and cumulative impact analysis, and approved use of the 1922 to 1992 period of record.

F. Groundwater is not a long-term viable solution for PCWA. Please refer to Response L-5.Z.

G. Please refer to Response L-93.B.

L-112, pg. 3

Someone with credible scientific credentials should look at the water temperature situation much more carefully, and fully document this in the final EIS.

H

2. The discussion of Auburn Ravine on pages 3-52to 3-56 in general, demonstrate an incomplete understanding of the current situation, a cursory understanding of salmonid ecology and genetics, and a total lack of knowledge regarding the impacts of diverting additional water into Auburn Ravine on fish behavior. This section is so purposefully slanted to avoid the perception of any problems or issues being associated with the long term, year around diversions by the proposed project that it is fatally flawed. The document should be rewritten by someone with appropriate scientific credentials, that could objectively assess the situation and reach supportable conclusions. This section of the document clearly is not objective and selectively presents information that is intended to purposefully mislead the reader and decision maker. This section clearly violates the legal mandates of NEPA and CEQA. I would be willing to meet with senior Bureau of Reclamation staff to explain the misrepresentations, inappropriate biological analyses, and general bias of this section of the report.

I

3. In the impact assessment for salmonids in general, the document states that water temperatures of 60, 65, and 68 F all have some important threshold effect on salmonids at various periods in their life history. The rationale for selection of these three temperature yardsticks is presented only as anecdotal information and not supported by credible scientific documentation. It is interesting to note, that the 60 F water temperature assessment standard used for spawning and incubation is not supported by the Regional Water Quality Control Board or the California Department of Fish and Game. Entities applying for discharge permits are being held to a lower standard over many months of the year. The document's representation that these are the appropriate standards for impacts assessment are not supported by fact. The water temperature impact assessment should be redone using real data and the appropriately documented criteria.

J

Page 3-52, Discussion on Auburn Ravine's natural flows: This section is unique in the report in that it discusses the natural flows in Auburn Ravine and quite cleverly leaves the reader with the impression that Auburn Ravine is not important as an anadromous fish stream. Why is this the only stream in which natural flows are an issue? During the drought of the late 1920's and early 1930's, the Sacramento River was dry in some places, but that type of information is not presented for other streams. An environmental document should describe the existing conditions in the stream and not attempt to bias the reader's thinking by inserting irrelevant information. Also, if the document preparers had examined the administrative record for the Lincoln Treatment Plant, they would have found that the NID Highway 65 gaging station only records flows up to 396 cfs and many of the flow readings below this level are estimates and known to be inaccurate by thousands of cubic feet per second. This fact is documented in the administrative record for Lincoln's EIR. This EIS should be rewritten using credible, factual information on Auburn Ravine flows.

Page 3-54, Discussion of the issue of additional straying into Auburn Ravine: The entire representation, impact assessment methodology, assumptions, and conclusions regarding the

H. Please refer to Master Response 3.1.13, Auburn Ravine. Additionally, since publication of the Draft EIS/EIR, the lead agencies and cooperating resource agency representatives have participated in extensive coordination efforts with commenters regarding their concerns surrounding Auburn Ravine, including three evening stakeholder meetings.

I. The commenter incorrectly states that water temperature index values used to assess potential impacts to Nimbus Hatchery also were used to assess impacts to salmonids in general for the lower American River. Justification for these threshold values can be found on page 3-61 of the Draft EIS/EIR.

Contrary to the contention in the comment, water temperature index values of 56ºF and 65ºF were used for impact assessment purposes for anadromous salmonid spawning and rearing in the lower American River, respectively.

J. Please refer to Master Response 3.1.13, Auburn Ravine for an updated discussion of Auburn Ravine flow conditions.

L-112, pg. 4

K

potential for additional straying of salmonids and splittail into Auburn Ravine is totally biased, lacking in scientific objectivity, based on scientifically unsupportable assumptions, has conclusions not supported by fact or credible scientific documentation, and a classic example of selectively presenting pseudo science to support an a priori conclusion. The entire presentation of the issue, documentation of the facts, and assessment of the situation should be completely redone by a credible and competent fishery biologist at the senior level. I would be willing to meet with senior Bureau of Reclamation officials to discuss the problems associated with this section of the document. As the document now stands, this section fails to meet the requirements of NEPA and CEQA and fails to pass the giggle test. By allowing this fatally flawed section to remain, the Bureau is obviously attempting to bias the selection of the final alternative, deliberately misrepresenting the facts, and understating the potential environmental impacts of the proposed project.

L

Page 3-55, Splittail: While no splittail have been found in Auburn Ravine, and habitat in Auburn Ravine is probably not suitable, there is lots of suitable habitat in the Eastside Canal and Cross Canal of which Auburn Ravine is a tributary before the Cross Canal enters the Sacramento River. Splittail have been found in the Cross Canal, and fishermen report catching them there routinely. False attraction of splittail is a real issue, particularly given the fact that water would be diverted year around under the proposed project, whereas it is only diverted seasonally at the present time. This change in diversion pattern could be significant for splittail and salmonids in general.

M

In general, I find the fish resources section and its associated analyses to be generally lacking in biological credibility. As mentioned above, many of the modeling results are biologically on the wrong time step, thereby making impact assessment impossible to support biologically and scientifically. Use of models designed to provide a comparison between planning alternatives might sound fine for some applications, but in this case, it is totally inappropriate, since the environmental and ecological impacts are real. Given the potential impacts to listed species, we cannot afford to go forward with a biased, scientifically indefensible, and skewed justification document such as this one clearly is. The Bureau of Reclamation must broaden the project objective to on of supplying water to PCWA, regardless of the source. Until alternatives other than two variations on the location of a pumping plant in the canyon are carefully examined, the project will clearly violate the mandates of CEQA.

If you have any questions, please feel free to contact me at 916.645.1235.

Sincerely,

Randy Bailey

Randy Bailey
3050 Meadow Creek Road
Lincoln, CA 95648

K. Please refer to Master Response 3.1.13, Auburn Ravine. Also see Response L-112.L, below, regarding splittail.

L. Because PCWA is no longer proposing to increase flows in Auburn Ravine (please see Master Response 3.1.13, Auburn Ravine), the Proposed Project is unlikely to cause a "false attraction" of spawning splittail. In addition, the continuing historical diversions for the North Fork American River into Auburn Ravine will not occur during splittail immigration and spawning season, further diminishing the potential for "false attraction" of splittail.

While the Proposed Project no longer proposes to increase flows in Auburn Ravine, the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF), which will receive a portion of the Proposed Project water, will increase the flows in Auburn Ravine. However, existing flows during splittail immigration and spawning periods in Auburn Ravine will continue to be adequate to allow passage to spawning habitat near the project area (i.e., Cross and East Side canals). In addition, the City of Lincoln WWTRF Draft Environmental Impact Report (1999) recognizes the increases in flow as a potentially significant impact to spawning fall-run chinook salmon spawning, and has proposed mitigation for the impact. The PCWA Proposed Project will contribute only a small fraction of the WWTRF discharges, which will not significantly exacerbate the potential impact identified by the WWTRF. For further detail on the Proposed Project's contribution to the Lincoln WWTRF discharges, please refer to the Master Response 3.1.13, Auburn Ravine.

M. Please refer to Responses L-112.A through L-112.L.

L-113

STEVE BILLINGS 11/13/01 07:18am P. 001

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	STEVE Billings
ADDRESS:	10020 Snowy Owl Dr.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	Bus. - 530-320-1137 Home - 530-889-1305 Fax 530-823-2798
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I HAVE NO PROBLEM WITH PCWA WANTING TO PUT A PUMPING STATION IN THE RIVER AND RETURNING THE RIVER TO ITS NATURAL FLOW. I DO HOWEVER OBJECT TO THE RECREATION AND PARKING FACILITIES. THE RIVER NOW IS OPEN FOR RECREATIONAL USE TO FOOT TRAFFIC, HORSES, ETC. AND SEEMS JUST FINE. I DO NOT WISH TO SEE VEHICLE TRAFFIC BEING ALLOWED DOWN TO THE RIVER, OR AN INCREASE OF TRAFFIC TO MAIDEN DR. FOR THIS PURPOSE. MY CONCERN IS TRAFFIC NOISE, INCREASE FIRE DANGER IN THE CANYON, LITTER, AND CONTROL PROBLEMS WHICH WILL COME WITH VEHICLES, AND INCREASES IN THE NUMBER OF PEOPLE USING THE RIVER. KEEP THINGS AS THEY ARE NOW, AND DO NOT ALLOW VEHICLES AND CAMPING IN THIS SECTION OF THE RIVER. THERE ARE PLENTY OF OTHER AREAS OF THE RIVER CURRENTLY WHICH ALLOW FOR REC. USE. THE EIS/EIR DOES NOT ADDRESS THESE ISSUES AS IT SHOULD.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU!

☑ *Please check here if you would like to be on the project mailing list.*

NOV-13-01 TUE 7:19 AM 530 823 2798 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features; Master Response 3.1.1, Auburn-to-Cool Trail; Master Response 3.1.10, Project Access; and Master Response 3.1.9, Fire Management.

L-114

Inv (530) 885-4829 p.1

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Gerald J. Wilfley
ADDRESS:	10100 Snowy Owl Way
CITY/STATE/ZIP:	Auburn, CA. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-889-1331
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

The above referenced project is a restorstion project of the Pump Station removed during the construction of the Auburn Dam. It also entails restoration of the American River to its natural channel which was also changed during the building of the Auburn Dam. These two restoration activities can be historically justified.

The provision for an access road and parking lot cannot be historically justified as they have never before existed. You are adding something completely new which exposess property owners living above the road and parking lot to a greatly increased risk of a devastating fire. This past year had three fires in the American River watershed which were all caused by careless people.

The homes that are being put at risk were there before any road access or parking lot existed in this part of the canyon, and their safety must be given precedence over any facilities that put these homes in Danger.

For many years people have been walking down to the river in this area to go fishing in the area below the diversion tunnell. We can continue to do that. In addition lets keep this section of the canyon in its natural state as much as possible and keep the cars and congestion away from an area your other two projects are attempting to return the area to its original state.

Protect these homeowners from unecessary worry and risk of wild fires casued by careless people. The homes were there before the road and parking lot.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

NOV-13-01 TUE 9:06 AM 530 885 4829 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

Additionally, it is noted that Maidu Drive was constructed by Reclamation to serve as a major construction haul route and primary access to the Auburn Dam area. Local approval and development of the residential area surrounding Maidu Drive has occurred with the knowledge that the Auburn Dam project could one day be re-authorized by Congress. In any event, the lead agencies, in formulating the Proposed Project and their objectives and purposes, are not limited to restoring conditions that existed before construction began on the Auburn Dam. Rather, the agencies have discretion to address safety considerations associated with the possibility that river users could get trapped in a long stretch of the canyon from which there is currently no easy means of departure. Though the project might result in increased public use of the river and canyon, the lead agencies have carefully formulated a Auburn State Recreation Area Prefire Management Plan that is intended to minimize any increased threat of wildfires to the maximum extent possible.

L-115

Skip Lauderbaugh, 08:29 AM 11/13/01, American River Pump Station Pr

Date: Tue, 13 Nov 2001 08:29:47 -0800
From: Skip Lauderbaugh <Skip@foothill.net>
X-Mailer: Mozilla 4.7 [en]C-CCK-MCD ezn/n45/72 (Win98; I)
X-Accept-Language: en
To: brown@swri.net
CC: "'Jim Haagen-Smit'" <jimhs@rose.hp.com>,
Sean & Mary Allan <allansx2@inreach.com>
Subject: American River Pump Station Project

A

I am writing this letter to let you know my concern of the possible trail closure for Mt. Bikes due to the closing of the diversion tunnel on the American River. While I support the closure of the tunnel and the restoration of the river so more people can enjoy this beautiful river canyon, I am concerned about loosing trail access between Auburn and Cool. With the tunnel closing, the only trail for Mt. Bikes will be closed by the river. Mt. Bikers are probably one of the largest user groups in both of these prized trail areas. Mt. Bikers have the spent more hours on maintaining and patrolling the local trails then any other user group in these two areas. Unfortunately, with the tunnel closure our only access between these two trails will be a very dangerous ride up Hwy. 49. The other user groups hikers, runners, and horses will have access- Mt. Bikes must also be considered!

I do not think that another large expensive bridge is required, or the best use of taxpayers money. Instead, for a fraction of the money, a connector trail that would go from the dam over look to the existing Hwy. 49 bridge or No-Hands bridge to cross the river and then connect to the Cool side trails would be a win /win. Giving Mt. bikers a connection to the two trail areas, and increasing the amount of trails in the area for everyone to enjoy.

Please consider this alternative. Mt. Bikers may not be the most vocal of the user groups, but they are one of the largest, and have positive impact on the local trails. Most of us would rather work on preserving and maintaining the local trails then writing letters....

Sincerely,

Skip Lauderbaugh
FATRAC Member
ARMBA Patrol Member

Printed for "Carol Brown, Surface Water Resources, Inc." <br... **1**

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-116

Chris Marney, 12:36 AM 11/13/01, Draft EIS/EIR Comments

X-Originating-IP: [206.217.205.214]
From: "Chris Marney" <camarney@hotmail.com>
To: <brown@swri.net>
Subject: Draft EIS/EIR Comments
Date: Tue, 13 Nov 2001 00:36:09 -0800
X-Mailer: MSN Explorer 7.00.0021.1700
X-OriginalArrivalTime: 13 Nov 2001 08:32:09.0320 (UTC) FILETIME=[AF40DE80:01C16C1D]

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825
brown@swri.net

Dear Project Reviewers:

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

A

The Auburn to Cool trail currently provides the only safe route for mountain bicyclists to get between the two towns. The only other route requires riding on at least two miles of Highway 49, which does not provide safe shoulders and has high traffic speeds.

I realize that the cost of a bridge would be quite large. I believe that a better, lower cost alternative would be a new trail traveling from the dam overlook in Auburn down to either Hwy. 49 at the N. Fork American River or to the Mountain Quarries Bridge (a.k.a. "No Hands Bridge") and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

B

The completion of the pump station project will result in more people using the Auburn State Park. Additional long term funds are needed to manage the Park as the number of visitors increase. Funding sources should be identified to do this.

Thank you for your time and consideration,
Chris Marney, Trail Patroller
American River Mountain Bike Assistants (ARMBA)
camarney@hotmail.com or cmarney@msn.com

Get more from the Web. FREE MSN Explorer download : http://explorer.msn.com

Printed for "Carol Brown, Surface Water Resources, Inc." <br... 1

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-117

Jim & Cathy Haagen-, 03:16 PM 11/12/01, Auburn to Cool Trail

Date: Mon, 12 Nov 2001 15:16:34 -0800
From: Jim & Cathy Haagen-Smit <jimhs@jps.net>
Organization: IMBA
X-Mailer: Mozilla 4.77 [en] (Win98; U)
X-Accept-Language: en
To: brown@swri.net
CC: jimhs@rose.hp.com
Subject: Auburn to Cool Trail

Carol Brown,

A We earlier submitted written comments regarding the PCWA Pump Station. This is a follow-up email specifically about the Auburn to Cool Trail. We would like to re-iterate that mitigating the loss of the trail is extremely important to mountain bikers who have only this one off-road route to get between Auburn and Cool. My husband and I just rode the trail from Auburn to Cool this past Saturday, returning to Auburn via a portion of Hwy 49. We were reminded how dangerous that route is for bicyclists.

In looking at the terrain, we are very hopeful that a new trail could be flagged from the Mtn Quarries Bridge up to the Olmstead Loop in Cool. Between Auburn and Mtn Quarries, there exists the old railroad grade that at one point was to be developed into a trail. We could re-vive perhaps the rail-trail and open Mtn Quarries to mtn bikers. The impacts to wildlife would be no more than what currently exists, we would think. A well-designed single track on the southside, would be unintrusive and impacts minimal. As stated the rail-trail allignment already exists. We attended the recent PARC (Protect American River Canyon) meeting and PARC appears in favor of supporting this option as a valuable mitigation measure.

If you have any questions, please do not hesitate to contact me. -Cathy Haagen-Smit

--
Jim and Cathy Haagen-Smit, CA State Reps for IMBA
California Bicycle Coalition
Folsom Auburn Trail Riders Action Coalition
Jim at 916-785-4589, jimhs@jps.net or jimhs@rose.hp.com
Cathy at 530-889-7079, cathyhs@jps.net or chaagen@placer.ca.gov
7589 Ridge Rd.
Newcastle, CA 95658
(916) 663-4626
Long Live Long Rides

Printed for "Carol Brown, Surface Water Resources, Inc." <br... 1

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-118

Nov 13 01 08:11a Rona 9167863503 p.1

RONALD L. OTTO, D.D.S., M.S.
Diplomate American Board of Orthodontics
A Professional Corporation

125-B Ascot Drive • Roseville, CA 95661 • Telephone (916) 786-2442

FAX COVER SHEET

Date 11-13-01 Number of Pages 3

TO:
Name Carol Brown
Company Surface Water Resources
Fax 916 286-0957

FROM: Ronald L. Otto, D.D.S.
Fax # (916)786-3503

Ms. Brown-

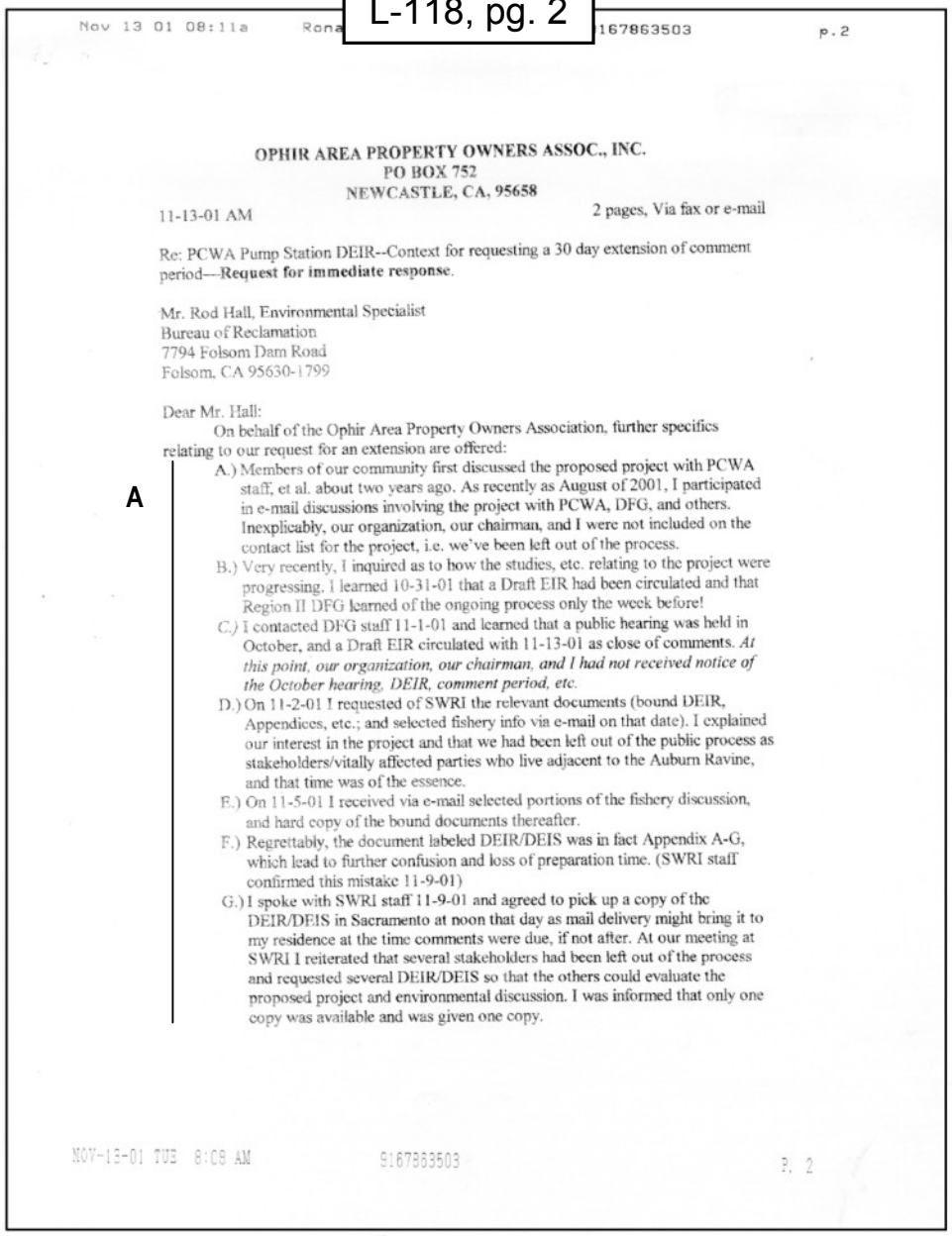
As I've not received Mr. Rod Hall/BuRec e-mail and Fax addresses requested yesterday, I'm sending a faxed letter to you FOR immediate distribution to BuRec, Mr. Hall, and PCWA. This provides context FOR our request FOR at least a 30 day extension of the comment period on the North Fork American PCWA Pump Station DEIR.

As you know, time is of the essence (this is the date FOR close OF comments), and I need to hear from you/the decision makers immediately as to the extension OF the comment period, OR not.

Ronald Otto

NOV-13-01 TUE 8:07 AM 9167863503 P. 1

L-118, pg. 2



Nov 13 01 08:11a Rona 9167863503 p.2

OPHIR AREA PROPERTY OWNERS ASSOC., INC.
PO BOX 752
NEWCASTLE, CA. 95658

11-13-01 AM 2 pages, Via fax or e-mail

Re: PCWA Pump Station DEIR--Context for requesting a 30 day extension of comment period---**Request for immediate response**.

Mr. Rod Hall, Environmental Specialist
Bureau of Reclamation
7794 Folsom Dam Road
Folsom, CA 95630-1799

Dear Mr. Hall:

On behalf of the Ophir Area Property Owners Association, further specifics relating to our request for an extension are offered:

A.) Members of our community first discussed the proposed project with PCWA staff, et al. about two years ago. As recently as August of 2001, I participated in e-mail discussions involving the project with PCWA, DFG, and others. Inexplicably, our organization, our chairman, and I were not included on the contact list for the project, i.e. we've been left out of the process.

B.) Very recently, I inquired as to how the studies, etc. relating to the project were progressing. I learned 10-31-01 that a Draft EIR had been circulated and that Region II DFG learned of the ongoing process only the week before!

C.) I contacted DFG staff 11-1-01 and learned that a public hearing was held in October, and a Draft EIR circulated with 11-13-01 as close of comments. *At this point, our organization, our chairman, and I had not received notice of the October hearing, DEIR, comment period, etc.*

D.) On 11-2-01 I requested of SWRI the relevant documents (bound DEIR, Appendices, etc.; and selected fishery info via e-mail on that date). I explained our interest in the project and that we had been left out of the public process as stakeholders/vitally affected parties who live adjacent to the Auburn Ravine, and that time was of the essence.

E.) On 11-5-01 I received via e-mail selected portions of the fishery discussion, and hard copy of the bound documents thereafter.

F.) Regrettably, the document labeled DEIR/DEIS was in fact Appendix A-G, which lead to further confusion and loss of preparation time. (SWRI staff confirmed this mistake 11-9-01)

G.) I spoke with SWRI staff 11-9-01 and agreed to pick up a copy of the DEIR/DEIS in Sacramento at noon that day as mail delivery might bring it to my residence at the time comments were due, if not after. At our meeting at SWRI I reiterated that several stakeholders had been left out of the process and requested several DEIR/DEIS so that the others could evaluate the proposed project and environmental discussion. I was informed that only one copy was available and was given one copy.

NOV-13-01 TUE 8:08 AM 9167863503 P. 2

A

A. Please refer to Response L-95.A. The public comment review period was extended for an additional 30 days for a total review period of 93 days.

L-118, pg. 3

A

Clearly, the right of the public to be properly informed and to participate in this CEQA/NEPA process has not met the standard required. We regret that this has happened, but find ourselves in an untenable situation not of our making, and not of our choosing.

As today is the stated close of comments, please immediately respond.

Sincerely,

Ronald Otto

Ronald Otto for Auburn Ravine Creek Preservation Committee, Ophir Area Property Owners Association

Tuesday work telephone: 916-786-2442
Tuesday fax: 916-786-3503

Cc: Dick Dal Pino, OAPOA
PCWA
SWRI
NCCFFF
CSPA

L-119

FROM :

Nov. 13 2001 11:33AM P1

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Bob & Denise DiMiceli
ADDRESS:	1479 Buckeye Ct.
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	FAX 530/887-9199
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

see attached.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ *Please check here if you would like to be on the project mailing list.*

NOV-13-01 TUE 10:35 AM 5908879199 P. 1

L-119, pg. 2

FROM :

Nov. 13 2001 11:33AM P2

November 13, 2001

To whom it may concern,

A I, as well as many of my neighberors feel compelled to put into written form our concerns regarding the American River Pump Station Project. If the need for a pumping system is truly needed that is one thing. But to add roads and parking for recreational use that is another. I do not want any recreational additions made to our area. We are first and formost a family neighborhood. We have a school and many children that we must protect from traffic and people that are possibly undesirable. Many of our children walk to school across Maidu. We also have the environmental issues of pollution related to traffic, construction and from recreational use. Our area has a tremendous amount ot traffic as it is and we do not need to actively increase it with a park access. It is not only vehicle pollution but noise pollution and litter as well.

The above are my major concerns and hopefully this committee will understand that I am definitely against adding a State park river access to our area.

Why not consider the parking area at the Overlook for the River access. There is already parking established at that site. Could that area not be further developed?

Sincerely,

Denise DiMiceli ; Robert DiMiceli

Denise and Robert DiMiceli
1479 Buckeye Ct.
Auburn, CA. 95603

NOV-13-01 TUE 10:36 AM 5908879199 P. 2

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-120

RECEIVED NOV 13 2001

November 11, 2001

Bureau of Reclamation/PCWA
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

To Whom This May Concern:

A

Many residents have expressed concerns regarding new traffic patterns and volumes as a result of the proposed "Pump Station" project. We represent one of the few minority voices in the area and feel the project has tremendous benefits to Auburn's economic, environmental and recreational health. As an impacted resident, share some of the concerns expressed during the November 7, 2001 informational hearing and would ask that the project applicants not act too hastily to appease certain neighborhoods at the expense of others. Many residents felt that most of the concerns could be remedied by simply shifting the access point for the new recreational opportunities from Maidu to Pacific Avenue. Perhaps some of the residents are thinking a bit too parochially and have not considered the fact that shifting or reducing traffic from Maidu to Pacific would result in disproportionately impacting other neighborhoods such as the lower Riverview area. If Maidu is closed for through traffic, not only would vehicles filter through other residential areas to access the new recreational amenities but also many property owners along Riverview have backyards that back-up to what would be the proposed alternative access road. Additionally, everyone in Auburn is fully aware of the fact that Maidu Drive was originally designed to withstand heavy volumes of traffic to negotiate the proposed dam road. Pacific, Skyridge and Riverview had no such designs. Unlike Riverview, children do not play in the street of Maidu and while we concede there may be safety issues regarding a neighboring school, safety considerations should also be given to youth utilizing the park facility on Pacific.

We think the new recreation component along the American River is exciting and are willing to sacrifice, to some extent, the terrific quality of life my family's currently enjoys. However, the issue of traffic must be addressed holistically and we would contend that both the residents along Maidu along with those on Riverview should share proportionately impacts resulting from a project that benefits California as a whole.

If the "Auburn Dam" were ever built we are convinced that my property values would probably increase. However, We feel the intrinsic value of the proposed recreational component far outweighs any monetary consideration for two reasons. First, currently our family (2, 4 and 6 year-old sons) aren't able to easily access the stretch of river behind our home. A new access road and parking facility near the river will greater permit such an activity. In addition, the more investment in infrastructure constructed along the canyon would reduce the prospects for a dam, thus saving critical habitat values as well as taxpayer dollars.

B

We know PCWA, the Bureau and State Parks want to be good neighbors. In developing a solution to address traffic concerns we would urge the project applicants to find mechanisms in which to limit vehicular access near the river. Enforceable "No Parking Zones" along Maidu and the access road leading to the proposed parking lot would alleviate neighborhood concerns, as would a staffed pay station that would actually monitor and manage the number of vehicles accessing the facility. There are a number of unknowns involved with this project and in fairness to those that have invested and developed roots in the area perhaps some "trust building" is in order. The suggested lack of notification and consideration of the scope and proposed mitigation measures required to address neighborhood concerns is very disconcerting to many. In order to avoid potential litigation we would recommend that the project applicants conduct a series of community workshops so that community input is fully considered as the project evolves. Thank you for your consideration.

C

Doug, Juli, Collin, Parker & Alex Houston
285 Riverview Drive
Auburn, CA 95603
(530) 885-4315

A. Project support noted. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Response L-95.A regarding public notification and involvement efforts associated with the American River Pump Station Project environmental review process. Additionally, it is noted that lead and responsible agency representatives participated in several additional meetings, including attendance with the Auburn City Council, with local residents to hear and discuss their concerns.

L-121

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 13, 2001

Mr. Rod Hall
Bureau of Reclamation
7794 Folsom Dam Road
Folsom, CA. 95630-1799

Dear Mr. Hall:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement for **Placer County Water Agency American River Pump Station Project, Placer County, California** (CEQ# 010334). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The Bureau of Reclamation (Bureau) and Placer County Water Agency (PCWA) propose to develop a year-round water supply diversion of up to 35,500 acre-feet annually (AFA) from PCWA's Middle Fork Project on the American River with water entitlements from the North Fork of the American River. The proposed project consists of constructing a diversion and intake structure, pump station and associated facilities including: pipelines, access roads, power lines, and safety features. The Bureau and PCWA are negotiating a contract that will define the terms and conditions upon which ownership for the facilities would be transferred to PCWA, including responsibilities for operation, maintenance, and related activities for the project.

PCWA holds appropriative rights to divert 120,000 AFA from the American River. In the late 1960s, PCWA built a pump station on the North Fork of the American River to convey its water supplies to the Auburn Ravine Tunnel for delivery to PCWA's service area. However, before pump station operations began, PCWA's station was removed by the Bureau as part of the construction of the multipurpose Auburn Dam. Under a Land Purchase Agreement, the Bureau is required to make water deliveries of up to 25,000 AFA to PCWA. The Bureau has met these water delivery obligations through installation and removal of a seasonal pump station on an as-needed basis since 1977. Beginning in 1990, PCWA has required access to its American River supply every year to meet its system demand. In addition, by the early 2000s, PCWA will require year-round access to its full American River water supply. Furthermore, the seasonal pumps have become increasingly expensive and cannot provide the diversion capacity to fulfill demand patterns.

Alternatives considered include upstream diversion at the site of the seasonal pump; a mid-channel alternative of setting a permanent diversion intake structure within the current dewatered portion of the river channel; and a no project alternative of continuing the present

L-121, pg. 2

seasonal pump station operation. The Mid-Channel Diversion Alternative is the preferred alternative. This alternative includes restoration of the currently de-watered river segment near Auburn and closure of the bypass tunnel. Additional improvements would be implemented under this alternative to ensure safe public access near the project area.

A EPA commends the Bureau and PCWA for their efforts to provide a year-round water supply diversion while minimizing potential adverse impacts to the unique sensitive resources of the American River. We concur that the Mid-Channel Diversion Alternative may best meet these project goals. Of special note are the restoration of the de-watered river segment and closure of the bypass tunnel. These actions will provide significant environmental benefits and remove a major public safety hazard.

B We are also impressed with the effort to analyze the diversion-related and development-related cumulative impacts in the American River Basin and water service areas (American River Basin Cumulative Impact Report, Appendix D). While this Report provides an excellent detailed evaluation of reasonably foreseeable water supply actions in the Bureau's American River Division of the Central Valley Project, we believe the Report would be of even greater value if it described potential mitigation measures and included other American River Basin and regional diversion actions that may adversely affect resources of concern. For example, the US Corps of Engineers and Sacramento Area Flood Control Agency have recently proposed flood control improvements on the American River which may alter future flood releases and have significant effects on sensitive riparian areas (American River Project, Long-Term Study, California).

C EPA believes water supply commitments should be tailored to reflect supplies reasonably expected to be available under varying conditions (e.g., wet versus dry years). We are concerned that if water quantity commitments consistently exceed available water supply, that perceived "shortages" will be created. We fear that such "shortages" may give the impression of unreliable commitments and may imply a "need" to develop additional supplies. Often development of "new supplies" is only reallocation of scarce water from environmental in-stream beneficial uses to consumptive uses. Thus, we advocate an approach which is focussed on efficient use and management of existing scarce water supplies. The quantity of allocated water in the proposed project should be based on existing, developed American River supplies and not on needs, demands, or anticipated additional supplies. We strongly urge the Bureau to avoid water quantity commitments exceeding expected supplies and to avoid allocating shortages relative to inflated supply commitments.

D While we acknowledge PCWA's appropriative water rights to divert from the American River, we are very concerned with the proposed increase in PCWA's diversion on the upper American River. The DEIS clearly demonstrates that diversion-related cumulative impacts will have significant adverse impacts on scare sensitive resources (e.g., threatened and endangered fisheries, riparian habitat). Although the proposed action has a minor incremental contribution to these cumulative impacts, we believe that the purpose and need of the proposed action is to ensure a year-round reliable water supply for PCWA versus permanent up-stream access to an American River diversion. Thus, we support the Bureau and PCWA efforts to develop alternative diversion points (e.g., Sacramento River) and other water supply sources. We urge you to aggressively pursue these efforts and to consider reduction of the amount of the proposed diversion on the American River.

A. Project support noted.

B. The modeling performed for the diversion-related evaluation of cumulative impacts within the American River Basin includes other American River and regional water diversion, flood control, and water temperature management actions that may affect environmental resources within the regional study area. The assumptions and parameters used in the modeling simulations include hydrology/level of land use, water demands, CVP facilities and operations (including flood control operations), CVP and SWP allocation objectives and decisions, and all applicable regulatory standards. These topics are briefly described in the Draft EIS/EIR, Chapter 3.0, Affected Environment and Environmental Consequences, Section 3.3.2.4, Modeling Assumptions (see pages 3-22 through 3-24) and in greater detail in Appendix E, Technical Modeling Memorandum (see Table 1). The cumulative analysis assumed implementation of and incorporated operational information that was available at the time of the analysis for all reasonably foreseeable future local, state, and federal projects or actions.

The Draft EIS/EIR reports that the cumulative condition would potentially result in significant environmental impacts. However, the incremental contribution of the Proposed Project would not be cumulatively considerable, and therefore, would be less than significant for all resources evaluated, with the exception of potential impacts upon cultural resources at Shasta Reservoir. As a result of this determination, Reclamation is developing a programmatic agreement with the State Historic Preservation Office (SHPO) to fully mitigate this potential impact. CEQA and NEPA only require or recommend mitigation of a project's contribution to a cumulative impact. However, as identified in the Cumulative Report, both lead agencies are actively involved in local and regional efforts, such as the Water Forum Agreement, related to improving the condition of sensitive fisheries and aquatic and terrestrial resources potentially affected by projected future changes in water project operation.

Letter 121 (cont)

Response C
Reclamation recognizes that the water supplies in the American River Basin are fully committed. Generally, American River Division CVP water contractors upstream of Folsom Dam already take their full water supply entitlements, except when water supply shortages are declared. As part of the Sacramento Area Water Forum Agreement, the American River Division CVP contractors have agreed to reduce water supply diversions during drier years. The American River Pump Station Project, however, involves use of water supplied by PCWA's Middle Fork Project (subject to water right permit numbers 13586 and 13858, as authorized by the State Water Resources Control Board) and does not involve the diversion of CVP water entitlements. Therefore, although the American River Basin as a whole may be fully committed, PCWA's MFP water supplies are not.

The Draft EIS/EIR describes Reclamation's CVP water allocation decision-making in Chapter 3.0, Affected Environment and Environmental Consequences, Section 3.3.2.4, Modeling Assumptions (see page 3-24) and in Appendix E, Technical Modeling Memorandum.

Response D
PCWA and Reclamation recently completed negotiation of PCWA's CVP water contract amendment (PCWA/USBR 2002). One of the provisions of the contract requires PCWA and Reclamation to evaluate an alternative point of diversion from the Sacramento River for PCWA's CVP water entitlements (otherwise to be taken from the American River, at Folsom Dam/Reservoir). Congress recently authorized and directed Reclamation to complete a feasibility study for this project consistent with the Sacramento Area Water Forum Agreement. Study funding has been authorized and it is expected that the feasibility evaluation will be underway this year (2002). Development of the Sacramento River Diversion Project would enable PCWA to reduce the total amount of water it diverts from the American River, thereby minimizing its contribution to future influences on resources of the upper and lower American River. Implementation of the Sacramento River Diversion Project would be subject to all applicable environmental review and regulatory permitting approval, including public involvement opportunities.

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E

The significant adverse cumulative impacts caused by reasonably foreseeable increased water supply diversions (American River Basin Cumulative Impact Report, Appendix D) is of considerable concern. Furthermore, it is clear there is the potential for significant water scarcity and the need for long-term strategies to address future shortages. EPA firmly believes that long-term water supply commitments must focus on determination of available supplies and bringing commitments into alignment with these supplies. Thus, we support the American River Water Forum's efforts to determine the basin wide water supply demand and to balance this demand with existing water supplies while protecting and enhancing the natural resources of the Lower American River. Of special note are the Water Forum's Dry Year Agreements (pg. 2-25).

We urge the Bureau, PCWA, and Water Forum to utilize a broad array of tools to increase management flexibility, water supply reliability, and to assure a long-term, sustainable balance between available water supplies, ecosystem health (e.g., in-stream beneficial uses, water quality), and water supply demand (e.g., contract commitments). These tools could include water transfers and exchanges, conservation, pricing, irrigation efficiencies, operational flexibilities, market-based incentives, diversification of water supply sources, water acquisition, conjunctive use, voluntary temporary or permanent land fallowing, water quality improvements, and wastewater reclamation and recycling.

F

EPA also has concerns regarding air quality. Because of these concerns, we have classified this DEIS as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). Additional detailed comments are enclosed. We appreciate the opportunity to review this DEIS. Please send two copies of the FEIS to this office at the same time it is officially filed with our Washington, D.C. office. If you have questions or wish to discuss our comments, please call Ms. Laura Fujii, of my staff, at (415) 972-3852

Sincerely,

Lisa B. Hanf, Manager
Federal Activities Office

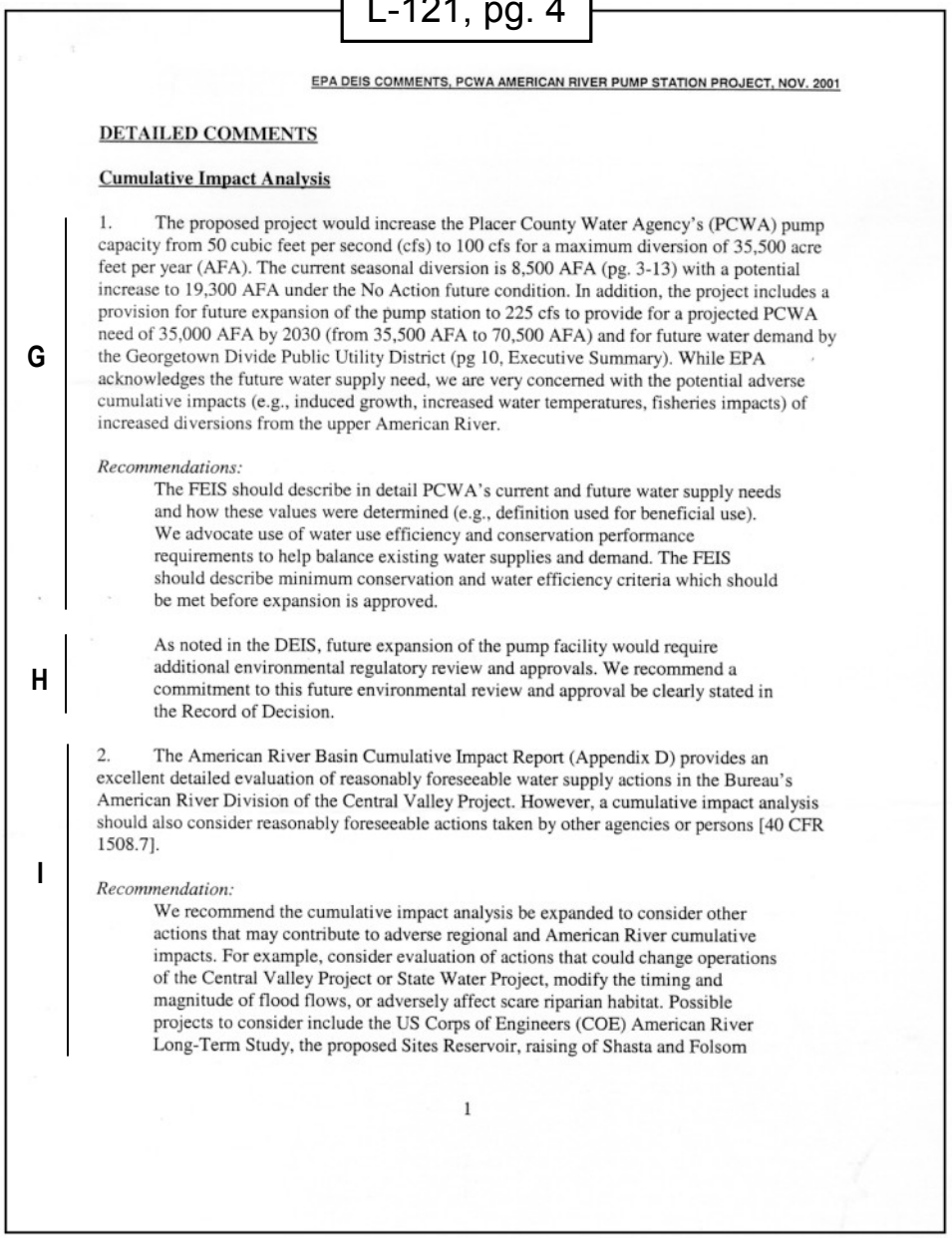
Enclosure: Detailed Comments (4 pages)
Summary of the EPA Rating System
MI003284
Filename: pcwapumpdeis.wpd

cc: Jim White, Department of Fish and Game
Wayne White, US Fish and Wildlife Service
Gary Stern, National Marine Fisheries Service
US Corps of Engineers, Sacramento
Brent Smith, PCWA

E. Many of the tools and programs suggested by the commenter have been and continue to be considered, developed, and implemented through regional and combined state/federal program efforts, such as the Sacramento Area Water Forum and CALFED. As participants in these larger programs, PCWA and Reclamation fully support the development and implementation of efforts to improve the balance between water supply and environmental resource water needs.

F. Additional detailed comments are addressed below, including specific references to Chapter 3.0 of the Final EIS/EIR, which provide additional clarification and information. Please refer to Responses L-121.G through L-121.P.

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EPA DEIS COMMENTS, PCWA AMERICAN RIVER PUMP STATION PROJECT, NOV. 2001

DETAILED COMMENTS

Cumulative Impact Analysis

1. The proposed project would increase the Placer County Water Agency's (PCWA) pump capacity from 50 cubic feet per second (cfs) to 100 cfs for a maximum diversion of 35,500 acre feet per year (AFA). The current seasonal diversion is 8,500 AFA (pg. 3-13) with a potential increase to 19,300 AFA under the No Action future condition. In addition, the project includes a provision for future expansion of the pump station to 225 cfs to provide for a projected PCWA need of 35,000 AFA by 2030 (from 35,500 AFA to 70,500 AFA) and for future water demand by the Georgetown Divide Public Utility District (pg 10, Executive Summary). While EPA acknowledges the future water supply need, we are very concerned with the potential adverse cumulative impacts (e.g., induced growth, increased water temperatures, fisheries impacts) of increased diversions from the upper American River.

G

Recommendations:

The FEIS should describe in detail PCWA's current and future water supply needs and how these values were determined (e.g., definition used for beneficial use). We advocate use of water use efficiency and conservation performance requirements to help balance existing water supplies and demand. The FEIS should describe minimum conservation and water efficiency criteria which should be met before expansion is approved.

H

As noted in the DEIS, future expansion of the pump facility would require additional environmental regulatory review and approvals. We recommend a commitment to this future environmental review and approval be clearly stated in the Record of Decision.

2. The American River Basin Cumulative Impact Report (Appendix D) provides an excellent detailed evaluation of reasonably foreseeable water supply actions in the Bureau's American River Division of the Central Valley Project. However, a cumulative impact analysis should also consider reasonably foreseeable actions taken by other agencies or persons [40 CFR 1508.7].

I

Recommendation:

We recommend the cumulative impact analysis be expanded to consider other actions that may contribute to adverse regional and American River cumulative impacts. For example, consider evaluation of actions that could change operations of the Central Valley Project or State Water Project, modify the timing and magnitude of flood flows, or adversely affect scare riparian habitat. Possible projects to consider include the US Corps of Engineers (COE) American River Long-Term Study, the proposed Sites Reservoir, raising of Shasta and Folsom

1

G. The Draft EIS/EIR provides a summary of PCWA's estimated future water supply needs (pages 1-5 through 1-7) as determined through long-term planning projections supported by projections in the general and specific plans of Placer County and the cities or communities within PCWA's water service area (see also Draft EIS/EIR pages 3-30 to 3-31). Draft EIS/EIR Table 3.4-2 provides a summary of incremental water supply demand increases projected through 2020.

Please also refer to Master Response 3.1.11, PCWA's Water Conservation Program.

H. The Draft EIS/EIR indicates the requirement to complete future environmental review and approval prior to expansion of the pump station (Chapter 2.0, Description of Alternatives, page 2-27). The lead agencies would not legally be able to expand the American River Pump Station without completing all appropriate environmental review and regulatory permitting processes, including public notification and involvement opportunities. Additionally, PCWA would only consider expansion of the pump station in the event the Sacramento River Diversion Project does not materialize.

I. The American River Basin Cumulative Report includes all reasonably foreseeable projects or actions that would potentially contribute to cumulative impacts, not just Reclamation's actions. Please refer to Appendix E of the Cumulative Report.

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Dams, implementation of the Trinity River restoration flow decision, COE Sacramento-San Joaquin Comprehensive Study, and CALFED restoration projects.

3. Potential mitigation measures to address cumulative impacts are only briefly mentioned in the DEIS and American River Basin Cumulative Impact Report.

J

Recommendations:

The cumulative impact analysis should include a distinct section providing a description and discussion of actions that can be implemented to help reduce identified potential adverse cumulative impacts. This section could be included after each resource environmental analysis section (e.g., water quality, fisheries) or as a separate section devoted to mitigation. While we recognize that the Bureau and PCWA are not responsible for the mitigation of cumulative impacts caused by other actions, we believe a general description of possible mitigation measures for cumulative impacts encourages others to step forward and take actions to reduce these impacts.

Possible mitigation measures to consider are water supply demand management tools, wetland and riparian habitat restoration, threatened and endangered species recovery actions, development of resource management plans (e.g., habitat conservation plans, natural community conservation plans), watershed analysis projects, implementation of Water Forum actions and agreements, implementation of nonpoint source pollution controls, implementation of sustainable growth principles (e.g., town-centered, transit and pedestrian oriented development), and active participation in CALFED efforts.

4. While we believe the American River Basin Cumulative Impact Report is an excellent attempt at providing a watershed-level cumulative impacts analysis, there a number of additional features which may improve the usefulness of the document.

K

Recommendations:

We suggest the following items be considered for inclusion in the Report:

a. An acronym definition list.

b. An executive summary providing a short summary of cumulative impacts and their causes.

c. A summary table of the reasonably foreseeable American River diversions. This table should include information on the American River's safe water supply yield and for each diversion - current and projected water supply demand, current and future contract amounts, water rights, and safe yield of other utilized water supply sources (e.g., groundwater, Central Valley Project, State Water Project).

J. Appendix A, Conservation Measures, of the American River Basin Cumulative Report, provides a list of ongoing or planned environmental resource protection or enhancement programs of local and regional agencies within the American River Basin. Specific on-going and future programs involving PCWA or Reclamation also are listed in Section 5.0 of the Mitigation Plan (Appendix D of the Final EIS/EIR). Conservation measures being implemented within the study area include many of those listed by the commenter.

K. An updated acronym and abbreviations list is provided at the front of the Final EIS/EIR. The cumulative impacts are identified in the Summary of Impacts and Environmental Protection and Mitigation Measures, as revised and presented in Chapter 2.0 of the Final EIS/EIR. Available information regarding each of Reclamation's reasonably foreseeable American River actions is provided in Chapter 2.0 of the American River Basin Cumulative Report and in the technical modeling memorandum. These modifications do not alter the conclusions presented in the Draft EIS/EIR, including the Cumulative Report.

L. The Draft EIS/EIR, page 2-296, recognizes that the Proposed Project study area is within a non-attainment area for ozone and particulate matter (PM_{10}). However, based on the implementation of recommended air pollutant control measures identified in the Draft EIS/EIR, it has been determined through consultation with the local air pollution control districts that the Proposed Project would be in conformity with the implementation plan and would not be expected to cause or contribute to any new violations or increase the frequency or severity of any existing violation of any standards. Information regarding the Proposed Project's conformity with the implementation plan, according to the General Conformity Regulations, is provided in Chapter 3.0, Section 3.15, Air Quality of the Final EIS/EIR. This change does not alter the conclusions presented in the Draft EIS/EIR.

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EPA DEIS COMMENTS, PCWA AMERICAN RIVER PUMP STATION PROJECT, NOV. 2001

K (cont)

d. A summary table for regional diversion projects. This table would be similar to the one above for American River diversions and should include information on the safe yield of utilized water sources (e.g., annual flows of Sacramento and American River tributaries, reservoir storage capacities), current and future diversion quantities, and current and projected demand.
While we recognize that much of the above data is present in the text, we believe summary tables would provide a quick glimpse of the data and an overview of the diversions from each major watershed.

Air Quality Analysis

L

1. While the DEIS provides an evaluation of potential air quality impacts, it does not appear to include a general conformity evaluation. Federal agencies are required by the Clean Air Act to assure that actions conform to an approved air quality implementation plan.

Recommendation:

If the proposed project area is in a nonattainment area, the Bureau may need to demonstrate compliance with conformity requirements of the Clean Air Act [Section 176(c)]. General Conformity Regulations can be found in 40 CFR Parts 51 and 93 (58 Federal Register, page 63214, November 30, 1993). These regulations should be examined for applicability to the proposed action. If the general conformity requirement does not apply to the proposed action (e.g., the project is in an attainment area), than the FEIS should state this.

M

2. EPA issued revised standards for ozone and small particulate matter (PM2.5)(smog and soot) in July 1997. Implementation of these standards are pending the designation of nonattainment areas and development of specific regulatory requirements. The adverse health effects of ozone and PM2.5 are well known. Thus, we believe the FEIS should evaluate the extent that the proposed project may release significant amounts of these pollutants.

Recommendations:

We recommend the Air Quality section of the "Affected Environment" chapter, include a description of the new ozone and PM2.5 standards, their health effects, and disclose what, if any, monitoring has been done in the project area for these pollutants. Possible sources that may contribute to high levels of ozone and PM2.5 emissions include construction equipment, mobile sources, and high volumes of diesel truck traffic.

The FEIS should identify sensitive receptors. These include children (schools, preschools, parks, playgrounds), elderly (retirement homes), infirm (hospitals), and athletes (gymnasiums, tracks, pools).

3

M. The Draft EIS/EIR evaluates the potential impacts associated with emission of ozone precursors (ROG and NO_x) and of PM_{10} according to the available emission estimate calculations and requirements of the local air pollution control districts. While it is recognized that EPA has issued standards for small particulate matter ($PM_{2.5}$), monitoring data for this pollutant was not available for locations within the study area at the time of Draft EIS/EIR preparation. It is expected that $PM_{2.5}$ will begin to be collected at Placer County air monitoring stations within the next year (D. Vintze January 2002). The mitigation measures included for PM_{10} were developed in consultation with the local air pollution control districts and are considered appropriate and adequate to mitigate the potential construction-related fugitive dust emissions of the project. Information regarding the new ozone and $PM_{2.5}$ standards, their health effects, and the status of monitoring and evaluation of these pollutants in the project area is provided in Chapter 3.0, Section 3.15.12, Regional Setting, Air Pollutants of Concern. This change does not alter the conclusions presented in the Draft EIS/EIR.

The Draft EIS/EIR identifies receptors that may be sensitive to air pollutant emissions generated by the Proposed Project (page 3-296). These receptors were identified in consultation with the Placer and El Dorado County air pollution control districts and are the focus of the air quality impact evaluation.

Mitigation measures identified to minimize ozone and particulate matter generation have been identified in consultation with the Placer County Air Pollution Control District (PCAPCD). The El Dorado County Air Pollution Control District also was consulted during preparation of the Draft EIS/EIR evaluation and during completion of the Final EIS/EIR. However, because no sensitive receptors were identified within the accepted sensitive receptor distance (1,000 feet in El Dorado County), the focus of the air quality analysis is on the Placer County side of the project study area.

The Draft EIS/EIR provides mitigation for potential air quality impacts to the maximum extent possible, as determined through consultation with local air pollution control districts. Mitigation measures for the construction-related air quality emission impacts are presented in the Draft EIS/EIR Summary of Environmental Protection and Mitigation Measures (Chapter 2.0, Section 2.3, pages 2-39 through 2-41) and in the Air Quality Analysis (Chapter 3.0, Section 3.15.2, pages 3-298 through 3-307). These measures include those mitigation approaches recommended by the commenter. Additionally, the lead agencies considered purchase of NO_x emission credits, but were advised during discussions with PCAPCD held during preparation of the Draft EIS/EIR, that the purchase of NO_x emission credits was not a feasible or appropriate mitigation measure for this project. Instead, PCAPCD recommended the measures included in the Draft EIS/EIR (page 3-300, 3-301), including an ongoing adaptive approach involving weekly construction air pollutant emission monitoring and evaluation of conditions throughout the construction period. These measures are considered adequate and appropriate for the mitigation of potential impacts and would be expected to fully mitigate NO_x emissions below the PCAPCD quarterly threshold. However, because there remains some uncertainty that NO_x emissions would consistently remain below the quarterly threshold, the Draft EIS/EIR indicates a conservative impact call regarding the potential for a short-term exceedance.

L-121, pg. 7

EPA DEIS COMMENTS, PCWA AMERICAN RIVER PUMP STATION PROJECT, NOV. 2001

M (cont) We also encourage mitigation to the maximum extent possible. Mitigation measures may include air emission credits, keeping diesel engines well tuned, retrofitting diesel engines, using machinery that uses alternative fuels, scheduling construction to minimize impacts to sensitive receptors, implementing seasonal control programs, and investigating opportunities to minimize land clearing. Given the potential for violation of nitrogen oxide (NOx) thresholds, we strongly recommend that the FEIS explore the possibility of purchasing NOx credits.

General Comments

N 1. The potential for climate change is now considered a significant possibility. Current research estimates that climate change could modify the frequency, magnitude, and timing of precipitation in the pacific northwest. A major change in precipitation and weather patterns could have notable implications for how we manage our water supply facilities.

Recommendation:

We recommend the FEIS include a short section on climate change and its potential implications for water supply management within the American River Basin and California. If possible, describe the potential impacts of future climate change on the effectiveness of the proposed PCWA pump facility (e.g., is the proposed location high enough), model assumptions and results (e.g., PROSIM), operation of the CVP and SWP, and potential impacts to resources of concern (e.g., fisheries).

O 2. Effective and sustainable management of CVP water supplies depends on an accurate knowledge of water supply availability and water use. This knowledge can only be obtained through monitoring and accounting of water supply and demand. We urge the Bureau and PCWA to make a firm commitment to timely and accurate monitoring and accounting. This commitment should include dedicated funding for this effort.

P 3. To provide clarity we recommend the FEIS include a major features figure for the No Action Alternative similar to those for the action alternatives. This figure should include the exact location of the seasonal pump facility, diversion/intake location, discharge pipe, and road access.

Q 4. If feasible, we recommend providing an itemized cost description which breaks out the cost for the pump facility, closure of the bypass tunnel, and river restoration actions.

4

N. Information regarding climate change is provided in Chapter 3.0, Section 3.18, Other Impact Considerations, which has been revised to include Section 3.18.6, Climate Change. This change does not alter the conclusions presented in the Draft EIS/EIR.

O. Reclamation presently monitors water deliveries and reports results annually in the Water Use Report required under Section 3405(B) of the CVPIA. PCWA monitors and records water supply diversions and deliveries associated with operation of the Middle Fork Project. This information is utilized by the individual agencies in their long-term water supply planning efforts.

P. The commenter requests a figure depicting the major features of the No Action Alternative. A figure showing the No Action/No Alternative has been included in Chapter 2.0, Section 2.2.1, No Action/No Project Alternative. This additional information does not alter the conclusions presented in the Draft EIS/EIR.

Q. A description of the costs of major project elements has been developed in response to this and other comments. An estimated cost breakdown of the Proposed Project has been included in Chapter 2.0, Section 2.2.2, Proposed Project—Mid-Channel Diversion Alternative of the Final EIS/EIR. This change does not alter the conclusions presented in the EIS/EIR.

L-121, pg. 8

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

L-122

Dennis Hada, 01:53 PM 11/13/01, Auburn Dam Site Restoration

From: Dennis Hada <dennis.hada@mcsinet.com>
To: ""brown@swri.net"" <brown@swri.net>
Subject: Auburn Dam Site Restoration
Date: Tue, 13 Nov 2001 13:53:19 -0500
Importance: high
X-Mailer: Internet Mail Service (5.5.2653.19)

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

To Whom It May Concern:

I am in support of restoring the American River at the Auburn Dam Construction site to it's natural flow, however, I am concerned about the loss of the Auburn to Cool trail as a result of this closure. The Auburn to Cool trail, via the diversion tunnel, has provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

My understanding is that the proposed design for a bridge at the restoration site has been estimated in excess of one million dollars. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool. The route on the Auburn side is already in place, as well as the Mt. Quarries bridge. The cost to complete this alternative is approximately one fifth that of erecting a new bridge at the tunnel location.

A I trust that mitigation for closing the existing trail would include all or partial funding for such a trail.

The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Thank you for your time and feel free to contact me if you have any questions regarding this issue.

Dennis Hada

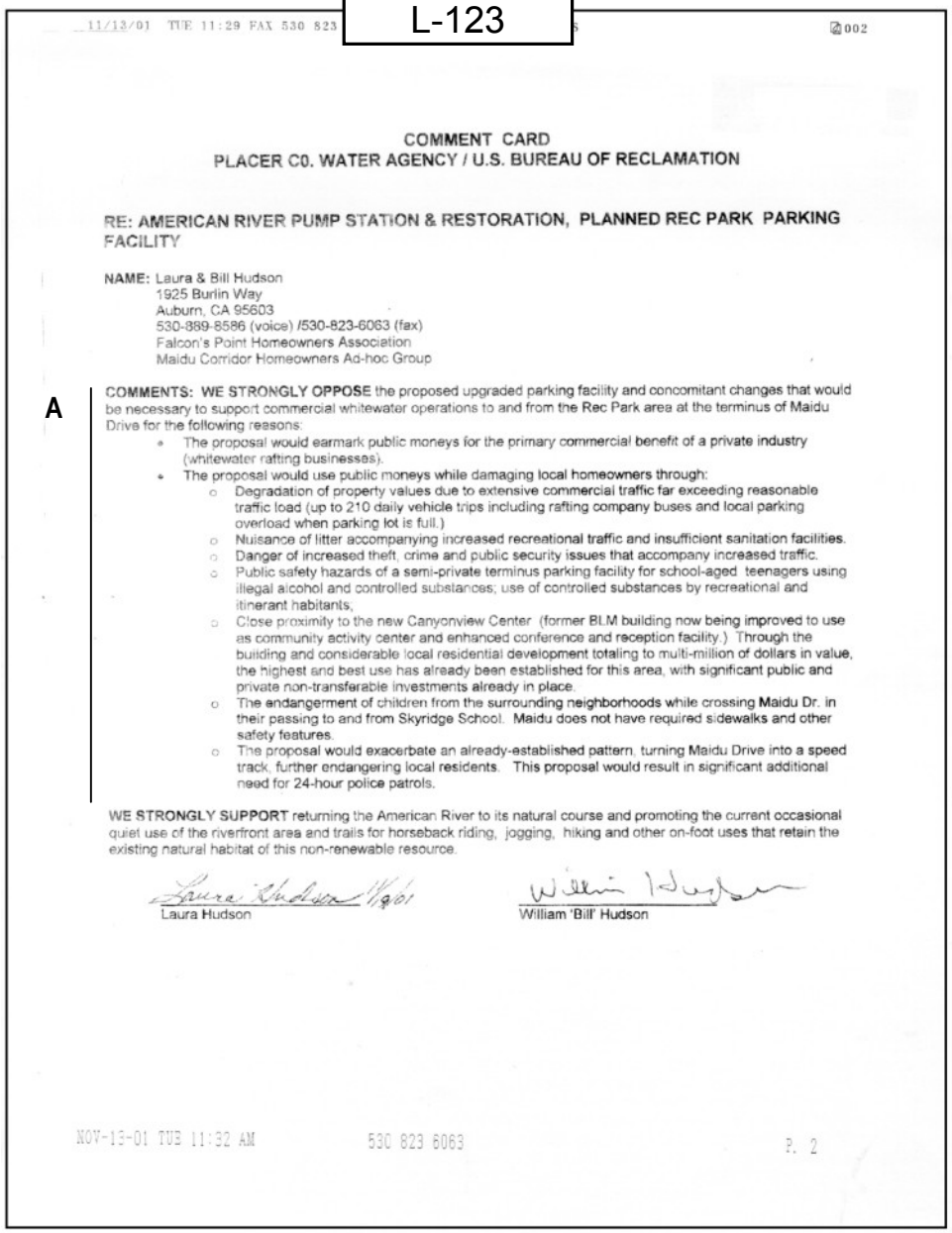
*Vice President, **ARMBA** (American River Mountain Bike Assistants)*
*Member, **FATRAC** (Folsom / Auburn Trail Riders Action Coalition)*
www.fatrac.org
Home Address:
9580 Rock Springs Road
Newcastle, CA. 95658

*CAD Technician, **MCSi** (Media Consultants / Systems Integrators)*
www.mcsinet.com
4604 Roseville Road, Suite 100
North Highlands, CA. 95660

wk; (916) 739-8226 ex. 177 dennis.hada@mcsinet.com
hm; (916) 663-4033 dhada@jps.net
cell; (916) 804-3722
wk FAX; (916) 414-2131

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-123



11/13/01 TUE 11:29 FAX 530 823 002

COMMENT CARD
PLACER C0. WATER AGENCY / U.S. BUREAU OF RECLAMATION

RE: AMERICAN RIVER PUMP STATION & RESTORATION, PLANNED REC PARK PARKING FACILITY

NAME: Laura & Bill Hudson
1925 Burlin Way
Auburn, CA 95603
530-889-8586 (voice) /530-823-6063 (fax)
Falcon's Point Homeowners Association
Maidu Corridor Homeowners Ad-hoc Group

A

COMMENTS: **WE STRONGLY OPPOSE** the proposed upgraded parking facility and concomitant changes that would be necessary to support commercial whitewater operations to and from the Rec Park area at the terminus of Maidu Drive for the following reasons:

- The proposal would earmark public moneys for the primary commercial benefit of a private industry (whitewater rafting businesses).
- The proposal would use public moneys while damaging local homeowners through:
  - Degradation of property values due to extensive commercial traffic far exceeding reasonable traffic load (up to 210 daily vehicle trips including rafting company buses and local parking overload when parking lot is full.)
  - Nuisance of litter accompanying increased recreational traffic and insufficient sanitation facilities.
  - Danger of increased theft, crime and public security issues that accompany increased traffic.
  - Public safety hazards of a semi-private terminus parking facility for school-aged teenagers using illegal alcohol and controlled substances; use of controlled substances by recreational and itinerant habitants,
  - Close proximity to the new Canyonview Center (former BLM building now being improved to use as community activity center and enhanced conference and reception facility.) Through the building and considerable local residential development totaling to multi-million of dollars in value, the highest and best use has already been established for this area, with significant public and private non-transferable investments already in place.
  - The endangerment of children from the surrounding neighborhoods while crossing Maidu Dr. in their passing to and from Skyridge School. Maidu does not have required sidewalks and other safety features.
  - The proposal would exacerbate an already-established pattern, turning Maidu Drive into a speed track, further endangering local residents. This proposal would result in significant additional need for 24-hour police patrols.

WE STRONGLY SUPPORT returning the American River to its natural course and promoting the current occasional quiet use of the riverfront area and trails for horseback riding, jogging, hiking and other on-foot uses that retain the existing natural habitat of this non-renewable resource.

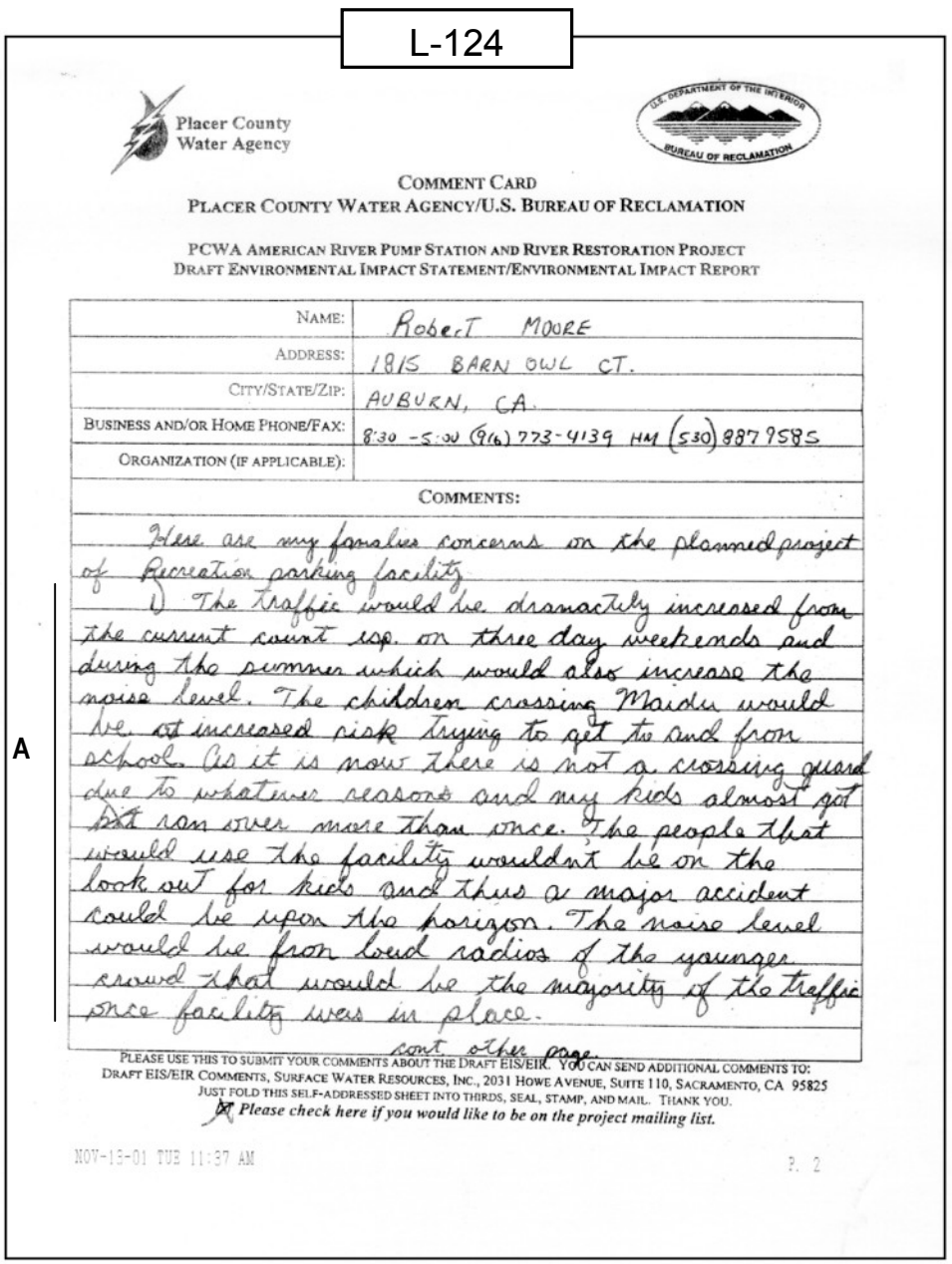
Laura Hudson 11/9/01
Laura Hudson

William Hudson
William 'Bill' Hudson

NOV-13-01 TUE 11:32 AM 530 823 6063 P. 2

A. Please refer to Master Response 3.1.6, Public River Access Features. CDPR would not issue commercial rafting permits as part of the Proposed Project.

L-124



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Robert MOORE
ADDRESS:	1815 BARN OWL CT.
CITY/STATE/ZIP:	AUBURN, CA.
BUSINESS AND/OR HOME PHONE/FAX:	8:30 - 5:00 (916) 773-4139 HM (530) 887 9585
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

Here are my fonalise concerns on the planned project of Recreation parking facility

1) The traffic would be dramactily increased from the current count esp. on three day weekends and during the summer which would also increase the noise level. The children crossing Maiden would be at increased risk trying to get to and from school. As it is now there is not a crossing guard due to whatever reasons and my kids almost got hit ran over more than once. The people that would use the facility wouldnt be on the look out for kids and thus a major accident could be upon the horizon. The noise level would be from loud radios of the younger crowd that would be the majority of the traffic once facility was in place.

cont other page

A

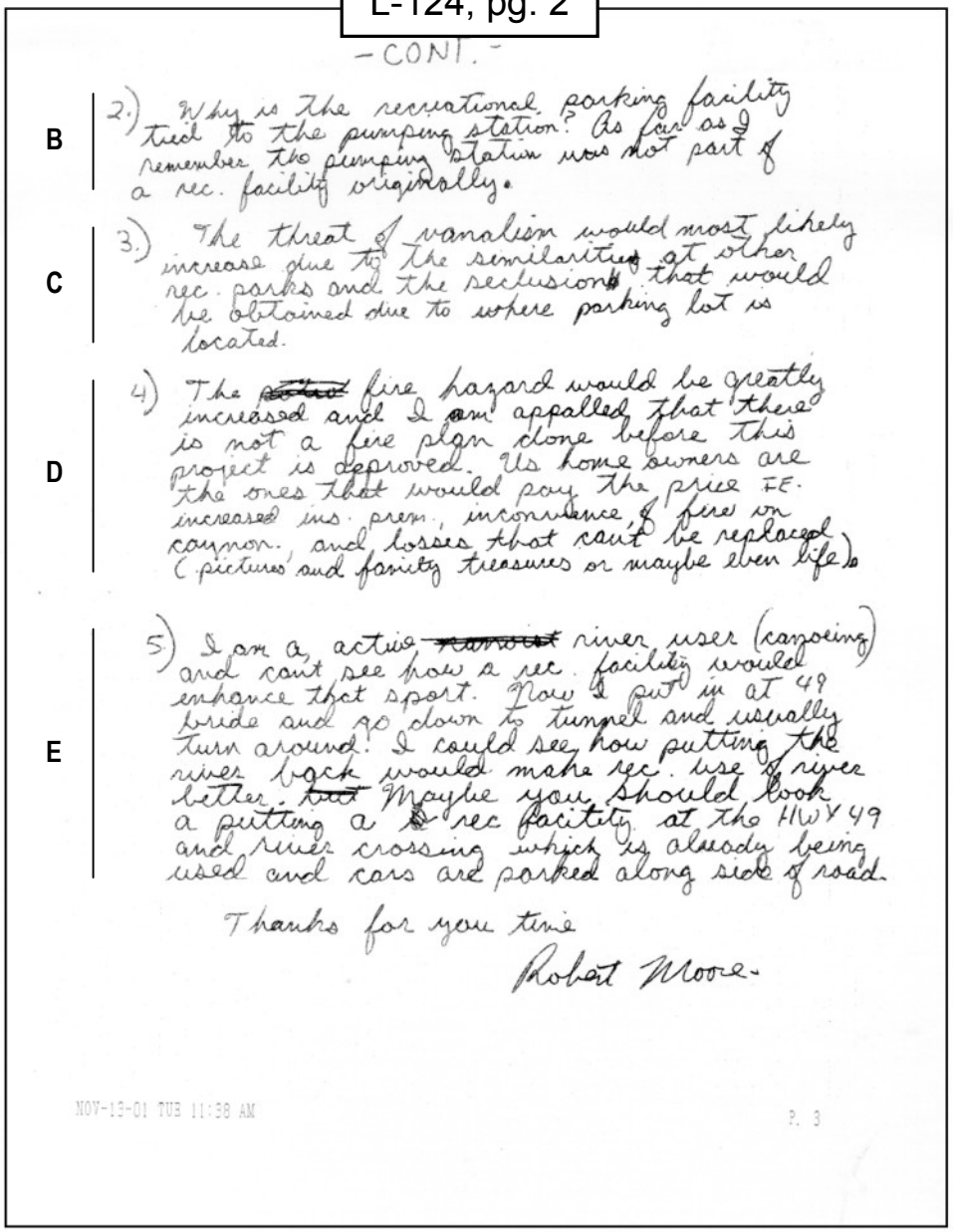
PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

NOV-13-01 TUE 11:37 AM P. 2

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-124, pg. 2



-CONT.-

B 2.) Why is the recreational parking facility tied to the pumping station? As far as I remember the pumping station was not part of a rec. facility originally.

C 3.) The threat of vanalism would most likely increase due to the similarities at other rec. parks and the seclusion that would be obtained due to where parking lot is located.

D 4) The ~~other~~ fire hazard would be greatly increased and I am appalled that there is not a fire plan done before this project is approved. As home owners are the ones that would pay the price FE. increased ins. prem. inconvience of fire on common, and losses that can't be replaced (pictures and family treasures or maybe even life)

E 5) I am a active ~~canoeist~~ river user (canoeing) and can't see how a rec. facility would enhance that sport. Now I put in at 49 bride and go down to tunnel and usually turn around. I could see how putting the river back would make rec. use of river better. ~~but~~ Maybe you should look a putting a ~~&~~ rec facility at the HWY 49 and river crossing which is already being used and cars are parked along side of road.

Thanks for you time

Robert Moore.

NOV-13-01 TUE 11:38 AM P. 3

B. Please refer to Master Response 3.1.6, Public River Access Features regarding the need for public river access in the project area.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.9, Fire Management.

E. Please refer to Master Response 3.1.6, Public River Access Features.

L-125

NOV 13 '01 13:48 GUS PEARS P.1

Comment Card
Placer County Water Agency/U.S.. Bureau of Reclamation

PCWA American River Station and River Restoration Project
Draft Environmental Impact Statement /Environmental Impact report

Name: Gus & Diana Pearson
Address :1880 Vista Del Lago
City/State/Zip: Auburn, CA. 95603
Home Phone:(530) 823- 6855

Comments:

We do favor the plan to restore the river and build the pump station, but do have several concerns.

A | With the growth in the Maidu Drive area, we are experiencing traffic problems now. Would it not be better to have Pacific Ave. as the main entrance to the recreational area?

B | I feel that with the increase of people in the canyon we will have a potential for fire danger. How will this be addressed?

C | Because we are so close to the canyon, we now hear noise from parties and reckless driving on the lower part of Maidu. How will this be policed?

Sincerely
Gus Pearson

Please put us on the project list.

NOV-13-01 TUE 12:09 PM P. 1

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-126



November 9, 2001

AMERICAN RIVER PUMP STATION PROJECT
DRAFT EIS/EIR COMMENTS
SURFACE WATER RESOURCES
2031 HOWE AVENUE, SUITE 110
SACRAMENTO CA 95825

Re: American River Pump Station Project

Dear Sirs:

The following comments are submitted on behalf of Protect American River Canyons (PARC) with regard to the Draft EIS/EIR for the Placer County Water Agency(PCWA) American River Pump Station Project.

A PARC strongly endorses the proposal identified by the Bureau of Reclamation and PCWA as its preferred project, the Mid-Channel Diversion Alternative. This alternative provides important environmental and public access benefits, closes the hazardous bypass tunnel, and allows PCWA to establish a reliable means of accessing its American River water entitlement on a year-round basis. The sponsoring agencies are to be commended for their commitment to a plan that meets these multiple important objectives.

In particular, we are pleased with the design features that call for closure of the bypass tunnel and restoration of the now dewatered river channel to a naturally appearing and functioning riverbed. The removal of the failed coffer dam debris along with the return of navigable flows to this stretch of the American River will satisfy the Bureau of Reclamation's public trust obligations and greatly enhance the river's fish and wildlife, scenic, and recreational values.

We are also pleased with the public access components of the proposed project. Reasonably regulated vehicle access to the restored river and to the vicinity of Oregon Bar will make feasible a quality boating experience from the North-Middle Fork confluence downstream to these two take-out locations. Restored public access also sets the stage for additional recreation enhancements as part of PARC's proposed American River Confluence Parkway. It is anticipated that these additional enhancements will be evaluated as part of the development of a new general plan for the Auburn State Recreation Area (ASRA), a process the California Parks and Recreation Department is scheduled to begin in 2003.

P.O. Box 9312 • Auburn, CA 95604 • http://pweb.jps.net/~parc/

Protect American River Canyons is dedicated to the protection and conservation of the natural, recreational, cultural, and historical resources of the North and Middle Forks of the American River and its canyons for all to care for and enjoy.

A. Project support noted.

L-126, pg. 2

B

We, like many others, are concerned about one impact of the proposed project: the permanent closure of the Auburn to Cool Trail through the project area. The existing land bridge provides an important link between trail systems on each side of the canyon and is utilized by hikers, runners, equestrians, and mountain bikers. It is likely that the loss of this trail link would intensify the use of other canyon trails, leading to physical degradation of those trails and increased user group conflicts.

We agree with the assessment that the loss of this trail connector is a significant impact. We question, however, the draft EIS/EIR's conclusion that there are no feasible mitigation measures that can be implemented as part of the proposed project.

One potential mitigation measure that appears to enjoy widespread public support is construction of a pedestrian, equestrian and cycling bridge across the river somewhere in the vicinity of the existing land bridge. Another attractive option is the construction of new multi-use trails on both sides of the river, leading downstream from Mountain Quarries (No Hands) Bridge to the project area and linking up with other existing trail systems.

It is PARC's position that both these options merit close analysis, and that both should be implemented at some point in the not to distant future. We would note that with regard to the footbridge option, special care needs to be taken in the design and placement of the bridge to ensure it is aesthetically pleasing and as compatible as possible with its canyon surroundings.

The new trail option may well be a more compelling mitigation measure to be taken as part of this project. This option would not only preserve the Auburn to Cool Trail link, but would do so by providing new trails that would help alleviate the usage demand on other increasingly popular canyon trails. It would also appear that new trail construction could be accomplished more quickly and at a lower cost than would be necessary for a new footbridge.

PARC is not insensitive to the authorization and budgetary constraints of the pump station project. Nevertheless, we believe the project sponsors do have a responsibility to mitigate for the impacts of the project, and in particular to mitigate the loss of the Auburn to Cool Trail link. If feasible that mitigation should include new trails or a new footbridge as outlined above; if such mitigation is determined to not be feasible as part of the proposed project, then it should include at a minimum other partial mitigation measures such as design of the reconstructed river channel to allow for a low flow, shallow water ford, or placement of a temporary seasonal bridge that would serve the same purpose. These partial mitigation measures should also include design of the reconstructed river channel in a manner that will accommodate future permanent bridge placement.

In the event neither the new trail option nor the permanent footbridge option is determined to be feasible as part of the proposed project, we believe it is

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-126, pg. 3

vitally important that both the Bureau and PCWA make a commitment to work with State Parks to implement both options as soon as possible. It is our perception that without such an express commitment by the project sponsors, neither of these necessary measures is likely to be funded or implemented any time soon.

C PARC is also sensitive to the integrity of the neighborhoods in the vicinity of the proposed access via Maidu Drive to the restored American River and Oregon Bar. Options here might include signage at Maidu and Auburn-Folsom Road indicating days and hours of operation of the Maidu-Auburn State Recreation Area American River access road, and adequate signage to discourage visitors from using the neighborhood as a parking area. It may be wise to create an overflow parking area near the top of the proposed entrance station on Maidu for those people who want to carpool into the restored river area. Another option that might alleviate many of the

D Maidu neighbors' concerns would be to consider, if feasible, additional or alternate access to the river from the Pacific Avenue-Overlook Area.

E Finally, there may be some merit to restoring the last quarter-mile of dirt road to Tamaroo Bar for fire and safety access to this stretch of river below the Robie Point neighborhood.

F One housekeeping note: references are made throughout the draft EIS/EIR to "No Hands Bridge." The historical name of this beautiful bridge is "Mountain Quarries Bridge." Given the historic character of the bridge (built circa 1912), we believe the EIS/EIR should refer to the bridge by its proper historical name, as well as by its more commonly used contemporary nickname ("No Hands Bridge").

On behalf of Protect American River Canyons, thank you for the opportunity to comment on the draft EIS/EIR for the American River Pump Station Project. We would welcome the opportunity to discuss any and all possible solutions to the mitigation issues raised above, and look forward to the implementation of this very worthy project.

Sincerely,

Tim Woodall
President

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.10, Project Access.

E. Please refer to Master Response 3.1.9, Fire Management.

F. A reference to the historical name of the Mountain Quarries Bridge is provided in Chapter 3.0, Section 3.8.1.2, Project Area Setting. This change does not alter the conclusions presented in the Draft EIS/EIR.

L-127



Comments on the Draft PCWA American River Pump Station Project

November 13, 2001

Carol Brown
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95814

Dear Ms. Brown,

General Remarks

Friends of the River has closely followed proposals by the Placer County Water Agency (PCWA) and the United States Bureau of Reclamation (USBR) to construct an "all-season" pumping facility to replace the seasonal pumping facilities now provided by USBR under its contract with PCWA. In addition, and like the California Attorney General and the USBR, we have also recognized the desirability of closing the Auburn dam diversion tunnel and restoring the American River to a more natural river channel as well as restoring public access to this area. We are pleased that PCWA and the USBR appear to be attempting to devise an integrated project that meets these goals.

Water Forum Agreement Implications

We note that the Project is premised on agreements for water diversion and related operations either reached in the January 2000 Water Forum Agreement or contemplated in the negotiations that proceeded the agreement. Both Friends of the River and PCWA were signatories to the Agreement. The USBR has expressed its general support for the Agreement as well.

The specific facility design embodied in the preferred alternative was contemplated during the Water Forum Agreement negotiations, but did not appear in the final agreement because

three remaining issues remained to be negotiated with PCWA[1] . One of those issues was whether the contemplated Auburn diversion would be linked to the closure of the diversion tunnel and the restoration of the river and public access to the project area. If the preferred alternative is adopted, this issue will largely be resolved.

The Water Forum Agreement did not include any provisions related to the delivery of PCWA supplies or USBR "exchange" supplies to the Georgetown Divide Public Utilities District. The American River Pump Station preferred alternative provides for an underchannel crossing and the physical space for a pump in the Pump Station that might some day supply water to the District.

Friends of the River has no current position on this now-hypothetical project, but has expressed concerns before about both the desirability and feasibility of developing this diversion facility to support further urbanization of this area. However, we recognize that the preferred alternative provides no more than a minor fraction of the facilities and financial resources that would be necessary ultimately to deliver water to the District, and that PCWA and USBR engineers would prefer to avoid the prospect of building (with its associated environmental impacts) a second river pump station or a channel crossing across a live stream channel. Therefore, we do not intend to raise any vigorous objection to this limited project feature.[2]

Recreation Improvements

We believe that the preferred alternative interim access program for river navigation use and other incidental public use is generally consistent with the Memorandum of Agreement between the United States and the State of California. We also believe that modifications and refinements to the Project interim access program will emerge and prove popular as the California Department of Parks and Recreation undertakes its update to the Auburn State Recreation Area General Plan – or during the development of a separate Confluence Parkway component amendment to the General Plan. We understand that at least one of these planning efforts are scheduled to begin in 2003. The final Project document should include a

---

[1] Water Forum Agreement, pp. 262 to 272. The remaining issues were: 1) the question of whether river restoration would be included in the design of the proposed Auburn diversion pump facilities, 2) the nature and effectiveness of the implementation of Water Conservation Best Management Practice #5 (particularly in reference to "ditch water" deliveries, 3) the effectiveness of dry year actions that PCWA expects to undertake (although many of these actions were negotiated in other parts of the agreement) given the uncertainties of PCWA diversions, points of diversions, and releases from storage that could not be fully anticipated or negotiated in the Agreement at that time.

[2] The Georgetown Divide Public Utility District has a Water Forum Procedural Agreement meant to memorialize the interest by the District and the Water Forum Signatories to work to resolve remaining issues when further discussions offer promise. (Water Forum Agreement, p. 335)

L-127, pg. 3

A commitment by the project partners, the California Department of Parks and Recreation, and regional governments and special districts to ensure that this effort is undertaken in a successful and timely way.

B A major focus of initial public reaction to the preferred alternative is that a successful effort be undertaken to identify and implement a program to mitigate for the project associated reduced utility of the existing river crossing element of the Auburn to Cool Trail. We understand that some creative and reasonably feasible approaches are likely to emerge during this public comment phase of the project. We hope that the Project partners will work with interested members of the trail community, the State Department of Parks and Recreation, and interested local governments and special districts in fashioning an approach to resolving these concerns — and at the same time forge working relationships that also will be necessary to create a successful Confluence Parkway.

Clarification of Design Philosophy

In Chapter 2, p.2-17 of the EIS/EIR, the Pump Station is to be placed above the 100 year flood level. The adoption of this design criteria is puzzling, for we suspect that PCWA views this element of the project to be "critical infrastructure."

C The Interagency Floodplain Management Review Committee recommends that the nation should: "Reduce the vulnerability of critical infrastructure to damage from the standard project flood.[3]" The purpose of that recommendation was to ensure that critical infrastructure be designed (to the extent possible) to avoid damage to reasonably foreseeable extreme flood events. The Committee also noted that:

> Floodplain Management Guidelines for implementing Executive Order (EO) 11988, issued by the Water Resources Council in February 1978, require that critical high-risk activities be protected at a minimum against the 0.2 percent annual chance (500-year) flood. (p. 71)

While a rich set of literature exists over disputes over modeling the frequency of hypothetical flood events (and the related annual flood risk assessments) in the American River Basin[4], the

---

[3] Page 71. The Committee defined Standard Project Flood as: "[A] very large (low frequency) design flood standard applied to the design of major flood control structures and representing the most severe recombination of meterorological and hydrological conditions considered reasonably characteristic of a particular region." *Sharing the Challenge: Floodplain Management Into the 21st Century, Report of the Interagency Floodplain Management Review Committee to the Administration Floodplain Management Task Force*. US Government Printing Office, June 1994.

[4] For a limited discussion (almost no discussion on standard project flood analysis and the use of paleoflood analysis to establish foreseeable flood event boundaries), see *Improving American River*

A. These items will be considered in the update to the Auburn SRA Resources Management Plan, which is a separate project and will require additional environmental review.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

C. Please refer to Response L-110.I.

L-127, pg. 4

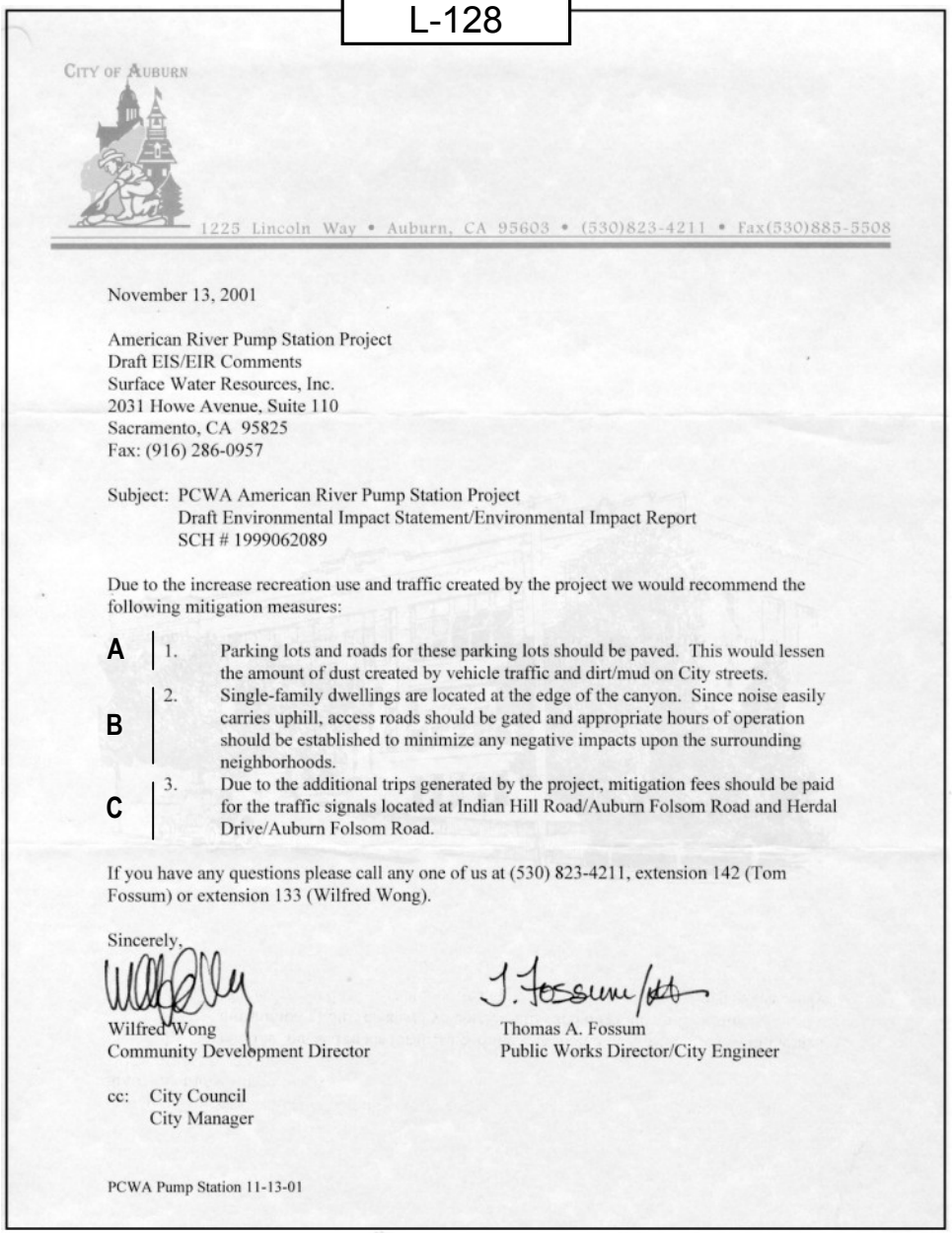
American River Pump Station Report provides no information why this design standard was chosen, and no information on the discharges and stages associated with modeled 1%, 0.2%, or the standard project flood. It would be appropriate to remedy this deficiency.

Sincerely yours,

Ronald M. Stork
Friends of the River Conservation Staff
915 20th Street
Sacramento, CA 95814
916 442-3155

Flood Frequency Analyses, Committee on American River Flood Frequencies, Water Science and Technology Board, Commission on Geosciences, Environment and Resources, National Research Council, National Academy Press, 1999.

L-128



CITY OF AUBURN

1225 Lincoln Way • Auburn, CA 95603 • (530)823-4211 • Fax(530)885-5508

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825
Fax: (916) 286-0957

Subject: PCWA American River Pump Station Project
Draft Environmental Impact Statement/Environmental Impact Report
SCH # 1999062089

Due to the increase recreation use and traffic created by the project we would recommend the following mitigation measures:

A 1. Parking lots and roads for these parking lots should be paved. This would lessen the amount of dust created by vehicle traffic and dirt/mud on City streets.

B 2. Single-family dwellings are located at the edge of the canyon. Since noise easily carries uphill, access roads should be gated and appropriate hours of operation should be established to minimize any negative impacts upon the surrounding neighborhoods.

C 3. Due to the additional trips generated by the project, mitigation fees should be paid for the traffic signals located at Indian Hill Road/Auburn Folsom Road and Herdal Drive/Auburn Folsom Road.

If you have any questions please call any one of us at (530) 823-4211, extension 142 (Tom Fossum) or extension 133 (Wilfred Wong).

Sincerely,

Wilfred Wong
Community Development Director

Thomas A. Fossum
Public Works Director/City Engineer

cc: City Council
City Manager

PCWA Pump Station 11-13-01

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features. The hours of operation would be limited and the gates at the entrance road would be locked at night and off-hours.

C. The Proposed Project Mitigation Plan includes payment of traffic mitigation fees to the City of Auburn.

L-129

11-13-2001 03:39pm From-KINKOS AUBURN T-634 P.001/001 F-454

ROBERT L. PROCISSI
1584 Lincoln Way
Auburn, Ca 95603
530 885-9101

November 14, 2001

American River Pump Station Project
DRAFT. EIR ES COMM
2031 Howe Ave. suite 110
Sacramento, CA.95825

RE: Parking lot / Rafting location

To whom it may concern,

A I am not in favor of this project at its proposed site. I am a property owner in the Montecello housing development. I feel this proposed projcet is not in keeping with the development that has already occured in the area. This is a quite residential neighborhood and would like to see it stay that way. Added traffic and noise would only destroy the neighborhood and surrending neighborhoods.

B This projcet should be moved to the Auburn Dam overlook site. The city of Auburn has already spent thousands of dollars on the skateboard site facility. I believe that the skateboard parking lot near Old Town Auburn and Downtown Auburn with the help of the City of Auburn and the Chamber of Commerce could and would promote tourism dollars for the city of Auburn and its merchants. I also feel that the infrastructure on Auburn- Folsom road and Pacific street has the proper and adequate design to move traffic in and safe and timely manner.

This letter has been written in a few minutes I did not have very much time to get the letter out. My intentions were to get something on paper. If anyone would care to contact me in the future so I can express my feelings in a clear and in depth manner I would be happy to

Sincerely,

Robert L. Procissi.

NOV-13-01 TUE 2:38 PM 5308878881 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-130

William J. Taylor
406 Riverview Drive
Auburn, CA. 95603-5734
Phone: 530\885-7108

11 November 2001

To: American River Pump Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA. 95825

This project as proposed is a blatant attempt by special interest groups to subvert the legitimate EIR\EIS process by misrepresentation of the issue of the pump station.

That this pump station unfortunately may be required to mitigate the water shortages in the Western County area caused by developments already built and pending is a given. However, this attempt to end run the EIR system to provide public access and parking for a small elitist group of river enthusiasts at the expense of and contrary to the desires of area property owners and taxpayers is a new low.

The entire plan as proposed is so flawed as to be ridiculous were it not for the extreme negative impact it threatens to bring to the residents of this area.
Some major concerns are:

A
- The Fire threat will increase many fold if public access of this area is allowed. This is historical fact. There is no Fire plan in place or proposed that has addressed this issue. Where are the fire mitigation and cost reimbursement plans for the Auburn Fire Department, The California Department of Forestry and Fire Protection, or Newcastle Fire Protection District to offset the additional costs of Suppression, Fire Prevention, Medical Aid, and Rescue Services that will be needed to serve the area? Why is this not addressed in the EIS\EIR?

B
- Why is the existing access utilizing Pacific Street not being considered for the Pump Station? The roads are in place and the majority are already paved and improved to standards far more that adequate for any Pump Station. Why would any other route even be considered and why was this fact not addressed in the EIS\EIR?

C
- What mitigation factors are being proposed to offset the additional costs of Law Enforcement and Police Protection in this area that will be incurred by the Auburn Police Department, The Placer County Sheriffs Department, and The California Highway Patrol should public access be allowed? Why was not this issue also addressed by the EIS/EIR?

D
- Riverview Drive has become a de facto connector artery for Madiu Drive since the construction of the Skyridge Elementary School facility. This

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.10, Project Access. Several houses located along Pacific Avenue face the street, are not separated by fencing, and have direct driveway access to the road.

C. Please refer to Master Response 3.1.6, Public River Access Features. Local law enforcement agencies have indicated ability to continue provision of law enforcement services in the project area; increased river access would not be anticipated to create an undue burden upon these agencies.

D. Please refer to Master Response 3.1.6, Public River Access Features.

L-130, pg. 2

increased traffic through this prime residential area caused by people seeking short cut access to the School has resulted in a major adverse impact for the residents. This existing problem has not been addressed to date. This area is already severely impacted without the additional commercial and recreational traffic that this project will generate. Why has there been no EIS\EIR plan to mitigate this problem?

William J. Taylor

Carol A. Taylor

L-131

Karen & Richard Goodrich
515 Riverview Drive
Auburn, Ca. 95603
September 11, 2001

To Whom It May Concern,

I am writing in regards to the American River Public Access Project in Auburn via Maidu Drive. I am a resident of this area and vehemently oppose this access route that you have chosen. I do not wish to have increased traffic in my neighborhood, which will ultimately…

A
1). Increase vehicle activity to a residential and elementary school area.
2). Increase noise pollution.
3). Increase roadside trash and
4). Decrease the pleasure of a nice quiet neighborhood that was designed to be just this.

Auburn already possesses another alternative route to this very same proposed river access area. Pacific Ave, which also comes off one of Auburn's main road, namely Auburn Folsom Road, is a much better choice with regards to Public access. Namely…

B
1). There are less residential homes that are affected by the increased traffic.
2). There are no public schools on this route and thus children's safety will not be compromised by the increased in automobile traffic.
3). **Most Importantly** though is to note that Pacific Ave already has 2 public parks that already draw community activity along with the nearby Fairgrounds, a Dam Overlook area, a Horse trailer parking trail head staging area and a large recreation park near the junction of the Auburn Folsom and Pacific Ave area. A Signal light at this junction is already in place to help regulate the traffic, thereby reducing this cost to your project. Not only this but routing traffic to this area will help our two new parks get the additional public attention that they deserve. Lets keep the public where the public access has already been developed and keep residential areas for families and neighborhoods.

Sincerely,

Karen and Richard Goodrich

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-132

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	LYLE W. IVES
ADDRESS:	1690 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN, CA. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-888-9291
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — I CAN UNDERSTAND THE NEED FOR THIS RIVER PUMP STATION BUT I CAN-NOT AGREE THAT ALSO LOADS OF MONEY WILL HAVE TO BE SPENT CREATING AN ADDITIONAL RECREATION AREA PLUS THE MAINTAINANCE COSTS. WHAT THE STATE OF CALIFORNIA WILL RECEIVE IN PARK FEES WILL NOT IN 50 YEARS PAY THE COST OF THIS PROPOSED PROJECT. THE TAXPAYERS ARE THE ONES WHO WILL BE OUT AGAIN IN PROVIDING THE MONEY FOR THIS. DON'T WE ALREADY HAVE ENOUGH OF THESE "LAME DUCK" STUPID IDEAS?

B — IN ADDITION, THIS PROJECT WILL HAVE AN IMMEDIATE IMPACT ON TRAFFIC CONGESTION ON MAIDU BLVD AS WELL AS CREATE DANGER TO THE CHILDREN GOING TO AND FROM THE SKYRIDGE SCHOOL JUST OFF MAIDU. PACIFIC AVE. OVER BY THE DAM OVERLOOK WOULD MOST CERTAINLY BE A BETTER LOCATION WITHOUT IMPACTING THE NEIGHBORHOOD.

I HEREBY REJECT THIS PROJECT AND HOPE OUR STATE CAN FIND A BETTER WAY (BENEFICIAL) TO SPEND THE TAXPAYER'S MONEY

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

B. Please refer to Master Response 3.1.6, Public River Access Features.

L-133

Comments to the PCWA American River Pump Station and River Restoration Project
Draft EIS/IER
November 12, 2001

A

1. A fire plan should be activated at the beginning of the construction of the project. Construction will have its own unique fire dangers (heavy equipment and personnel), and the project should not move forward until fire hazard concerns are addressed.

B

2. We live at the corner of Riverview Drive and Maidu Drive (just above the ARD building and near the Skyridge Drive intersection. The ARD parking lot and the lower Maidu Drive near PCWA is a regular hangout on summer evenings. We have had to frequently call the police to report racing, and spinning out of cars and loud parties. An additional parking lot will be an attractive place to hang out at night. When we have called the City of Auburn regarding such activities on Maidu Dive and through the residential neighborhood, we have been told to call the CHP, since the lower portion of Maidu Drive is not within the jurisdiction of the Auburn Police Department. This is such small isolated pocket that it does not make a lot of sense for the CHP to have to patrol this portion of the County.

   An agreement should be in place before construction takes place for the City to patrol the unincorporated portion of Maidu Drive and the future parking lots.

C

3. We are very concerned about the increased traffic travelling along Maidu Drive, to Riverview Drive, to Skyridge Drive, and then onto Sacramento Street, instead of taking Maidu Drive back to Auburn-Folsom Blvd. This is a residential neighborhood with houses fronting the Maidu, Riverview and Skyridge Drives and there are no sidewalks on Riverview Drive. Numerous children walk to Skyridge School along Riverview Drive and the three way intersection in front of our house has a curve, which is posted at 15 MPH. There is no stop sign at this intersection. Traffic through the intersection has already increased due to the PCWA and the ARD building. We are concerned that the recreational traffic will take Riverview Drive back to Auburn-Folsom Blvd instead of Maidu Drive. The three-way intersection at Maidu and Riverview Drives is not safe for large amounts of traffic.

   We propose putting a barricade on Maidu Drive between the ARD building and the residences on Maidu Drive, this would then force non-residential traffic to use Maidu Drive. The other option would be to use the access at Pacific Street. This area already has commercial and recreational facilities and is more suited to handle the traffic.

We would like to be included on your project mailing list. Thank you for your consideration of our comments.

Claudia and Kurt Heisinger
401 Riverview Drive
Auburn, CA 95603
(530)823-8078

Claudia Heisinger

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

L-134

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	DAVE & KRISTI STRIPLIN
ADDRESS:	1705 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A PLEASE DO NOT PUT THE ACCESS TO THE RIVER'S RECREATION FACILITIES ON MAIDU DRIVE. THE INCREASED TRAFFIC IS A MAJOR CONCERN DUE TO THE FACT THAT MANY YOUNG & CHILDREN MUST CROSS MAIDU TO GO TO SKYRIDGE SCHOOL, NOT ONLY FOR CLASS M-F, BUT ALSO TO USE THE PLAYGROUND & FIELDS ON THE WEEKEND. THEIR SAFETY MUST BE A PRIORITY. PLEASE CONSIDER PACIFIC AVE. FOR ACCESS OR PUTTING IN ACCESS ON THE EASTERN SIDE OF THE RIVER, BY COOL. I BELIEVE ACCESS ON THE

B EASTERN SIDE MEETS YOUR NEED FOR A PLACE WHERE RECREATIONAL USERS MAY ENTER/EXIT THE RIVER WHILE IMPACTING THE LEAST NUMBER OF HOMEOWNERS / FAMILIES.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-135

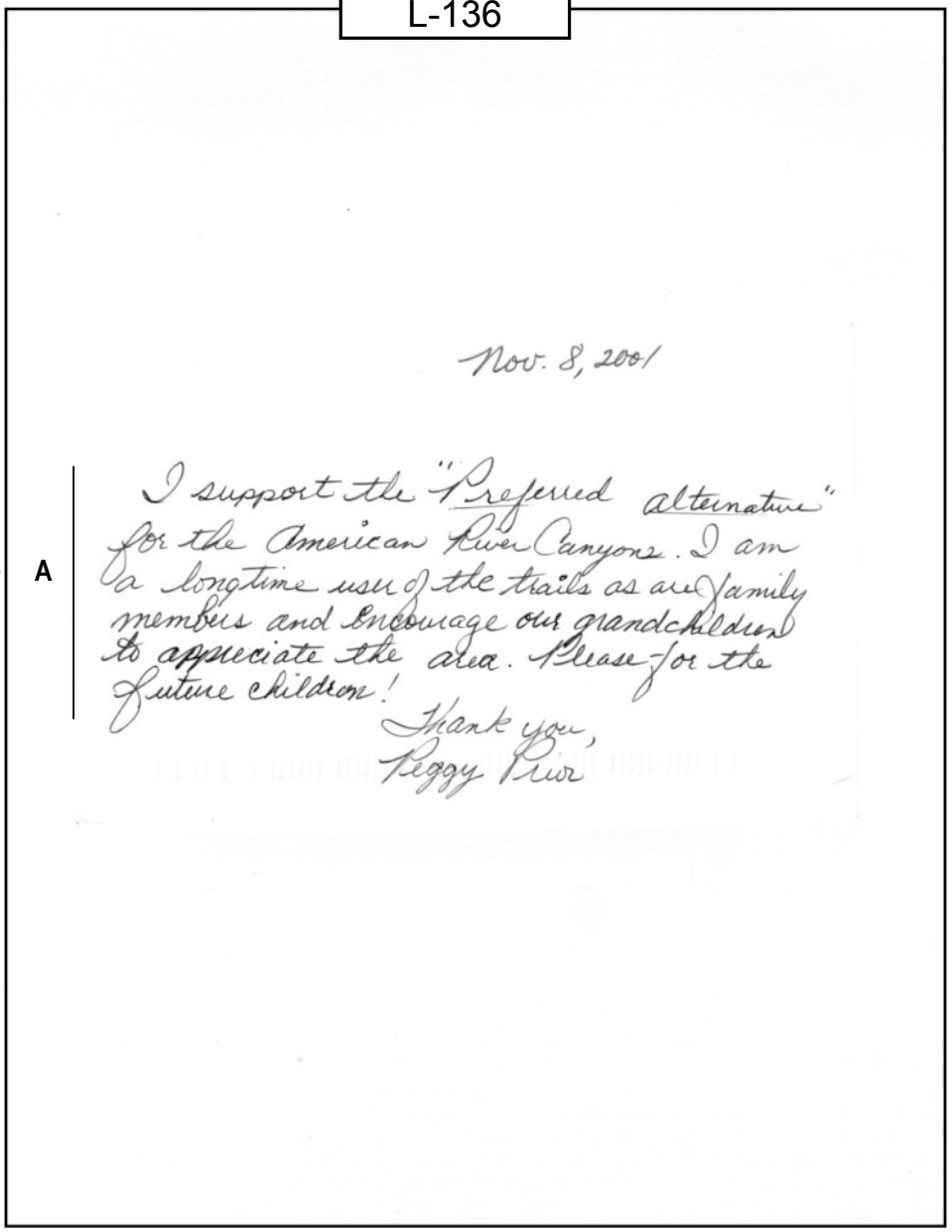
A

I SUPPORT THE "PREFERRED ALTERNATIVE" OF THE RESTORATION PLAN FOR THE AMERICAN RIVER, WHICH WOULD CLOSE THE OLD AUBURN DAM DIVERSION TUNNEL AND RESTORE THE AMERICAN RIVER TO ITS NATURAL CHANNEL WHILE PROVIDING A SUPPLY OF WATER TO PLACER COUNTY.

John Prior
8848 SWALLOW WAY
FAIR OAKS CA 95628

A. Project support noted.

L-136



Nov. 8, 2001

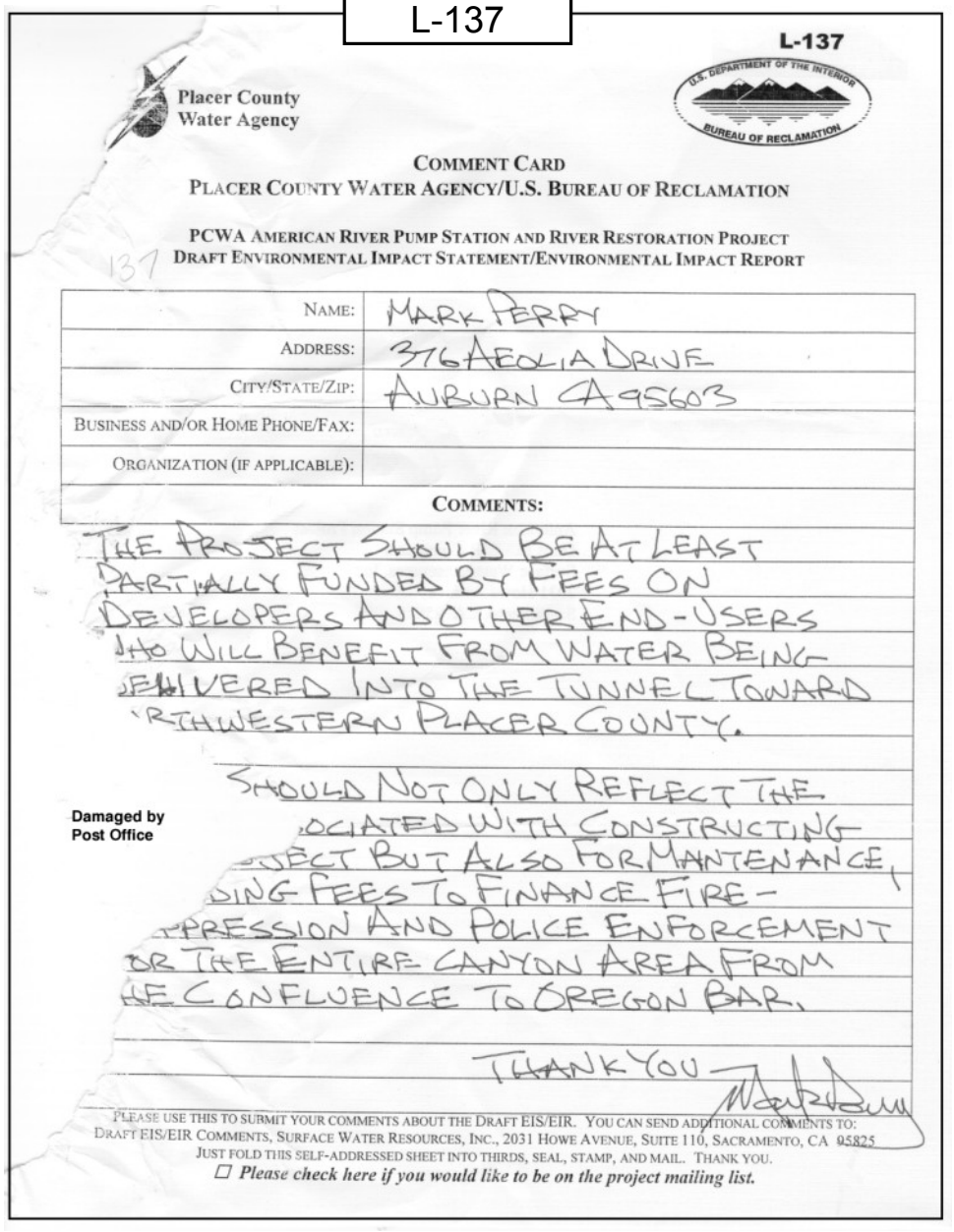
I support the "Preferred alternative" for the American River Canyons. I am a longtime user of the trails as are family members and encourage our grandchildren to appreciate the area. Please for the future children!

Thank you,
Peggy Rios

A

A. Project support noted.

L-137



L-137

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

137

NAME:	MARK PERRY
ADDRESS:	376 AEOLIA DRIVE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

THE PROJECT SHOULD BE AT LEAST
PARTIALLY FUNDED BY FEES ON
DEVELOPERS AND OTHER END-USERS
WHO WILL BENEFIT FROM WATER BEING
DELIVERED INTO THE TUNNEL TOWARD
NORTHWESTERN PLACER COUNTY.

SHOULD NOT ONLY REFLECT THE
OCIATED WITH CONSTRUCTING
JECT BUT ALSO FOR MAINTENANCE,
DING FEES TO FINANCE FIRE-
PRESSION AND POLICE ENFORCEMENT
OR THE ENTIRE CANYON AREA FROM
HE CONFLUENCE TO OREGON BAR.

THANK YOU

Damaged by Post Office

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-138

OPHIR AREA PROPERTY OWNERS ASSOC., INC.
PO BOX 752
NEWCASTLE, CA, 95658

November 13, 2001

Via e-mail and fax

Re: Preliminary Comments to August 2001 DEIR/DEIS PCWA American River Pump Station, and Request to Extend the Comment Period

American River Pump Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Post-it® Fax Note 7671 | Date 11-13-01 | # of pages ▶ 36
To Carol Brown | From R. Otte
Co./Dept. SWRI | Co. Ophir Prop. Owns. Assoc.
Phone # 916 563-6369 | Phone # 916) 786-3442
Fax # 916) 286-0957 | Fax # 916) 786-4503

Dear Ms. Brown:

Please accept these electronically transmitted preliminary comments on behalf of the Ophir Area Property Owners Association regarding the proposed American River Pump Station Project. Included are supporting references and comments made by Mr. Lowell Jarvis.

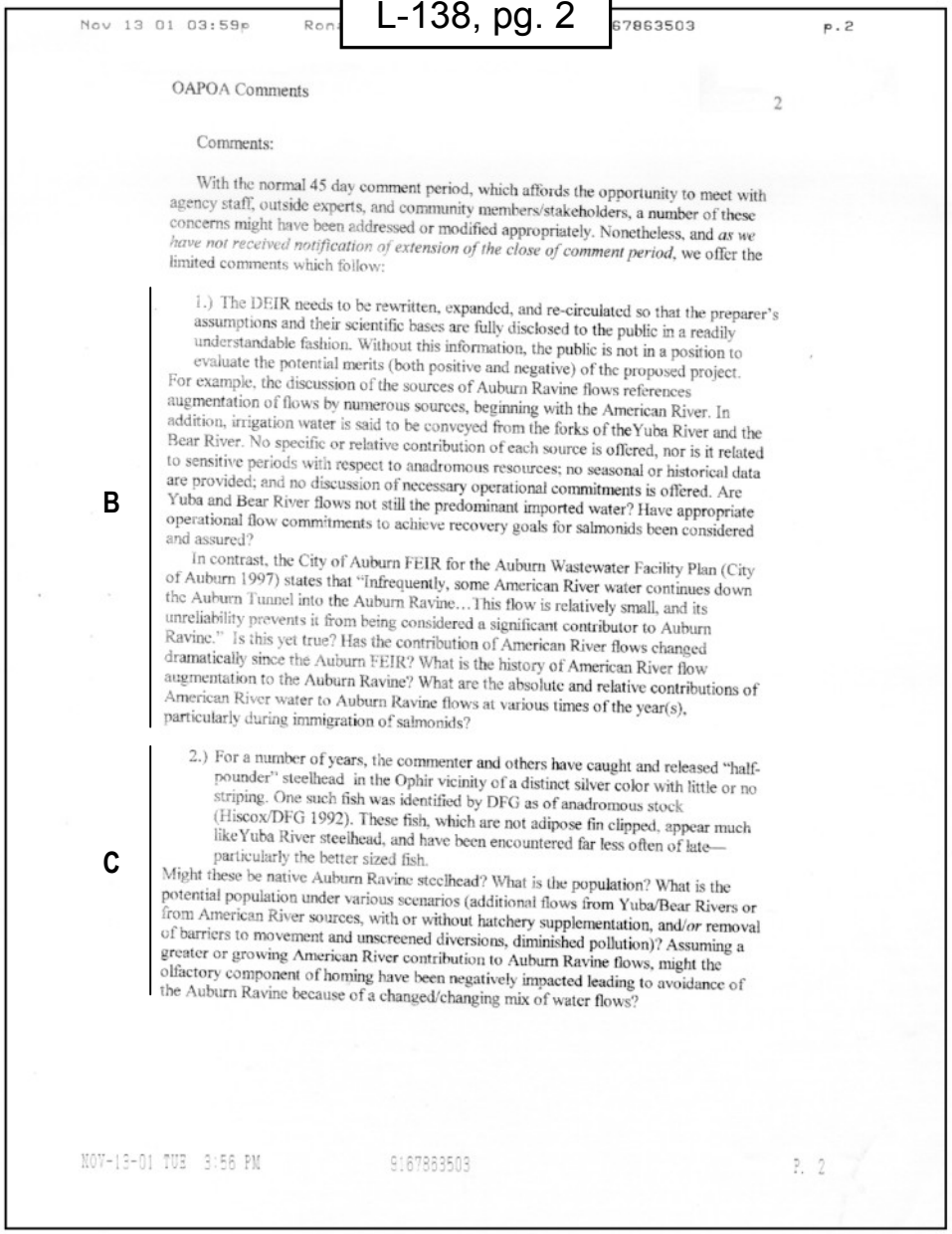
A *We believe that the DEIR/DEIS (DEIR) and public notification and opportunity for participation fall far short of the standard required for a project of this scope—and potential impact. As in our previous letter, we request at least a 30 day extension of the deadline for comments.*

We believe that the document should be fully rewritten following the extended comment period, and then re-circulated for public and agency consideration. The lack of fundamental disclosure and discussion, tortured language, failure to notify stakeholders and allow appropriate public participation in the process, regrettably, make this conclusion unavoidable. We also believe that without far better disclosure, discussion, and opportunity for public participation, the public, agency staff, and decision makers cannot reasonably make an informed decision to support, suggest modification to, or oppose the project. We do not oppose additional and appropriate flows of water in the Auburn Ravine, provided appropriate scientific review, study, and public participation show this to be proper.

A number of conversations between the commenter, affected community members and the project proponent have occurred over the last two or more years; the commenter, project proponent and others discussed the project via e-mail as recently as August of this year. The commenter and other stakeholders live along the Auburn Ravine and should have been included on the notice list as should have the Ophir Area Property Owners Association. As we learned of, requested, and received the DEIR not in a timely manner, i.e. just prior to the close of comment, were not included in the distribution list, and were not notified of the October hearing, it is impossible to do a thorough and valid analysis of the DEIR within the current time frame.

A. Please refer to Response L-95.A.

L-138, pg. 2



Nov 13 01 03:59p Ron 67863503 p.2

OAPOA Comments 2

Comments:

With the normal 45 day comment period, which affords the opportunity to meet with agency staff, outside experts, and community members/stakeholders, a number of these concerns might have been addressed or modified appropriately. Nonetheless, and *as we have not received notification of extension of the close of comment period*, we offer the limited comments which follow:

B

1.) The DEIR needs to be rewritten, expanded, and re-circulated so that the preparer's assumptions and their scientific bases are fully disclosed to the public in a readily understandable fashion. Without this information, the public is not in a position to evaluate the potential merits (both positive and negative) of the proposed project. For example, the discussion of the sources of Auburn Ravine flows references augmentation of flows by numerous sources, beginning with the American River. In addition, irrigation water is said to be conveyed from the forks of the Yuba River and the Bear River. No specific or relative contribution of each source is offered, nor is it related to sensitive periods with respect to anadromous resources; no seasonal or historical data are provided; and no discussion of necessary operational commitments is offered. Are Yuba and Bear River flows not still the predominant imported water? Have appropriate operational flow commitments to achieve recovery goals for salmonids been considered and assured?

In contrast, the City of Auburn FEIR for the Auburn Wastewater Facility Plan (City of Auburn 1997) states that "Infrequently, some American River water continues down the Auburn Tunnel into the Auburn Ravine…This flow is relatively small, and its unreliability prevents it from being considered a significant contributor to Auburn Ravine." Is this yet true? Has the contribution of American River flows changed dramatically since the Auburn FEIR? What is the history of American River flow augmentation to the Auburn Ravine? What are the absolute and relative contributions of American River water to Auburn Ravine flows at various times of the year(s), particularly during immigration of salmonids?

C

2.) For a number of years, the commenter and others have caught and released "half-pounder" steelhead in the Ophir vicinity of a distinct silver color with little or no striping. One such fish was identified by DFG as of anadromous stock (Hiscox/DFG 1992). These fish, which are not adipose fin clipped, appear much like Yuba River steelhead, and have been encountered far less often of late—particularly the better sized fish.

Might these be native Auburn Ravine steelhead? What is the population? What is the potential population under various scenarios (additional flows from Yuba/Bear Rivers or from American River sources, with or without hatchery supplementation, and/*or* removal of barriers to movement and unscreened diversions, diminished pollution)? Assuming a greater or growing American River contribution to Auburn Ravine flows, might the olfactory component of homing have been negatively impacted leading to avoidance of the Auburn Ravine because of a changed/changing mix of water flows?

NOV-13-01 TUE 3:56 PM 9167863503 P. 2

B. Please refer to Master Response 3.1.13, Auburn Ravine.

C. Please refer to Master Response 3.1.13, Auburn Ravine.

L-138, pg. 3

C (cont)

3.) What is the best strategy for recovery of anadromous stocks in the Auburn Ravine? Will *any* water do, particularly at sensitive times of the year? Will *any* fish do? i.e. native or hatchery or a mix?

Or may we find that we have created a scenario which extirpates native steelhead stocks from the drainage, establishes a hatchery-based population which is less suited and less adapted to the drainage, and which attracts American River stocks (which have been of no little concern) from that river and up to the Auburn Ravine, Coon Creek, etc?

The debate within the professional community continues regarding the proper role of hatchery supplementation in the recovery of salmonid populations. If complete consensus has not been achieved, it is apparent that the *protection of native stocks is clearly recognized as of growing importance or as the first priority*, and that *recovery actions are fraught with uncertainty and must include a diversity of strategies* to "spread the risk" compared with relying on only one or two methods. Monitoring and evaluation are said to be very important in assessing success of recovery or supplementation strategies. Even the lay press is reflecting the increasing concern among the experts as to the proper role for hatcheries to play. (IEP 1999; Robin Waples, et al. in Bakke; Edie Lau 2001)

What is the plan for Auburn Ravine anadromous recovery? What data are available to support such a plan? Who will fund it, and monitor it? Might we preclude the biologically superior strategy by locking in a program and water delivery means which, in hindsight, prove deleterious compared to other approaches? Although we wish it were different, we do not believe that we the public, the agencies, or the decision makers can yet adequately address this question.

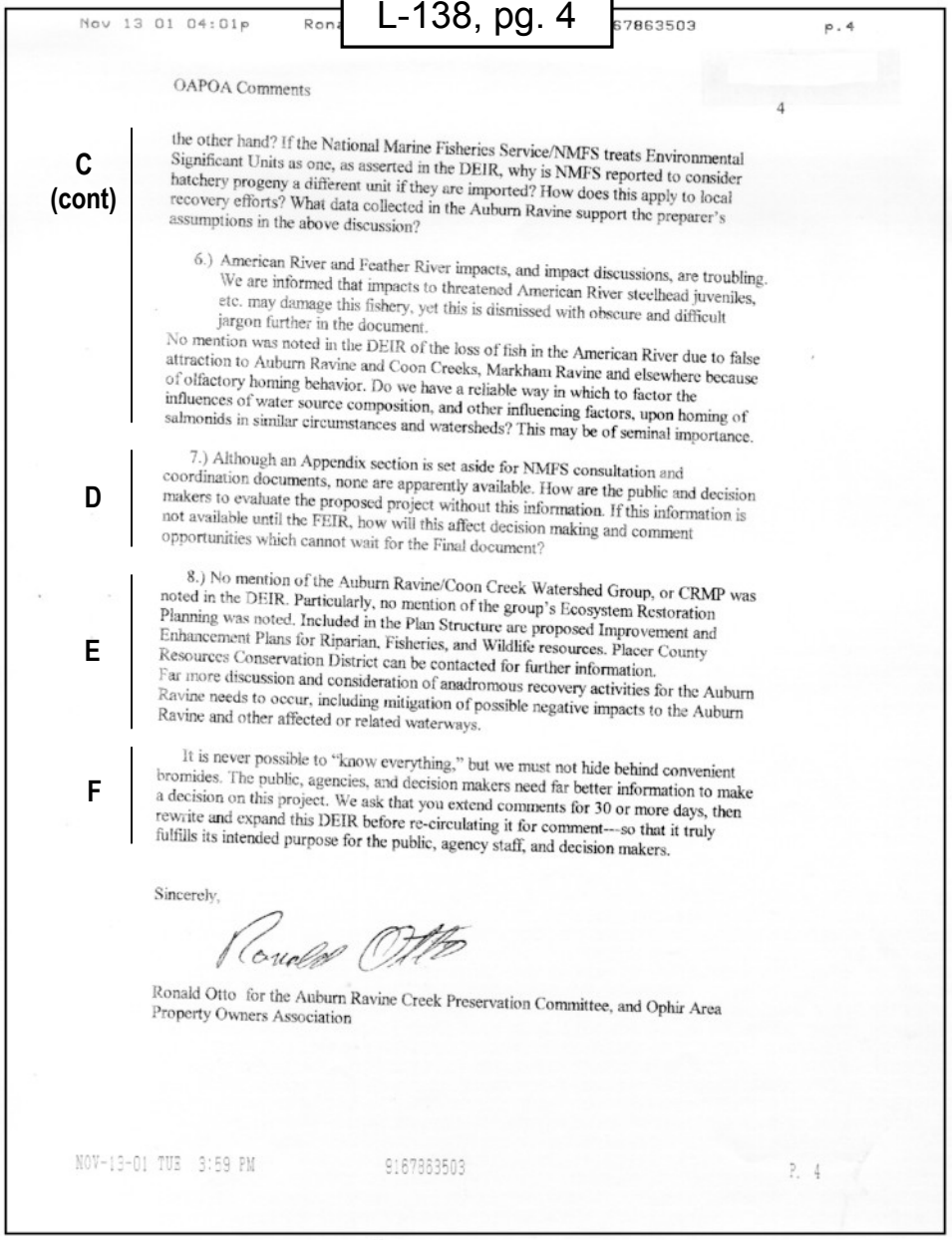
4.) The presence of native steelhead in the Auburn Ravine needs further discussion. As mentioned above, and found in other agency and lay documents, steelhead and salmon have been observed in the Auburn Ravine for many decades. Recent DFG monitoring of Auburn Ravine, Coon Creek and Dry Creek has found juvenile (fry and smolts) and adult steelhead in these streams. (DFG 1999; Drake 1989; Goodall 1991; Hiscox/DFG 1992; IEP 1999; Sarkisian 1990)

If barriers to passage and unscreened diversions were remedied, what would be the potential anadromous population? As American River steelhead have been shown to be genetically similar to Eel River stock, how does this impact Auburn Ravine fish—which often appear more like Yuba River steelhead? If they are genetically dissimilar, what are the consequences of supplementation with American or with Feather River stocks? What are the consequences (to both drainages) of attraction of American River stocks to Auburn Ravine?

5.) Effects on native salmonids in Auburn Ravine due to changed water source composition: Discussion of the relative importance of olfactory versus genetic homing behavior of salmonids, etc. is confusing to this commenter, limited, and in need of major expansion.

Do the scientific community and best available literature support the preparer's assumptions? Does the American Fishery Society have a position, review or consensus statement on this subject? In this discussion, *are we focused on doing the best, biologically, for the Auburn Ravine*? Or are we focused on narrow and inappropriate definitions and distinctions on the one hand, and on an overly broad use of ESUs, etc. on

L-138, pg. 4



Nov 13 01 04:01p Ron 9167863503 p.4

OAPOA Comments

4

C (cont)

the other hand? If the National Marine Fisheries Service/NMFS treats Environmental Significant Units as one, as asserted in the DEIR, why is NMFS reported to consider hatchery progeny a different unit if they are imported? How does this apply to local recovery efforts? What data collected in the Auburn Ravine support the preparer's assumptions in the above discussion?

6.) American River and Feather River impacts, and impact discussions, are troubling. We are informed that impacts to threatened American River steelhead juveniles, etc. may damage this fishery, yet this is dismissed with obscure and difficult jargon further in the document.

No mention was noted in the DEIR of the loss of fish in the American River due to false attraction to Auburn Ravine and Coon Creeks, Markham Ravine and elsewhere because of olfactory homing behavior. Do we have a reliable way in which to factor the influences of water source composition, and other influencing factors, upon homing of salmonids in similar circumstances and watersheds? This may be of seminal importance.

D

7.) Although an Appendix section is set aside for NMFS consultation and coordination documents, none are apparently available. How are the public and decision makers to evaluate the proposed project without this information. If this information is not available until the FEIR, how will this affect decision making and comment opportunities which cannot wait for the Final document?

E

8.) No mention of the Auburn Ravine/Coon Creek Watershed Group, or CRMP was noted in the DEIR. Particularly, no mention of the group's Ecosystem Restoration Planning was noted. Included in the Plan Structure are proposed Improvement and Enhancement Plans for Riparian, Fisheries, and Wildlife resources. Placer County Resources Conservation District can be contacted for further information. Far more discussion and consideration of anadromous recovery activities for the Auburn Ravine needs to occur, including mitigation of possible negative impacts to the Auburn Ravine and other affected or related waterways.

F

It is never possible to "know everything," but we must not hide behind convenient bromides. The public, agencies, and decision makers need far better information to make a decision on this project. We ask that you extend comments for 30 or more days, then rewrite and expand this DEIR before re-circulating it for comment---so that it truly fulfills its intended purpose for the public, agency staff, and decision makers.

Sincerely,

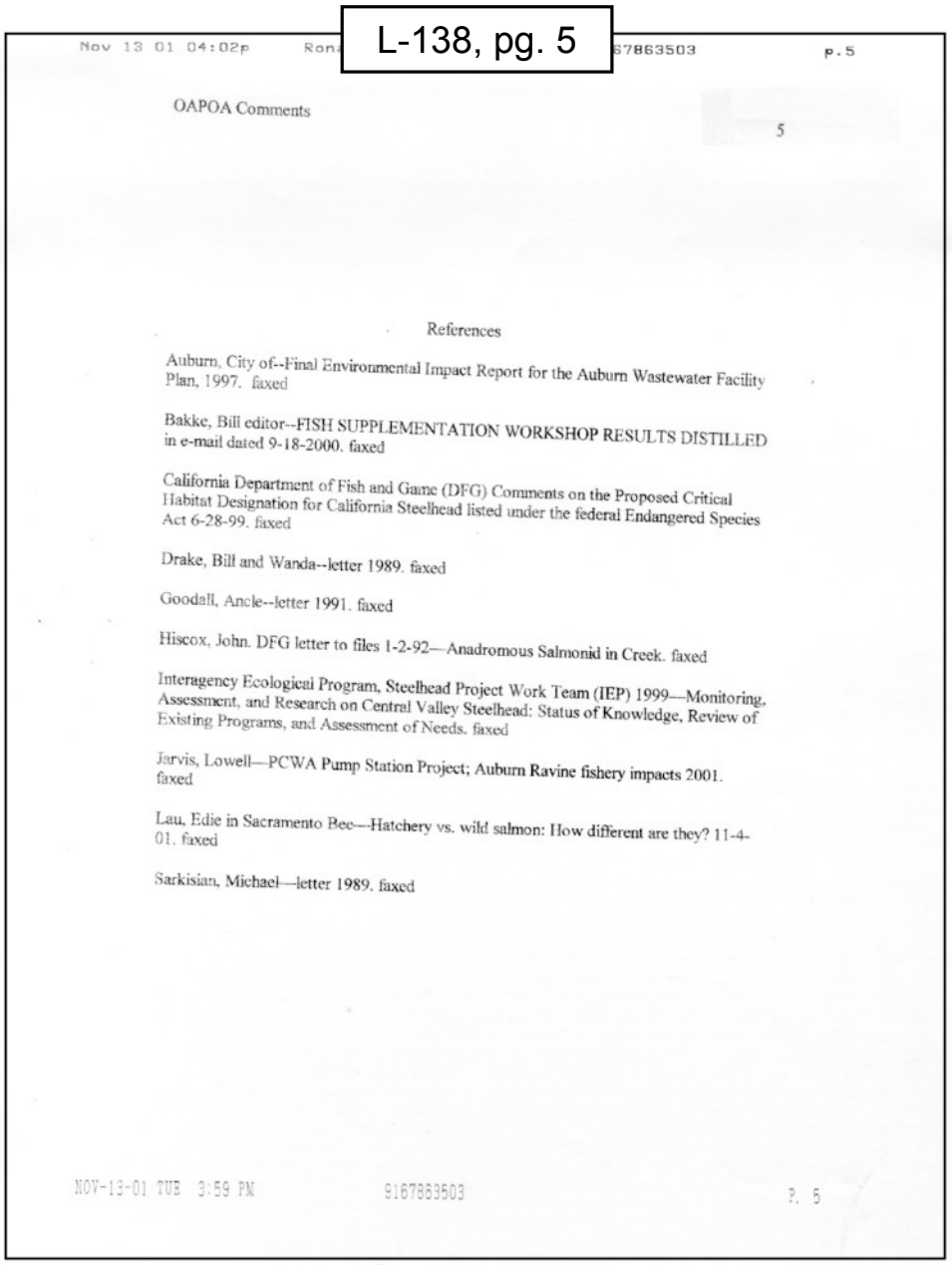
Ronald Otto for the Auburn Ravine Creek Preservation Committee, and Ophir Area Property Owners Association

NOV-13-01 TUE 3:59 PM 9167863503 P. 4

D. Informal consultation between the U.S. Bureau of Reclamation (Reclamation) and the National Marine Fisheries Service (NMFS) pursuant to the federal Endangered Species Act (ESA) have been ongoing since 1997, as described in the Draft EIS/EIR (Chapter 4, Section 4.1.1). No public documentation is produced during the informal consultation. Formal consultation between the agencies was requested by Reclamation at the time the Draft EIS/EIR was published and publicly distributed. The Draft EIS/EIR was prepared to satisfy the federal ESA section 7 consultation requirements and serves as a Biological Assessment. The Biological Opinion for the Proposed Project is prepared following NMFS review of the Draft EIS/EIR. Reclamation will not issue the Record of Decision for the Proposed Project until the Biological Opinion is completed. It is not a requirement of either the National Environmental Policy Act (NEPA) or the federal ESA that the consultation documentation be included in the environmental documentation.

Section 15089 of CEQA states that, "lead agencies may provide an opportunity for review of final EIR by the public or by commenting agencies before approving the project. The review of the final EIR should focus on the responses to comments on the draft EIR." In accordance with NEPA requirements, federal agencies must allow a 30-day review period on the contents of the final EIS to receive public comments on how the final EIS deals with the problems raised with the draft EIS. The CEQA process requires public review only at the draft EIR stage. The final EIR can be submitted directly to the decision-making body of an agency for consideration.

E. In response to concern from interested parties, PCWA and Reclamation have developed operational changes in order to avoid potential impacts to the Auburn Ravine aquatic resources (see Master Response 3.1.13, Auburn Ravine). Therefore, the potential impacts to the riparian, fisheries, and wildlife resources of the Auburn Ravine drainage would be avoided, and the Proposed Project would not affect the CRMP plans. PCWA looks forward to working with the Watershed Group to protect and enhance the resources within the Auburn Ravine drainage.



L-138, pg. 5

Nov 13 01 04:02p Ron 9167863503 p.5

OAPOA Comments

5

References

Auburn, City of--Final Environmental Impact Report for the Auburn Wastewater Facility Plan, 1997. faxed

Bakke, Bill editor--FISH SUPPLEMENTATION WORKSHOP RESULTS DISTILLED in e-mail dated 9-18-2000. faxed

California Department of Fish and Game (DFG) Comments on the Proposed Critical Habitat Designation for California Steelhead listed under the federal Endangered Species Act 6-28-99. faxed

Drake, Bill and Wanda--letter 1989. faxed

Goodall, Ancle--letter 1991. faxed

Hiscox, John. DFG letter to files 1-2-92—Anadromous Salmonid in Creek. faxed

Interagency Ecological Program, Steelhead Project Work Team (IEP) 1999—Monitoring, Assessment, and Research on Central Valley Steelhead: Status of Knowledge, Review of Existing Programs, and Assessment of Needs. faxed

Jarvis, Lowell—PCWA Pump Station Project; Auburn Ravine fishery impacts 2001. faxed

Lau, Edie in Sacramento Bee—Hatchery vs. wild salmon: How different are they? 11-4-01. faxed

Sarkisian, Michael—letter 1989. faxed

NOV-13-01 TUE 3:59 PM 9167863503 P. 5

F. The public review period for the American River Pump Station Project Draft EIS/EIR was extended to December 13, 2001.

Note: The references attached to this comment letter may be viewed at lead agency offices.

L-139

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Joe Konst
ADDRESS:	P.O. Box 7274
CITY/STATE/ZIP:	Auburn CA, 95604
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

I feel the loss of the Auburn-to-Cool trail is a significant loss. This trail is used by hikers, runners, horse back riders and mountain bikers. This is the only legal trail for mountain bikers to travel between Auburn and Cool. A bridge must be built in order to keep this trail. I understand that there are limited funds available for this project. Maybe there could be a less expensive water flow design that does not allow boats to flow through. Maybe they could carry their boats around. This project is sacrificing the trail use for one group of people and is adding benifit to river users. This is not fair. Let the → (on back)

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-139, pg. 2

river users "wait until there are additional funds". Government funds should add to existing recreational opportunities not take from one group in order to give to another group.

L-140

November 7, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. suite 110
Sacramento, Ca 95825

Dear Sirs,

A

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. the only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

B

The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Sincerely,

Alan Naye

Alan Naye
300 Oak Street
Auburn, Ca 95603
530-889-8524

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-141

Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

November 9, 2001

Dear Sirs:

As a long time resident of Falcon's Point and an avid trail user, I find two major problems in regard to the recreational access part of the PCWA-River Restoration Project. The first part concerns a safety issue and the second is an omission in the recreational emphasis that is tied to the project.

A I can see where vehicular access to the canyon from Maidu or Pacific Avenue would be desired by a diverse group of people. Since I have an in depth knowledge of the canyon in that area, I feel that it is irresponsible to put public vehicle access down to Oregon Bar due to the very difficult fire management in that area. Topographically, this is a very remote region, with no equipment access points from above or downstream. It has steep and heavily vegetated canyon walls that lead directly up to dense residential areas off of Eagles Nest Way and Crockett Rd. The chance of fire in that area will greatly increase with the introduction of traffic and people who would normally not be willing to hike the several hundred vertical feet to reach this region. The vulnerability of this area to fire was exhibited in the summer of 2000 where significant structural damage was only averted by favorable wind conditions. The next time, luck may not prevail. Public river access could still be upstream as planned in a more defensible area.

B The EIS puts a heavy emphasis on direct river access for raft takeout and for other people to reach the water quickly. The area has been heavily used for years by hikers, runners, equestrians, fishermen, and cyclists. The river restoration will inundate and cut off the only trail from South Auburn to Cool. There have been rumors of a bridge in the area but I have seen no definitive plans. Having seen two high water flows in the last six years, which scoured the canyon and washed out the temporary roadbeds, I wonder if a bridge is a realistic option in the current fiscal environment. Of the above mentioned recreational users, only cyclists will be denied tail use to Cool since the Western States Trail up to Cool is closed to bikes. A cyclist from South Auburn would be forced to travel up and down Hwy 49 through the confluence. This is a steep and winding road without a bike shoulder. Cars and trucks traveling at a high speed create a hazardous place for a bicycle to be.

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-141, pg. 2

B (cont)

Mountain biking is one of the most rapidly growing sports in the country and has many advocates in the South Auburn Area. I feel that any mitigation plan should include funding for a bike legal trail through the Auburn SRA from South Auburn to Cool and the popular Olmstead Trail. There are excellent possible routes such as the abandoned rail road grade on the North side of the river. Please do not ignore the large number of mountain cyclists in the area who stand to be the big recreation losers under the current plan.

Please add me to your mailing list and keep me posted on future developments.

Sincerely,

Kirk M. Hanson DDS
4085 Eagles Nest Way
Auburn, CA 95603

L-142

DON HOOVER
P.O. BOX 1320
MEADOW VISTA, CA. 95722
(530) 878 - 1457

PLACER COUNTY WATER ASSOCIATION
AUBURN, CA. And U.S. BUREAU OF RECLAMATION

OPEN PUBLIC COMMENT LETTER FROM MEETING OF OCTOBER 11, 2001. RESPONSE TO DETAILS OF DRAFT E.I.S. / E.I.R. FOR AMERICAN RIVER PUMP STATION AND RIVER RESTORATION.

I am writing in response to the meeting in the evening of October 11, 2001 in which your agency invited public comment about the proposed river restoration and pump plant project on the American River.

It would seem that there is more work ahead of you for the completion of this concept plan and before your agency can even begin the final draft of the E.I.R. / E.I.S. statement packages. I will therefore outline the items that I see as being deficient or inadequately addressed in the report and your meeting.

A 1. The Pump Station:
The concept, location, and intake point are fine. The Final appearance of the Pump House is not acceptable. The entire surrounding area is a natural landscape. Why not use the "Disnyfication" construction technology available today and clad the exterior in a duplicated rock outcropping. Make the pump station blend with natural surroundings.

B 2. MY BEST GUESS: The tunnel and the keyway of the dam site are being left in place because the intention and requirement of the federal government and state water resources to use them in the future. They will be used in the next 20 years. The next excuse, gee golly our projections just weren't good enough and we will have to build the dam after all. The 30 year plan that is said to be addressed is only the best guess-timate based on data from the past and some urban planing projections. Get rid of the keyway and collapse the tunnel once and for all. NO water, No building.

C 3. THE BRIDGE: C.E.Q.A. requires that this item be addressed. How did anyone think that leaving out the bridge crossing was an acceptable option. For the past 30 years there has been a *defacto* bridge. This bridge and the lack of the proposed replacement is a legal entanglement that can halt or hold the project for a long period of time. The coordinatioin of the various trails and equestrian associations in the area are steadfast and resolute in our demand for a bridge replacement for this river crossing.

Build a bridge that is capable of accommodating (a.) horses (b.) bikers (c.) pedestrians (d.) enclosed for the prevent the bridge from being a jumping/ diving platform.

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-142, pg. 2

The design of the bridge needs to have the input from the equestrian community because the width and especially the height of an enclosure must be considered in the final design.

Some comments from people at the meeting were typically shallow thinking. The crossing of the stream was, in their mind, only something done at low stream flow. River flows change! The loss of life when crossing the river at this point is guaranteed to happen. There will be children, women of small physical stature, and yes horses that are not capable of crossing moving water. Just as with people, not all horses are capable of navigating water and they will drown along with their rider.

D

4. PARKING AT TRAILHEADS:
The requirement for separate parking for people with truck and trailer for their horses is a necessity. The mixing of rafters, kayaks with loading and unloading of horses will not work and there needs to be a separate parking area.

E

5. A.D.A.C.:
As required for the satisfaction of both the state and federal governments. There seems to be no access for the handicapped white water people and those on horse back.
Yes, there are handy-capped people who are regulars in these activities and they will require some parking and restroom facilities for their specific needs.

F

6. SECURITY AND SANITATION: Will chemical toilets be the long term solution for the health and safety of the river? What is the long-term sanitation plan?

Nighttime security, as stated at the meeting, is a problem. The residence in the area deserve a plan that calls for seasonal closure at specific times so that these parking areas does not become "party central" in Auburn. The other associated drinking and drug problems are obvious and to help mitigate those problems I think that there should be day use fees charged in this area.

I sincerely hope that this letter, as well as other letters , gives you additional guidance. Our community of thought, our concepts and our requirements for this restoration project are necessary to move this project forward to completion. Please implement and include all of these additions in the final draft statement. The additional review and acceptance by this community is what is needed so that we can press forward for a complete project and not a partial one.

SINCERELY,

Don Hoover

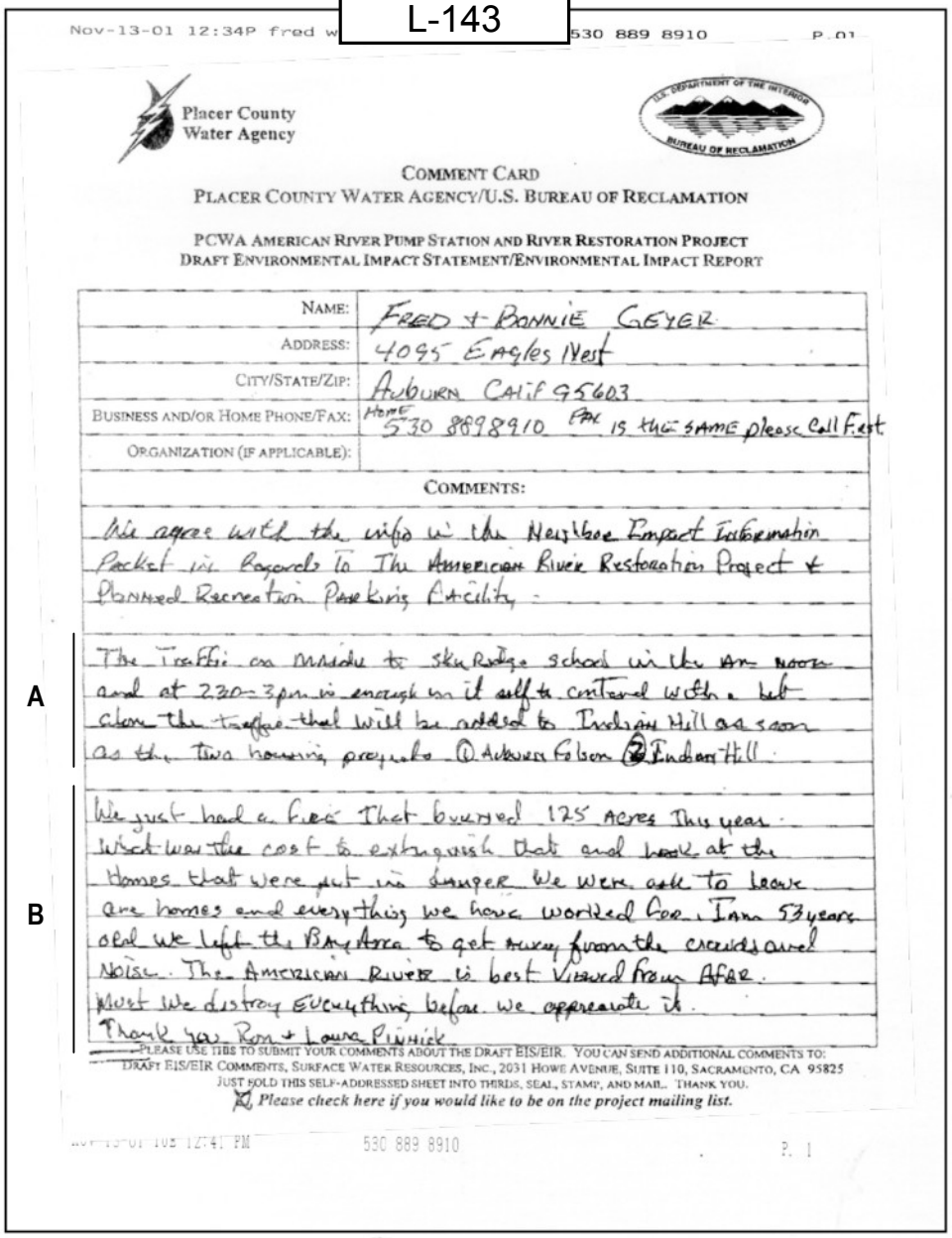
DON HOOVER.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. The Proposed Project public river access facility design includes handicapped designated parking spaces in compliance with the American Disabilities Act. Please refer to Master Response 3.1.6, Public River Access Features.

F. Please refer to Master Response 3.1.6, Public River Access Features.

L-143



Nov-13-01 12:34P fred w 530 889 8910 P.01

Placer County Water Agency

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	FRED + BONNIE GEYER
ADDRESS:	4095 EAGLES NEST
CITY/STATE/ZIP:	AUBURN CALIF 95603
BUSINESS AND/OR HOME PHONE/FAX:	HOME 530 8898910 FAX IS THIS SAME please Call First
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

We agree with the info in the Neighbor Impact Information Packet in Regards To The American River Restoration Project + Planned Recreation Parking Facility -

A The Traffic on Riverside to Skyridge school in the AM hours and at 230-3pm is enough on it self to contend with. Let alone the traffic that will be added to Indian Hill as soon as the two housing projects ① Auburn Folsom ② Indian Hill.

B We just had a fire that burned 125 Acres This year. Wish we the cost to extinguish that and look at the Homes that were put in danger We were ask to leave our homes and everything we have worked for. I am 53 years old we left the Bay Area to get away from the crowds and Noise. The American River is best Viewed from Afar. Must We destroy Everything before we appreciate it.

Thank you Ron + Laura Plunick

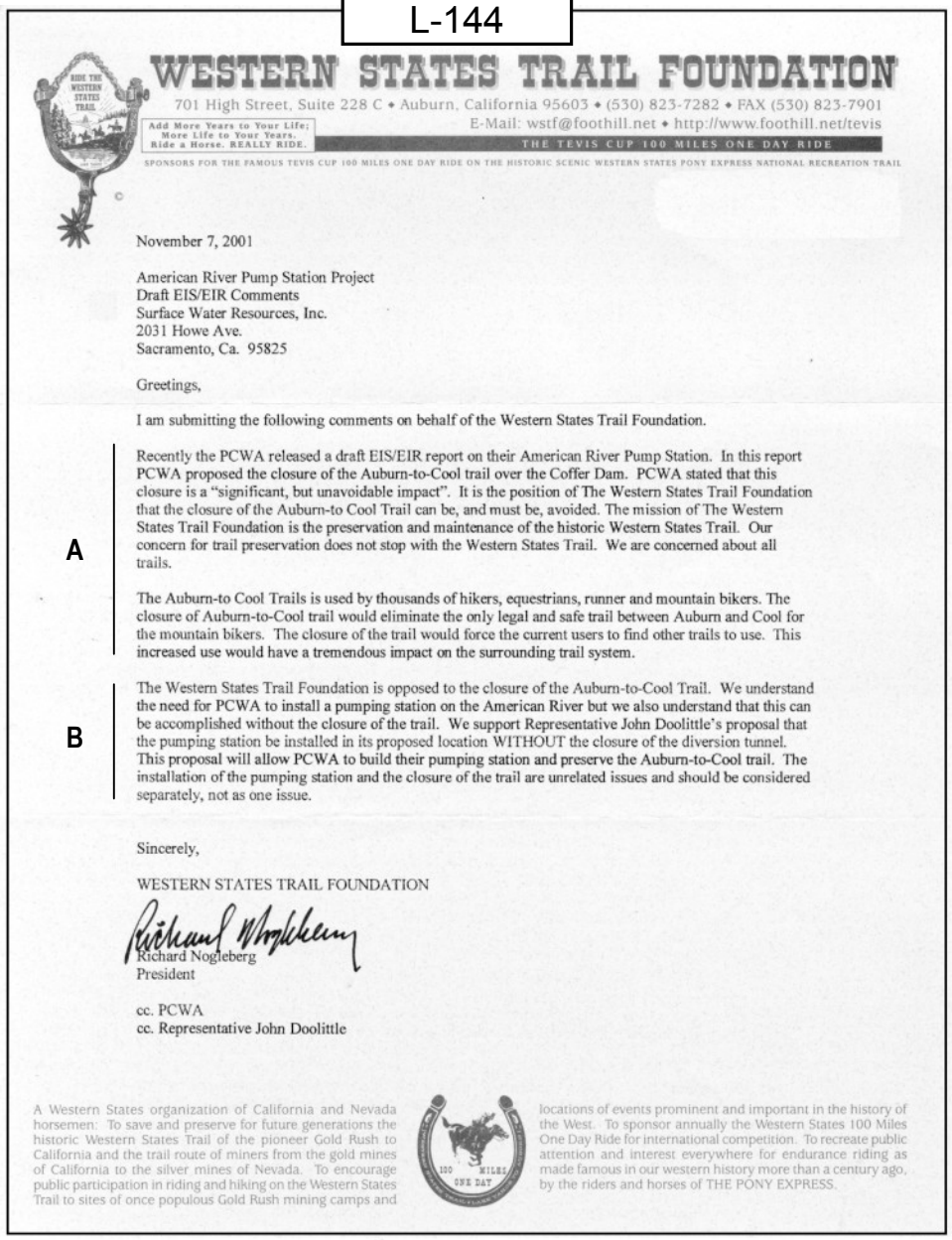
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DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ *Please check here if you would like to be on the project mailing list.*

NOV-13-01 TUE 12:41 PM 530 889 8910 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

L-144



WESTERN STATES TRAIL FOUNDATION

701 High Street, Suite 228 C • Auburn, California 95603 • (530) 823-7282 • FAX (530) 823-7901
E-Mail: wstf@foothill.net • http://www.foothill.net/tevis

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November 7, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave.
Sacramento, Ca. 95825

Greetings,

I am submitting the following comments on behalf of the Western States Trail Foundation.

A

Recently the PCWA released a draft EIS/EIR report on their American River Pump Station. In this report PCWA proposed the closure of the Auburn-to-Cool trail over the Coffer Dam. PCWA stated that this closure is a "significant, but unavoidable impact". It is the position of The Western States Trail Foundation that the closure of the Auburn-to Cool Trail can be, and must be, avoided. The mission of The Western States Trail Foundation is the preservation and maintenance of the historic Western States Trail. Our concern for trail preservation does not stop with the Western States Trail. We are concerned about all trails.

The Auburn-to Cool Trails is used by thousands of hikers, equestrians, runner and mountain bikers. The closure of Auburn-to-Cool trail would eliminate the only legal and safe trail between Auburn and Cool for the mountain bikers. The closure of the trail would force the current users to find other trails to use. This increased use would have a tremendous impact on the surrounding trail system.

B

The Western States Trail Foundation is opposed to the closure of the Auburn-to-Cool Trail. We understand the need for PCWA to install a pumping station on the American River but we also understand that this can be accomplished without the closure of the trail. We support Representative John Doolittle's proposal that the pumping station be installed in its proposed location WITHOUT the closure of the diversion tunnel. This proposal will allow PCWA to build their pumping station and preserve the Auburn-to-Cool trail. The installation of the pumping station and the closure of the trail are unrelated issues and should be considered separately, not as one issue.

Sincerely,

WESTERN STATES TRAIL FOUNDATION

Richard Nogleberg
President

cc. PCWA
cc. Representative John Doolittle

A Western States organization of California and Nevada horsemen: To save and preserve for future generations the historic Western States Trail of the pioneer Gold Rush to California and the trail route of miners from the gold mines of California to the silver mines of Nevada. To encourage public participation in riding and hiking on the Western States Trail to sites of once populous Gold Rush mining camps and locations of events prominent and important in the history of the West. To sponsor annually the Western States 100 Miles One Day Ride for international competition. To recreate public attention and interest everywhere for endurance riding as made famous in our western history more than a century ago, by the riders and horses of THE PONY EXPRESS.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Support of Representative John Doolittle's proposal to build the pumping station without the closure of the diversion tunnel has been noted.

L-145

11825 Skyline Blvd
Los Gatos, CA 95033
Nov 7, 2001

American River Pump Station Project
Draft EIS/EIR Comments, Surface Water Resources
2031 Howe Avenue Suite 110
Sacramento, CA 95825

A I support the Mid-Channel Diversion Alternative in the BLM draft proposal for restoring the American River channel at Auburn. I started boating the various forks of the American River in 1965. So few white water boating river runs are left in the Sierra due to all the dams and diversions. The resulting river touring on the North Fork American will be a valuable addition to local river recreational activities.

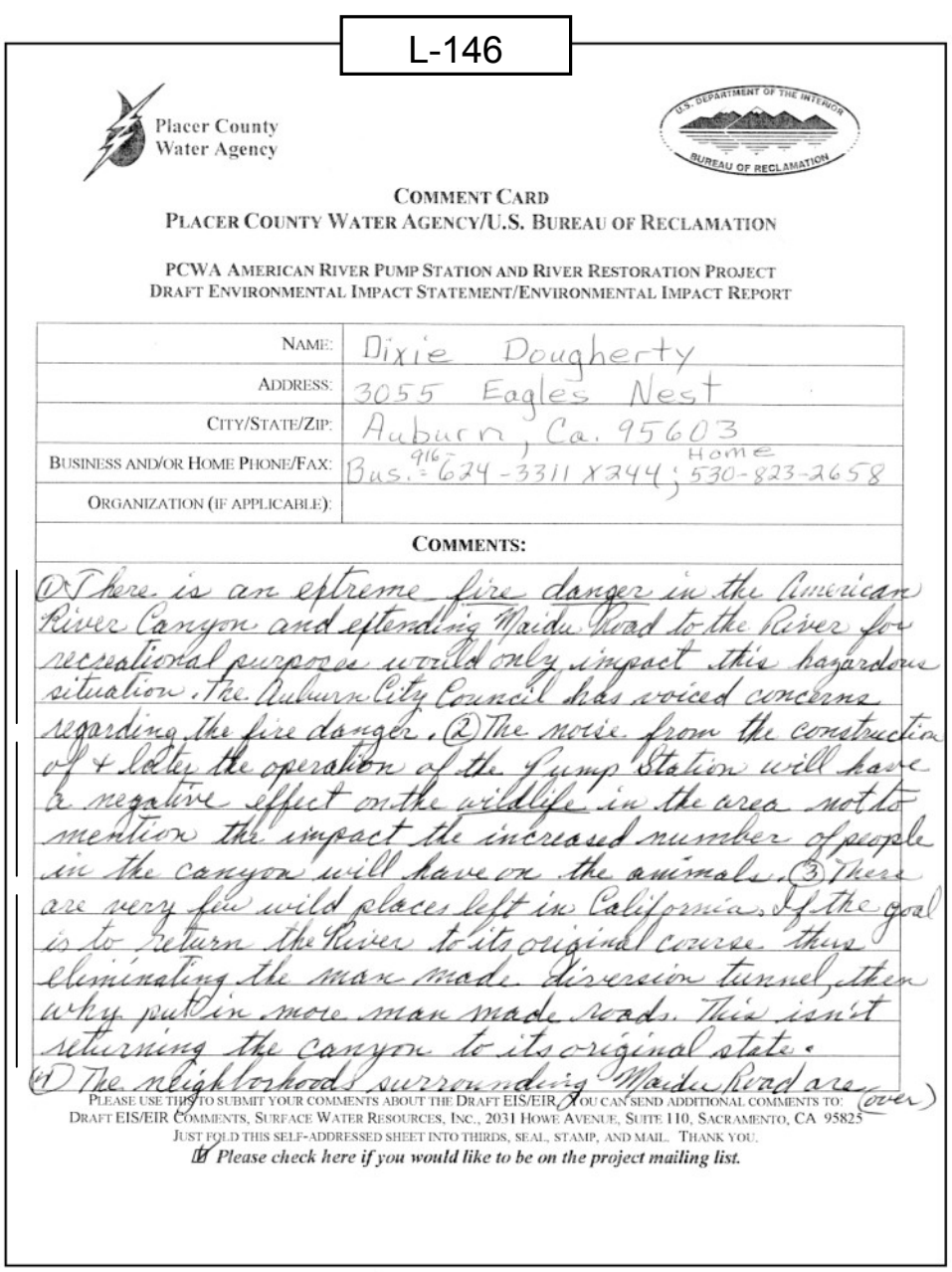
Sincerely

Richard Schwind

Richard Schwind

A. Project support noted.

L-146



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dixie Dougherty
ADDRESS:	3055 Eagles Nest
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	Bus. 916-624-3311 x244; Home 530-823-2658
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A ① There is an extreme fire danger in the American River Canyon and extending Maidu Road to the River for recreational purposes would only impact this hazardous situation. The Auburn City Council has voiced concerns regarding the fire danger. ② The noise from the construction of + later the operation of the Pump Station will have B a negative effect on the wildlife in the area not to mention the impact the increased number of people in the canyon will have on the animals. ③ There are very few wild places left in California. If the goal C is to return the River to its original course thus eliminating the man made diversion tunnel, then why put in more man made roads. This isn't returning the canyon to its original state.

④ The neighborhoods surrounding Maidu Road are (over)

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JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.12, Project Area Wildlife.

C. The Proposed Project area is highly disturbed from past activities associated with Auburn Dam project construction. The Proposed Project would provide restoration of the river channel, thus, eventually allowing the return of improved natural river functions, relative to the existing condition. Additionally, the project access roads and public river access features involve only minimal "rustic" improvements in areas already disturbed by past human activity in the canyon.

L-146, pg. 2

D

(4) Cont. family oriented and relatively safe. Additional people entering the area would bring in crime. (5) Many children cross Maidu each day to attend Skyridge School and the added traffic would make a very dangerous situation for them. The City of Auburn has also expressed concerns over the additional traffic.

Thank you for considering the many negative aspects of this project. The citizens of Auburn do NOT want it!

2

D. Dougherty

D. Please refer to Master Response 3.1.6, Public River Access Features.

L-147

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	DAVE KASBERG
ADDRESS:	1530 BURLIN WAY
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	916-785-4763
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

see attached

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ ***Please check here if you would like to be on the project mailing list.***

L-147, pg. 2

Comments:

1. **Maidu Drive public and commuter construction access**
I believe that the draft EIR underestimates the impact that both the **construction** access and the **public** access to the parking facilities have on Maidu Drive. Maidu Drive, although originally intended for access to the Auburn Dam construction facilities, has been become a road to access residential subdivisions that have developed there over the last 20 years. I believe that its original intention is outdated from the fact that city planners elected to develop residential areas along the road.

A
- **Safety** is the number one impact. Even today, the road is unsafe for any other use than driving. It is dangerous to both walk and bike along this road due to the fact that the shoulder is narrow and the speed limit is 35, which is typically exceeded. There is only one stop sign, which often is completely ignored by some drivers, and contains no sidewalks. An elementary school one block from Maidu requires children to cross this road at construction commute time in the morning.
- **Noise level** is another impact. The area has been developed, and people have purchased their homes, from the fact that it is a quiet area. The increased noise from the traffic will diminish the quality of life that residents originally chose when they moved here. The area in which Maidu Drive resides is somewhat in a bowl shape. This causes sound to carry very far, not just next to the homes that are located on Maidu.

B
- I believe that the **alternative** access from Pacific Street by the Overlook and Skatepark is a better choice. There is an existing road (that needs to be improved by the keyway) that can be utilized. This access point is better from the fact that there are very few homes in this area, it is easily accessed from Auburn-Folsom Rd, already has a signal light at the intersection with Auburn-Folsom Rd, and there are other recreation facilities there (skatepark, Railhead soccer fields, WST trailhead, etc).

2. **Alternative Multi-use Auburn-to-Cool Trail**

C
I believe that the EIR does not adequately address the impact of closing the multi-purpose Auburn-to-Cool Trail. This trail is indeed popular to equestrians, mountain-bikers, and runners since its opening a few years ago. An alternative multi-use trail must be considered. I do not advocate a bridge due to it's expense, but rather modify the existing trails from the Robie Point fire road to the Mt Quarries Bridge and then trails up to Cool. I believe it is high time to open these trails to all types of uses rather than exclusive use by equestrians. Ultimately, I would like to have seen the old railroad grade converted as a Rails-to-Trails trail.

Thanks!

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-148

Anthony J. DeRiggi
932 46th street
Sacramento CA 95819

November 6, 2001

American River Pump Station Project
Draft EIS/EIR Comments

A

I am writing to support the Preferred Alternative, the Mid Channel Diversion Alternative, because it is the only alternative which will close the diversion tunnel and restore the river through the construction site.
I have been a frequent visitor to the canyon near the damsite for the past 25 years. The tunnel is a serious safety hazard, especially to risk-taking youth, and must be closed as a public safety measure.
The public deserves recreational access to this section of river canyon, access which will be provided by the preferred alternative.

Sincerely,

Anthony J DeRiggi

A. Project support noted.

L-149

Greetings,

Please accept these comments for the Draft EIS/EIR regarding the American River and the "Mid Channel Diversion Alternative."

As the Director of Canoeing and Inland Sea Kayaking at California Canoe and Kayak I am deeply concerned about the fate of our inland waterways. Obviously, from a business perspective, the more rivers that are accessible in their natural state is a plus to the boating industry. However, on a deeper level, I feel that the connection with our natural landscape is fundamental in developing healthy individuals and communities. Diverted or dammed rivers do not qualify as "natural", even though they often do provide respite from motorized life (although this is also becoming increasingly threatened by the rise in motor boat and jet ski use).

The American River, as you know, is one of the jewels of the Sierra west slope. The opportunities provided by river access, and unique environments found along the mainstem and tributaries is exceptional. In addition, the ecological value of the riparian zones along our local rivers is accentuated by the arid climate. In other words, certain plants and animals need these rare riparian refuges. Obviously, dams and diversions totally eliminates or significantly alters these riparian zones. For these reasons, I urge you to choose the "Mid Channel Diversion Alternative" and restore flow to this remote segment of river.

A In addition, I feel that primitive recreation (non-motorized) is a vital resource in the Sierra west slope. This area is a prime candidate for offering almost wilderness (de facto) experiences. Remote, and undeveloped, the powers of wild nature dominate here. These factors are fundamental in developing a healthy relationship with the natural world. Exposure to wild nature is becoming alarmingly scarce; we have an opportunity to ammend a past mistake.

Please select the "mid channel diversion alternative."

Thank you for your time,

Salmon Stroich
Director of Canoeing and Inland Sea Kayaking
California Canoe and Kayak
1 800 366-9804
salmon@calkayak.com

A. Project support noted.

L-150

November 9, 2001

Susan Ryan
11155 Rosemary Dr.
Auburn, CA 95603

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA 95825

Gentlemen,

A tremendous disservice has been done to the citizens of South Auburn by not notifying us of the impact the various stages of this project will have on our neighborhoods. The problems and negative impact this project brings are numerous:

A

1. An elementary school, Skyridge Elementary, is located one block away from Maidu Drive. The construction traffic for the two year construction period is extremely hazardous for the children walking and riding bikes to and from school. Another hazard is the increased traffic and negative outside influence that will be brought to an otherwise quiet area when the parking lots and recreation area are opened up to the public. Elderly people, kids on bikes, people walking dogs and joggers currently use Maidu Drive. This is a quiet residential area that is extremely vulnerable to having Maidu Drive being used as access to a public recreational area. The current traffic useage on this road is primarily residents going to and from their homes, and children being dropped off and picked up from the school. It would not be appropriate to use it as public access to a recreational area. or for construction of the pump station facilities.

2. This new recreational area will draw people from all over Sacramento and other surrounding areas, bringing crime, vandalism, trash, and noise directly through what was a quiet neighborhood. We should not have to have this trust on us. We as homeowners and parents of young children will gain no benefit from this project. We will lose our peaceful way of life. Access to the American River Canyon is currently not restricted in any way - one simply hikes, bikes or rides horseback, which is how one should access a natural area, not by dirving down to a paved parking lot.

B

3. Fire danger runs extremely high during the summer and fall, as evidenced by the fire that occurred in the summer of 2000 just outside the Falcon's Point neighborhood. We came very close to losing our homes. Opening up the river area to hundreds of users per day would increase the fire danger tremendously. Once a fire starts moving up the canyon, it becomes unpredictable and difficult to contain, and threatens hundreds of homes.

C

4. The reason for providing this paved access and the two parking areas are supposedly so the public can access the river for rafting. But the rapids that will be part of the restored river are artificial and man-made. Did the river originally even have these rapids in this location? It seems that you are restoring a river to something it never was, and telling us we now have to provide convenient access so the public can use it. Does this make any sense? If the idea were to simply restore a river to it's natural state, then do it according to how nature made it. As soon as you start adding parking lots and paved roads, you destroy it. The people that will be attracted to this location will be teenagers looking for a place to party. There aren't enough park rangers as it is to patrol all the recreational facilities that are already in existence in this area. And how will you keep rafting busses from becoming part of the mix? The one main access road for all this activity is

D

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.10, Project Access.

L-150, pg. 2

D (cont)

Maidu Drive, with its one stop sign that is typically ignored already. The increase of traffic to this area is absolutely unacceptable, inexcusable and downright dangerous. There is currently a signal light at Pacific Street and Auburn Folsom Rd., and a paved parking lot and access to the river and the dam building roads at the skateboard park at the old dam overlook. Why is this not a better location for the river access as well as the construction route for the project? How can you impact a quiet residential area when there is another option like this? I also have a concern that my street, Rosemary Drive, which runs parallel to Maidu, would be used as a short-cut when traffic is backed up on Maidu on those busy days when the parking lots are full.

E

5. If this project has been in the works since 1994, why hasn't there been more information given out the people that will be impacted the most by it? In all of the articles I have read recently in the Auburn Journal as well as the Sacramento Bee there has been no mention of the parking lots and construction and recreational access being designed through the Maidu Drive area. There also has not been sufficient public notice of any public hearings for residents to hear the details of the project and voice their concern. It seems that this is being slipped right by us.

I attended the informational meeting that was held on November 7th at Skyridge School for the residents of the impacted neighborhoods. There were many concerned and angry residents there, and I sincerely hope you are taking our concerns into consideration before moving forward with this project. At the meeting we were told that if we had comments and opinions about the project, we should write letters and contact our elected representatives, both of which I am doing.

Sincerely,

Susan Ryan

E. Please refer to Response L-95.A.

L-151

CITY OF AUBURN

1225 Lincoln Way • Auburn, CA 95603 • (530)823-4211 • Fax(530)885-5508

November 9, 2001

American River Pump Station Project Draft
EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Reference: Draft EIS/EIR for the American River Pump Station Project, Auburn, California

To Whom It May Concern:

At the request of Kevin C. Dimmick, an Auburn resident, I am forwarding a copy of his November 8, 2001, email which provides comments about the proposed project. It is my request that these comments be considered as part of the official record.

Please be advised that the City of Auburn, by separate letter, is submitting comments from City staff relative to the draft EIS/EIR.

Sincerely,

Paul Ogden
City Manager

PO/mhc
Enclosure
cc: City Council Members
Kevin C. Dimmick

L-151, pg. 2

Paul Ogden

From: DIMMICK,KEVIN (HP-Roseville,ex1) [kevin_dimmick@hp.com]
Sent: Thursday, November 08, 2001 1:59 PM
To: 'dbreninger@pcwa.net'; 'pogden@auburn.ca.gov'; 'agrenier.ard@sbcglobal.net'
Subject: PCWA American River Pump Station Project
Importance: High

To: Dave Breninger, PCWA General Manager
Paul Ogden, Auburn City Manager
Alain Grenier, ARD District Administrator

Copies: Auburn City Council - Jodie Hale, Cheryl Maki, Kathy Sands, Alice Singh and O.C. Taylor

From: Kevin C. Dimmick

Subject: PCWA American River Pump Station Project

Gentlemen:

A I would like to call to your attention concerns I share with many other Auburn residents about problems with the PCWA American River Pump Station Project. While the merits of their plans are obvious, of particular concern is the total environmental impact of Maidu Drive being an entrance to the proposed recreation area. The negative impact to surrounding families and homes has not been properly considered and mitigated, and deserves further consideration.

B This entrance, versus the highly viable albeit more expensive alternative on Pacific Avenue, will direct up to 300 or more vehicles per day from numerous counties down this relatively quiet Auburn street among upscale residential neighborhoods. The assumption by PCWA and the State has heretofore been that this traffic is only a slight increase over the 1500-2000 cars that travel this street daily, an estimate provided by the City of Auburn. This estimate is a flawed, with most of the traffic being parents taking and picking their children up from Skyridge School. This being the case, these cars never go past Maidu and Burlin Drives, or Maidu and Riverview for those who approach the school from the other side of Perkins Way. A handful of cars only, proceed down Maidu past these streets.

In addition to the flawed assumptions that were based on a flawed traffic analysis, the current plan causes a number of concerns, some of which are the following:

C *Increased fire danger - With the increased vehicle and foot traffic in the canyon, the risk of fires is increased significantly. Fires fueled from the canyon and canyon walls have and will seriously threaten residential houses and neighborhoods, and can be extremely expensive to extinguish.

A *Traffic safety issues - These concerns are associated with the elementary school children who must cross Maidu daily to get to Skyridge School. Today vehicles regularly run or "California stop" the stop sign at Maidu and Burlin. Newcomers to the area often do not even notice the stop sign. I have personally witnessed close calls and have myself almost been struck by a truck at this corner while riding a bicycle.

A *Crime - With a large, daily influx of recreational users, crime will increase. Crimes common to such areas include auto burglaries, vandalism, alcohol and drug use, and crime often associated with intoxication, such as DUI's, fights and indecent exposure.

11/9/01

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.9, Fire Management.

L-151, pg. 3

D *Parking conjestion problems - With a planned shortage of parking, traffic will spill over into adjacent neighborhoods causing numerous strangers daily to walk through the neighborhoods to get to their cars, trucks, vans and busses. Associated problems include the creation of noise, lack of neighborhood street parking, litter, traffic/driving safety issues, loitering, trespassing and other crimes. This will result in a reduced sense of security and desireability for those who live in these quiet neighborhoods, and can even lower property values if problems become extreme. Increased police patrols, and their associated costs, goes without saying.

E *Increased health risks - Air quality issues should also be considered in an area that already has difficulty complying with air quality standards. Such standards exist for a reason.

For the above reasons, I urge you to exercise your influence to put this plan on hold until these issues are thoroughly considered and mitigated.

Thank you for attention to this important matter.

Regards,

Kevin C. Dimmick
Auburn, CA
(530) 823-5116

11/9/01

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. The Draft EIS/EIR evaluated the potential air quality effects of the Proposed Project and alternatives in Section 3.15, Air Quality (page 3-304). The Final EIS/EIR provides an updated assessment of vehicular emissions using recent updated information from the Placer and El Dorado County APCDs (Chapter 3.0, Section 3.15, Air Quality).

L-152

November 9, 2001

Surface Water Resources, Inc. **Fax 916-286-0957**
2031 Howe Ave, Suite #110
Sacramento, CA 95825

American River Pump Station Project
Draft EIR/EIS Comments

I am against the DRAFT American River Pump Station Project as currently developed. Living in the Maidu Drive area since 1993, and not being advised that a project was being developed that impacts our area was a unpleasant surprise. The following are key points about the project that are unacceptable:

A
- **Increased Fire Risk** – Canyon fires are hard to fight and spread rapidly endangering the residences in the greater area. Adding people and vehicle access to the canyon area will increase fire events. No fire management plan has been developed; this should be done and approved prior to any construction start.

B
- **School Children Safety** – Children from residences on the south side of Maidu must cross Maidu to reach the Skyridge School. The intersection of Riverview/Falcons Point at Maidu has poor visibility from traffic moving in the western direction of Maidu. This increases the risk for accidents and injury to anyone living in the area.
- **Litter and Dumping** – The parks department would be responsible for litter in the park area, who would be responsible for increased litter in the Maidu Area?

C
- **More Pollution** – River pollution from increased traffic in the area from construction and park use. Air pollution from increased traffic.

B
- **Residential Traffic** – Traffic from the Maidu Loop that becomes River View is a hazard to the residences. The older section of River View drive is narrow with no sidewalks. Cars traveling from Maidu that use the River View short to Auburn will increase injury and accidents. Children use this area to walk to school.
- **Noise** – Noise from the canyon echo's up into the residential area. This noise will increase from construction and park usage.

D
SOLUTION – Remove the park element from the PROJECT, or change the access road to Pacific Street.
Pacific Street access will provide river access that avoids a major residential area of Maidu and moves the access to a more commercial area. Some of the issues remain but this eliminates some of the key issues such as School Children Safety, Traffic, and litter issues.

Please include this letter in the project planning process.

Laura Pinnick
565 Riverview Drive
Auburn, CA 95603
530-889-1202 Home
916-368-7610 Office

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. The Draft EIS/EIR addresses potential air quality impacts due to construction of the Proposed Project. Please refer to Response L-3.C for an update of air quality impacts related to public river access and project operation traffic.

D. Please refer to Master Response 3.1.10, Project Access.

L-153

9 November 2001

Draft EIS/EIR Comments
Surface Water Resources, Inc
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

I would like to thank Jim Michaels, Rod Hall and Ranger Mike Lynch for the time they took to provide the presentation and answers to questions during the meeting at Skyridge School on 7 November 2001. They were well informed and did try to explain the contents of the plan for the American River Restoration Project. It may not have appeared this way, but most of us did appreciate the information and the depth of their knowledge.

Based on the information provided, I would like to ask that the plan be revised to include greater detail and additional consideration in the following areas:

A

1. Traffic Mitigation on Maidu Drive: The draft plan as now written does not adequately address the impact of vehicles towing boat trailers along this street. This street is the main residential access for homes in this area.

At the meeting, when the question was asked: "what happens when all of the parking spaces are full?", the answer was "the gates will be closed." That further exacerbates the traffic problem - either with parking on the side of the road, or traffic doubling back because there are no parking spaces.

During the presentation on 7 November, Ranger Mike Lynch addressed the posting of "No Parking" signs around the area, to prevent parking on the roadway. Being a former resident of El Dorado Hills, I am well aware of how ineffective the signs are. Attempting to drive along Folsom-Auburn Road between Douglas Boulevard and the Dam Road during summer days was truly a traffic hazard, due to cars parked along the side of the road. Signs were posted and ignored. Eventually, a very unsightly berm was built to prevent parking. The effectiveness of posting signs is questionable, as is the ugly berms in a residential neighborhood..

B

2. Alternate Access Routes: The draft plan as now written does not cover alternate access routes to the river and parking.

The Auburn Dam Overlook has a parking lot already in place. Since one of the proposed areas at the river is a turn-around only, it appears that the parking lot already in being could be used if an access road was connected to the lot. Also, Pacific Street (the access road to the Dam Overlook parking lot) is in a commercial area.

C

3. Fire Hazards:

Having had several fires in the canyon floor over the last two years, we are very concerned about fire danger. Additional people with vehicles in the area certainly increases the fire danger. The fire potential was not adequately addressed.

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.9, Fire Management and Master Response 3.1.6, Public River Access features.

L-153, pg. 2

4. Personnel Safety: Personnel safety is not adequately addressed in the draft plan. The increase in traffic of approximately 240 vehicles during peak times in the draft plan is considered inadequate. A more realistic number should be developed which considers the

increase, as well as that currently required to support PCWA, use of the BLM Building for Recreation, Skyridge School, current residences and proposed residences.

C Many children and parents walk to Skyridge School. This is not just the 7:15 a.m. - 8:15 a.m. and 2:00 p.m. - 3:30 p.m. traffic. Due to the many activities at the school, traffic changes daily, depending on school activities.

Also, this area is used extensively for area residents who walk, run and bike. Additional vehicle traffic will have significant impact in addition to the safety problems currently in being. Riverview Drive, which is a connector to Maidu, does not have sidewalks except for approximately one block in the Montecielo area.. Additional traffic in this area enhances the possibility of safety problems.

D 5. Air Pollution: The draft plan does not adequately address additional air pollution due to vehicles using the proposed river access AND the relocation of PWCA to the BLM site. This comment does not address the construction phase, since that is assumed to be temporary. This problem is after the construction is complete.

I have no objection to opening the river for recreation, but I truly feel there are better access routes than through a residential area.

Thank you,

Sheryl R. Frank

SHERYL R. FRANK
1770 Vista Del Monte
Auburn, CA 95603
(530) 889-1770

D. Please refer to Response L-3.C for a discussion of air quality relative to public river access and project operations. The Proposed Project does not involve a change in use of the Reclamation buildings currently occupied by PCWA.

L-154

Linda Godfrey
P.O. Box 1050
Meadow Vista, CA 95722
530-878-7679

11/8/01

To whom it may concern,

A This letter is to show my concern about the closing of the diversion tunnel on the American River. Many of my friends and I use the trail that travels over that tunnel to ride to Cool. If you are destroying the tunnel then I believe a bridge should be built so people can continue to get across the river. Don't ruin our trail access, that so many people use and enjoy every day. KEEP OUR TRAILS OPEN!

Sincerely,

Linda Godfrey

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-155

Steven Weiler
10135 Snowy Owl Way
Auburn, CA 95603

November 9, 2001

American River Pump Station Project (ARPSP)
Draft EIS/EIR Comments
Surface Water Resource, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Subject: Comment Card- Placer County Water Agency/U.S. Bureau of Reclamation

Comments:

I would like to ask that you revise the proposed parking-lot plan. The current proposal states that two parking lots (20 and 50 car capacity) would be installed below Maidu Drive within the reserve area. This plan is sure to have the following negative impacts on the natural and residential environment:

A

- Parking lots and public roads within the recreation area will significantly impact the character of this natural environment, thus negating any claim to the project restoration goal. This American river canyon area is one of the few public accessible areas in the lower Sierra Nevada foothills not disturbed by motorized vehicles. By introducing public roads throughout the recreation area the landscape, wildlife, vegetation, air quality, and serenity of the river area will be damaged from its historical state. The ARPSP has the tremendous potential to be recognized as a leading example of environmental restoration. The inclusion of public access roads and lower area parking lots will certainly negate this claim.

B

- Public roads within the recreation area will significantly increase the probability of fire within this area, in addition to subsequent fire prevention efforts and associated fighting costs.

The current State Park plan and associated EIS/EIR does not sufficiently address these issues. In addition, it is clear that current estimates on traffic volumes, traffic pollution, and fire mitigation requirements are under estimated within the current study.

C

I would like to ask that in addition to addressing the above issues that the ARPSP consider a revised plan that would keep the river road off of Maidu drive closed to public traffic as part of this project. The best alternative to this plan is to continue to allow public access to the park and river through the unique combination of hiking, biking, and horseback riding trails in existence today. Emergency river access can be achieved through the use of the private, secured, canyon drive which is in existence today.

D

Public parking lots, and associated public roads, should only be considered at the top of the canyon and should continue to be limited in to 20 vehicles in size. These changes will assist in mitigating the certain overwhelming public opposition and challenges which face the current plan. I believe these actions may enable the project to move forward successfully meeting its three stated goals. Thank you for your professional consideration and support.

Sincerely,

Steven W. Weiler

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

D. Please refer to Master Response 3.1.6, Public River Access Features.

L-156

From John Hauschild
Canyon Raft Rentals
110 Porter Ln
Auburn CA 95602

Nov 7, 2001

Comments on PCWA American River Pump Station and River Restoration Project

I am strongly in favor of the mid channel diversion alternative and tunnel closure.

Here are my comments about some of the details regarding recreation and access details:

A
- The southern embankment needs to have a trail cut into it to maintain recreational access from Cool even if no bridge is built soon. The cost of this should be insignificant.

B
- It would be great if the haystack waves at Tamaroo Bar Rapid could stay as they are as this is a high point of this run.

C
- The plan for a parking lot above the Oregon Bar takeout is not optimum for rafters due to its distance & elevation gain from the river. I recently went down and scouted the area and determined that the road down to Oregon Bar is plenty wide in several places and could accommodate at lease 30 cars within a quarter mile of the turnaround. I think that money could be saved by investing it into roadside parking instead of an upper lot. Since this rafting run will be mostly in the evenings in summertime due to flow schedules it is important for rafters to be able to access their vehicles quickly at the takeout and not have to hike 1/3 of the way out of the canyon to get their cars.

John Hauschild

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.7, Tamaroo Bar.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-157

November 7, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. suite 110
Sacramento, Ca 95825

Dear Sirs,

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

A The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. the only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

B The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Sincerely,

Melinda Tager

Melinda Tager
300 Oak Street
Auburn, Ca 95603
530-889-8524

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-158

Karri R. Weiler
10135 Snowy Owl Way
Auburn, CA 95603

November 9, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resource, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Subject: Comment Card- Placer County Water Agency/U.S. Bureau of Reclamation

Comments:

I would like to ask that you revise the proposed public roads into the Auburn State Recreation Area. The current proposal states that an estimated 210 automobiles will travel this area at peak times. This estimate is believed to be grossly underestimated in addition the full impacts of this increase have not been considered within the proposal and Draft EIS/EIR. I request as the mother of school age children that the following points be considered:

A

- The estimated increase in public traffic through the residential neighborhood will have a health and safety impact on the Sky Ridge Elementary School children walking on, and across Maidu Drive area.
- The school is 1 block from Maidu Drive which is the proposed park access road. By promoting increased public access we are introducing the elementary school age children to greater public exposure. The transient population of park visitors posses an increased risk to the safety of these children.
- Maidu Drive is part of a heavily populated residential area. The increase in non-local traffic has a significant impact on the home owners and safety within the community. It is unclear as to the increased potential of crime as a result of the increase public traffic associated with the current plan.

The current State Park plan and associated EIS/EIR does not sufficiently address these issues. In addition, it is clear that current estimates on traffic volumes, air quality, child health and safety, and community impact are not adequately addressed in the plan.

B I would like to ask that in addition to addressing the above issues that the ARPSP consider a revised plan relocating both construction and public access to the park and river to the Paris Drive entrance point. Emergency river access can still be achieved through the use of the private, secured, canyon drive to be enhanced as part of the ARPSP.

A The current plan to greatly increase non-local traffic to the Maidu residential and Sky Ridge school area should be reconsidered, thus avoiding overwhelming public opposition. I believe these actions may enable the project to move forward successfully meeting its three stated goals.

Sincerely,

Karri R. Weiler

Karri R. Weiler

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-159

November 5, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave.
Sacramento, CA 95825

Re: Coffer Dam area trails Auburn to Cool

To Whom It May Concern:

A

I have lived in the Auburn area for over 30 years, my husband has lived in the area all of his life, over 70 years. I moved to the area because of the local trails and the Tevis Cup ride and am on the Board of Governors of the WSTF. My husband and I ride the local trails many times a week and have donated hundreds of hours of time in maintenance, promotion, and enjoyment on all of our local trails from Robie Equestrian Park to Sacramento. We have devoted so much time and energy fighting for our trails in Placer County that we want to let you know our concerns that the trail in the Coffer Dam area may be lost for lack of a bridge.

The PCWA claims that the Auburn-to-Cool trail loss is a significant but unavoidable impact of the river restoration and pump station project. However, there is a solution – PCWA needs to include the construction of a bridge in their plan. They also need to leave a dirt trail along side the roads that they are paving so those trails are not lost as well.

The Coffer Dam site is one of the few places where several trails merge and provide access to other trail systems (the Western States trail in Auburn, the Olmstead trail in Cool, the Maidu area trail and the Pioneer Express trail from Folsom Lake, and Sacramento. Most people, and we definitely feel, that if the PCWA river project doesn't include a bridge in their plan now that it will never happen and we will lose the Coffer Dam area trails, some of our best training hills, and a major trail system connection FOREVER.

There are a number of organized events that will have to be canceled or rerouted if this trail is lost, the American River Ride, one of the largest endurance rides in the U. S., NATRC Competitive Trail Rides, and a number of Endurance runs use the Coffer Dam trails. Auburn is known as the Endurance Capital of the World, we cannot afford to lose these trails.

Several thousand hikers, outdoor enthusiasts, equestrians, mountain bikers, and runners use these trails annually. If the Auburn-to-Cool trail is closed, the remaining trails from Auburn to Cool will become even more crowded. Many people using our trails for the first time are intimidated by the WSTF trail, as it is narrow and steep, but feel comfortable on the wider more open trails of the Coffer Dam area. Also the Western

Coffer Dam Trails - 1 -

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-159, pg. 2

States trail, due to its narrowness etc. is NOT open to bikers and this would be a MAJOR loss for the bikers. It is not fair to take away their only access route away. The canyon and local trails represent many user groups that include water use AND land use. The PCWA project needs to support all canyon user groups and recognize the value of keeping the canyon access available to everyone.

Currently a volunteer mounted unit patrols the Coffer Dam area. Private equestrians riding the area, as I am sure runners, hikers and mountain bikers, have reported problems and assisted in emergencies in the area. There is also a group Sweep Riders of the Sierras who ride the area and have GPS and ham radios and can and do report any problems or accidents. These and other equestrians will no longer have access to the area as the PCWA plan includes paved roads on the Auburn side and piled river rock from the excavation on the Cool side. Does the State, County and PCWA really want to lose this valuable resource?

Most of us want to share in the joy and celebration of opening the river back to its natural course. We are asking PCWA to do the right thing and not take away these beautiful and wonderful canyon trails from our community and those that visit this area because of its awesome trails. We CAN retain these trails, this can be achieved by building a bridge – a small price to pay when compared to the overall multi million-dollar project budget. We fought hard to save No Hands Bridge, we dedicated our time, labor and money to keep that trail, we are having to fight again, and this shouldn't be the case, to save our trails. A bridge and trail access is a small price to pay compared to the permanent loss of trails that so many people, of all walks of life, have been using for so long, and want to continue to use for many, many more years.

Thank you for the opportunity to comment.

Cordially,

Phil and Rho Jacoby
9539 Whiskey Bar Rd.
Loomis, Ca. 95650
(916) 652-7828
Fax (916) 652-2388
e-mail: rho@jps.net

Coffer Dam Trails - 2 -

L-160

October 20, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

Signed,

Jim and Justine Brown
2495 Westville Trail
Cool, CA 95614

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-161

COUNTY OF EL DORADO

Trails Advisory Committee

3000 Fairlane Court Suite 1
Placerville, CA 95667
(530) 621-5864 FAX (530) 295-2540

November 7, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Dear Project Manager:

A The El Dorado County Trails Advisory Committee met on Wednesday November 7, 2001 and discussed the American River Pump Station Project. After reviewing the executive summary the Committee is in favor of the preferred alternative. Having the American River restored to it's original course will be both aesthetically pleasing and beneficial to fish and wildlife. Enhancing public river access to the site is another positive aspect of the project. While the preferred alternative has many benefits we have concerns relating to the loss of a valuable inter-county trail linkage between El Dorado and Placer Counties.

B The study refers to a permanent closure of the Auburn-to-Cool Trail as a significant and unavoidable impact. The committee believes that closure of any trail is significant and should be avoided. We are also concerned that no mitigation measures have been identified for this closure. This route is a major connecting route not only for the communities of Auburn and Cool but a route between two foothill counties. There are other suitable trail linkages in the area but they don't provide the type of access being lost by the preferred alternative. To close the Auburn to Cool trail without offering another option will set the stage for increased trail user conflicts.

C The committee is also concerned that the time line for a comprehensive planning of the Auburn SRA is defined as "in the near future". The problem with planning in the near future, is that people use this trail now. Prior to the approval of this project the PCWA and the CDPR should have a selected plan and funding available to replace this link. The El Dorado County Trails Advisory Committee is very appreciative of the trail system contained within the Auburn State Recreation Area and hopes the pump station project can be adequately incorporated.

Sincerely,

Eileen Crim

Eileen Crim, Chairperson
Cc: Rod Hall, Folsom Area office, United States Bureau of Reclamation

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.2, American River Pump Station Project Funding.

L-162

Steve and Marsha Helland
1825 Arroyo Dr.
Auburn, CA 95603
530-823-7123

11/8/01

Re: PCWA American River Pump Station and River Restoration Project
Draft Environmental Impact Statement/Environmental Impact Report

Comments-

Thank you for the informative session conducted at Skyridge School last evening, 11/8/01. We would like to offer the following comments about this project.

A
1. We agree with the primary objectives of this project; provide a permanent pump station, restore the river and close the diversion tunnel. Our concerns lie with the approach taken to provide recreational facilities as part of this project. The first point is that the choice of Maidu Drive for the access is poor. It is a residential neighborhood with children walking in the street, crossing the street and playing near the street. The additional traffic on Maidu resulting from this access would create an extremely unsafe condition for these children and others.

B
2. The estimated increase in traffic is significantly understated. This is especially true for the parking near the water. There is very limited access to the river and opening a parking facility next to the water would have tremendous appeal to people. Unfortunately the 70 parking spaces (20 next to the water) would quickly fill up resulting in a traffic nightmare on Maidu which has no parking facilities except along the street's sides. Also, multiple cars would be needed for leaving a car to pick up a raft. We believe the 210 car increase during peak periods is off by several hundred.

C
3. If a parking facility at the river is approved the access should be via Pacific Street where a parking lot already exists, the neighborhood is largely not residential, there are already several other recreational facilities in close proximity and is more easily accessed from Auburn Folsom Road. Safety and impact to the surrounding area should be taken into consideration, not just economics.

D
4. Most importantly, rather than implement the recreational plan in this draft EIR, the alternative of improving Rattle Snake Bar recreational area should be investigated. The concern about leaving people on the river is erroneous. The paddle from Oregon Bar to Rattlesnake Bar is no longer than the rafters now paddle on the south fork of the American River where they have no problem. Patrol boats could more economically patrol the lake between the bars than establishing a whole new recreational facility above Oregon Bar. Rattlesnake Bar has ample room for additional parking facilities, is already a developed recreational site, has a boat ramp and has a direct access road through a rural area.

5. The comment was made at the meeting that commercial rafting was not part of the proposed plan for the river. This needs to be backed up in the EIR with a statement from the Auburn State Recreation Area that commercial rafting will not be allowed on the north fork of the American River from the confluence downstream to Oregon Bar.

Steve Helland

Marsha Helland

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

D. Reclamation and CDPR will evaluate other recreation needs and facilities in the update to the Auburn SRA recreation management plan later this year (2002). Please also refer to Response Master Response 3.1.6, Public River Access Features.

L-163

11/8/01

Placer County Water Agency
U.S. Bureau of Reclamation
2031 Howe Ave
Sacramento, CA 95825

Ref: Auburn Pump Station/Coffer Dam

The following are my comments, concerns and suggestions relative to the Auburn Pump Station and various aspects of the EIS/EIR discussed at an open meeting in Auburn on October 11,2001.

A

1. Closure of the Auburn to Cool trail:
A totally irresponsible conclusion indicating that those preparing the report did not do their homework! If, in fact, the objective was to make this plan palatable to those interested in the River and Canyon, what bonehead would conclude that closing a significant passage for the Western States Trail and the only mountain bike passage to Cool, would have an "insignificant impact". This conclusion was far from scientific and even further from well thought out.

The risks are too high to expect runners, bikers and horses to share the "no-hands" bridge route to Cool. In fact, it's nearly impossible for bikers because of the trail condition. In addition, the entire trail is too narrow for two-way traffic safely. In the event of an accident, emergency access is incredibly difficult.

Maintaining both trails to Cool is the only way to divide the usage and the types of users up safely.

B

2. Aesthetics
Simply dumping the rock that is pulled from the riverbed onto the hillside leaves the canyon looking striped. If the object is to "return to nature" then do a complete job. The river will flow in it's original bed and the hill side should be returned with natural foliage and rugged appearance.

C

3. Parking and Access
There is no provision currently for parking equestrian rigs – there need to be. This is an important training site for the Tevis and recreational users. Pull through parking spaces and adequate passing space within the parking lot is essential.

A

4. A bridge
NO Bridge, NO water for Rocklin.
If this project proceeds, it needs to do so with a bridge that's built to accommodate both pedestrian and equine traffic. That necessitates that the width be sufficient for the safe passage of two-way traffic, the surface needs to be non-slip, the sides need to be high enough to prevent swimmers from diving off and frightened horses from leaping or falling off.

Sincerely,

Janet K. Peterson
P.O. Box 1320
Meadow Vista, CA 95722
(530) 878-4750

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-164



NASSAU-SUFFOLK HORSEMEN'S ASSOCIATION, INC.

2 Carll Court, Northport, New York 11768 (631) 261-4915 Fax (631) 754-3164

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Joel Serota
C. William Uhlinger, Esq.

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc
2031 Howe Ave.
Sacramento, CA 95825

October 31, 2001

Re: Coffer Dam area trails near TEVIS finish Line, Auburn CA

Dear Supervisors:

NSHA represents about 2,000 horse people on Long Island, a highly urban area that nevertheless boasts many miles of trails and trails enthusiasts including not only horseback riding, but also mountain biking and hiking.

From experience, we can tell you that trails and land are not endless, but finite. Every step we take to reclaim, restore and create open space and clean water has to be thoughtfully executed. The ramifications of incomplete planning are expensive and last forever.

It seems only sensible to include an appropriate bridge in the Auburn to Cool trail to keep the historic and safer trail open for users. It seems only practical to keep the roadside safe for those who use foot, bicycle or horses.

A Tunnel vision when it comes to our resources is catastrophic. To eliminate thousands of appropriate users and stewards from this trail will have lasting negative financial and environmental impact.

Sincerely,

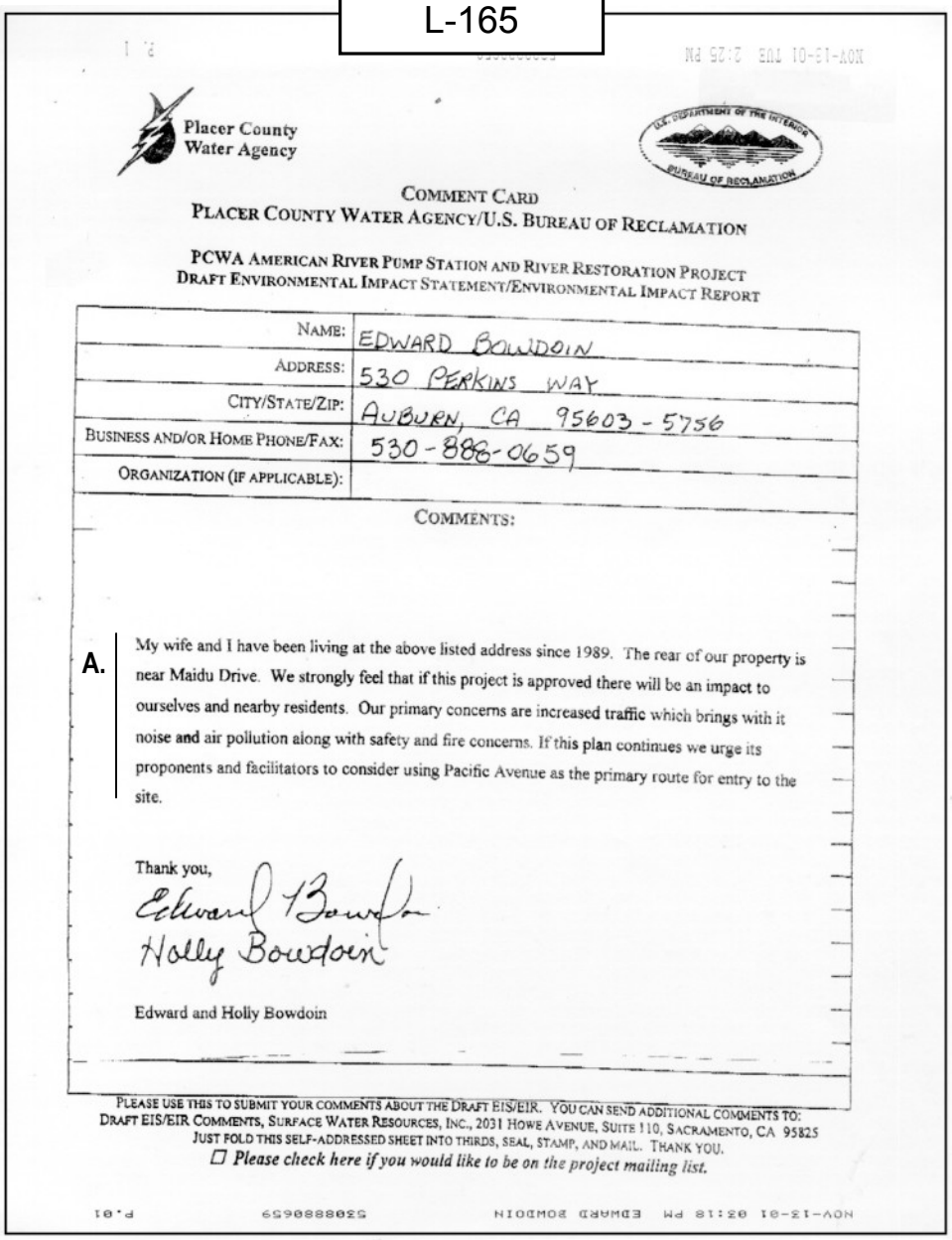
Cyla Allison, Ph.D.

A publicly supported federally tax exempt organization formed under the New York State not for profit law.



A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-165



Placer County Water Agency

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	EDWARD BOWDOIN
ADDRESS:	530 PERKINS WAY
CITY/STATE/ZIP:	AUBURN, CA 95603-5756
BUSINESS AND/OR HOME PHONE/FAX:	530-888-0659
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A. My wife and I have been living at the above listed address since 1989. The rear of our property is near Maidu Drive. We strongly feel that if this project is approved there will be an impact to ourselves and nearby residents. Our primary concerns are increased traffic which brings with it noise and air pollution along with safety and fire concerns. If this plan continues we urge its proponents and facilitators to consider using Pacific Avenue as the primary route for entry to the site.

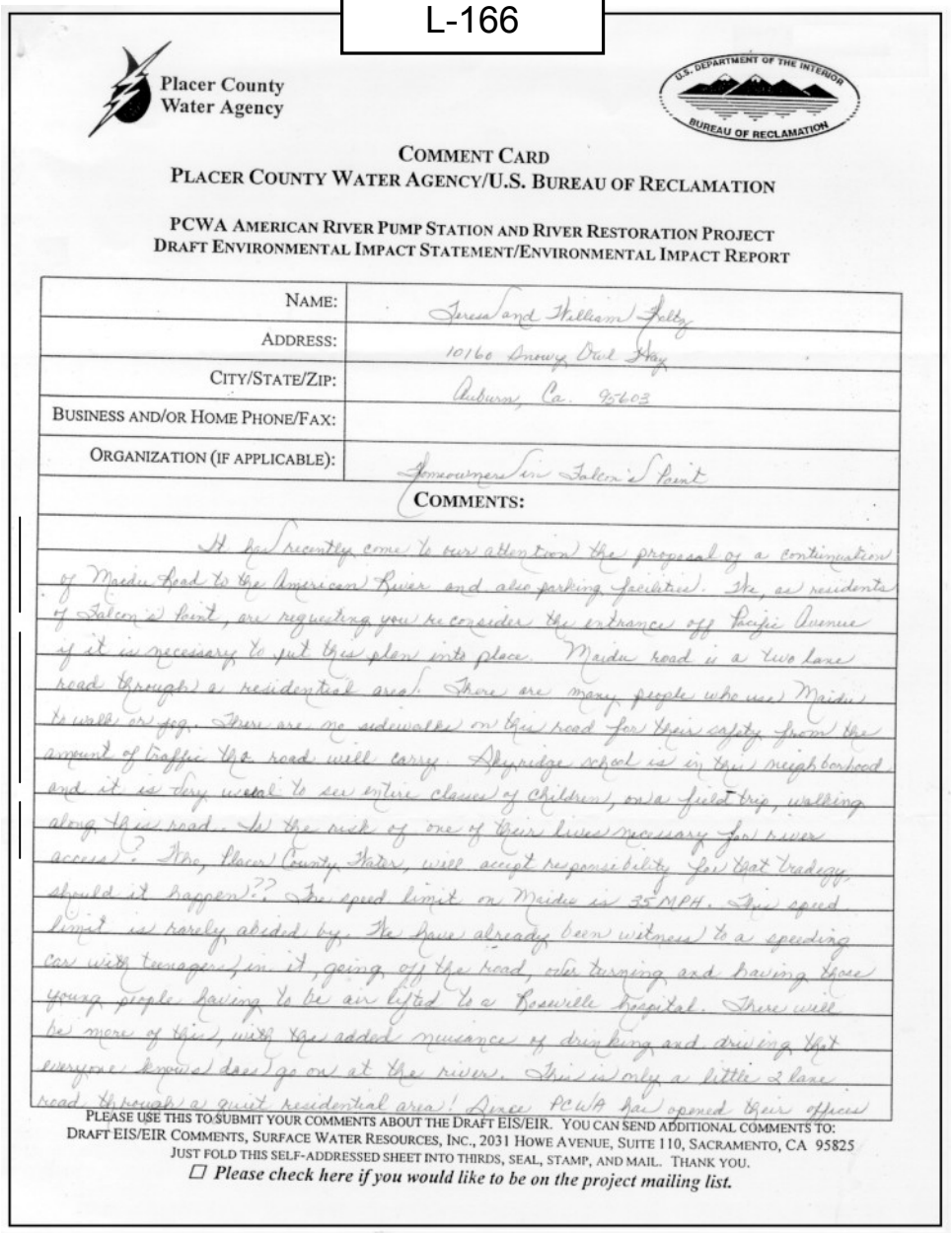
Thank you,
Edward Bowdoin
Holly Bowdoin

Edward and Holly Bowdoin

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features; Master Response 3.1.9, Fire Management; and Master Response 3.1.10, Project Access.

L-166



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Teresa and William Foltz
ADDRESS:	10160 Snowy Owl Way
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	Homeowners in Falcon's Point

COMMENTS:

A — It has recently come to our attention the proposal of a continuation of Maidu Road to the American River and also parking facilities. We, as residents of Falcon's Point, are requesting you reconsider the entrance off Pacific Avenue if it is necessary to put this plan into place. Maidu road is a two lane road through a residential area. There are many people who use Maidu to walk or jog. There are no sidewalks on this road for their safety from the amount of traffic the road will carry. Skyridge school is in this neighborhood and it is very usual to see entire classes of children, on a field trip, walking along this road. Is the risk of one of their lives necessary for river access? No, Placer County Water, will accept responsibility for that tradegy should it happen?? The speed limit on Maidu is 35 MPH. This speed limit is rarely abided by. We have already been witness to a speeding car with teenagers in it, going off the road, over turning and having those young people having to be air lifted to a Roseville Hospital. There will be more of this, with the added nuisance of drinking and driving that everyone knows does go on at the river. This is only a little 2 lane road through a quiet residential area! Since PCWA has opened their offices

B — on Maidu, traffic has increased substantially. Please reconsider the entrance off Pacific Avenue.

C — Thank you for your consideration.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

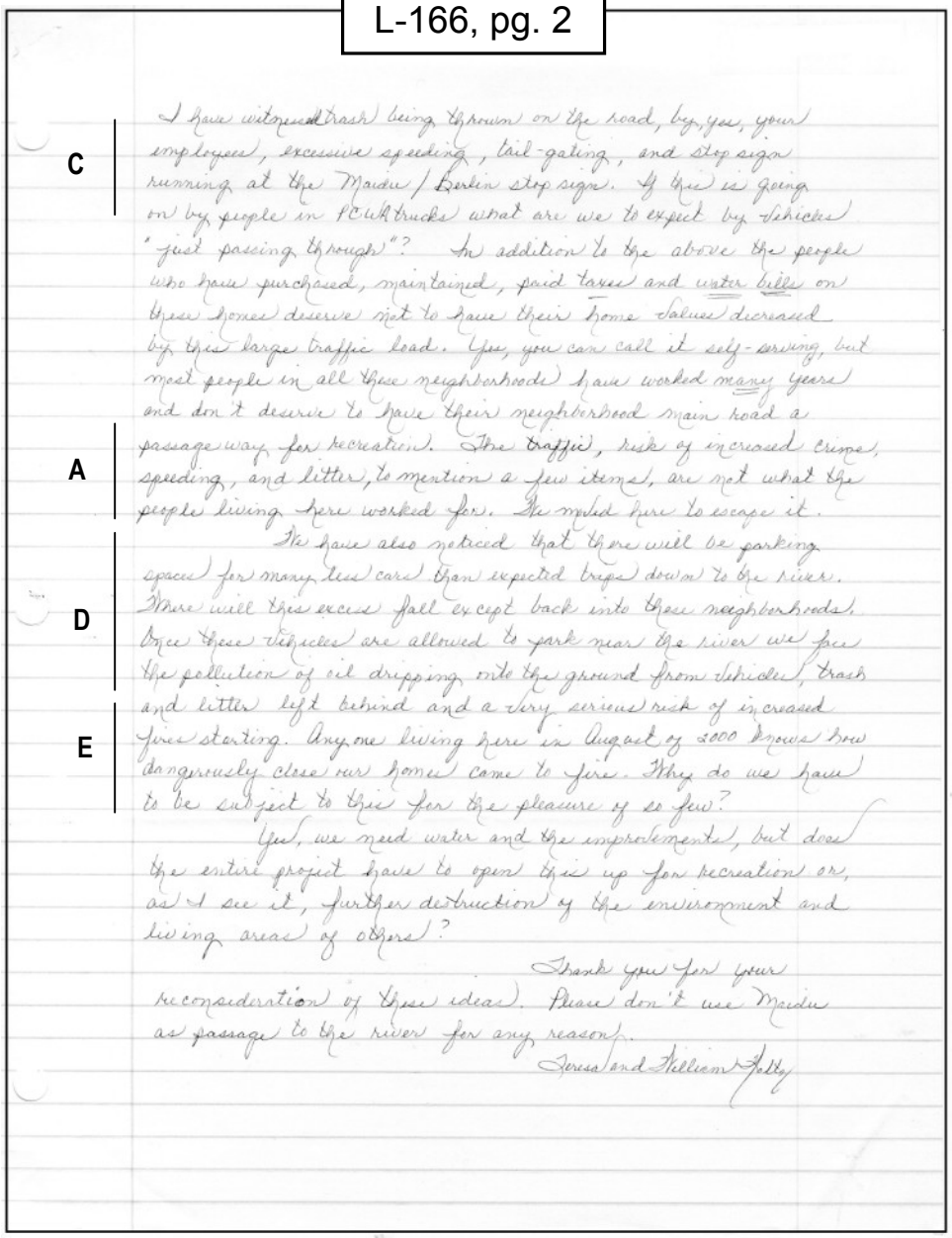
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-166, pg. 2



I have witnessed trash being thrown on the road, by you, your employees, excessive speeding, tail-gating, and stop sign running at the Maidu / Larkin stop sign. If this is going on by people in PCWA trucks what are we to expect by vehicles "just passing through"? In addition to the above the people who have purchased, maintained, paid taxes and water bills on these homes deserve not to have their home values decreased by this large traffic load. Yes, you can call it self-serving, but most people in all these neighborhoods have worked many years and don't deserve to have their neighborhood main road a passage way for recreation. The traffic, risk of increased crimes, speeding, and litter, to mention a few items, are not what the people living here worked for. We need here to escape it.

We have also noticed that there will be parking spaces for many less cars than expected trips down to the river. There will this excess fall except back into these neighborhoods. Once these vehicles are allowed to park near the river we see the pollution of oil dripping onto the ground from vehicles, trash and litter left behind and a very serious risk of increased fires starting. Anyone living here in August of 2000 knows how dangerously close our homes come to fire. Why do we have to be subject to this for the pleasure of so few?

Yes, we need water and the improvements, but does the entire project have to open this up for recreation or, as I see it, further destruction of the environment and living areas of others?

Thank you for your reconsideration of these ideas. Please don't use Maidu as passage to the river for any reason.

Teresa and William Tolley

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. Please refer to Master Response 3.1.9, Fire Management.

L-167

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	ROGER & MICHELINA TURNER	
ADDRESS:	RESIDENCE 4005 EAGLES NEST	MAILING ADDRESS PO BOX 6736
CITY/STATE/ZIP:	AUBURN, CA 95603	AUBURN, CA 95604
BUSINESS AND/OR HOME PHONE/FAX:	(530) 889-9621	
ORGANIZATION (IF APPLICABLE):		

COMMENTS:

PLEASE SEE COMMENT CARD ATTACHED

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ *Please check here if you would like to be on the project mailing list.*

L-167, pg. 2

ATTACHMENT TO COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

NAME: Roger and Micheline Turner

ADDRESS: Residence
4005 Eagles Nest
Auburn, Ca. 95603

Mailing address
P.O. Box 6736
Auburn, Ca. 95604

TELEPHONE: (530) 889-9621

WE DO NOT SUPPORT THE PROPOSED RECREATIONAL PROJECT FOR THE FOLLOWING REASONS:

A 1. THE INCREASE IN PUBLIC USE IN THIS ALREADY FIRE HAZARDOUS AREA WILL CREATE AN OMINOUS RISK TO RESIDENTS AND THEIR HOMES.

B 2. INCREASE IN TRAFFIC WILL ONLY INCREASE DANGER TO OUR CHILDREN.

3. THE PROJECT MAY ATTRACT UNDESIRABLES, GENERATE ADDITIONAL NOISE AND INCREASE LITTER DISPOSAL ON MAIDU DRIVE.

C 4. ACCESS VIA MAIDU DRIVE IS INAPPROPRIATE FOR A RESIDENTIAL AREA AND PACIFIC AVENUE IS A FAR MORE SUITABLE OPTION BEING A COMMERCIAL AREA WITH NO RESIDENTIAL HOMES.

A 5. WE FEEL THAT SPENDING THE EXCESSIVE AMOUNT OF FUNDS PROPOSED FOR THE PROJECT SHOULD BE SECONDARY TO PROVIDING FIRE BREAKS AND PRO ACTIVE THINNING OF UNDERGROWTH TO PREVENT ANY DISASTROUS FIRES WAITING TO HAPPEN IN THIS AREA.

ATTACHMENT

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access. It is noted that Pacific Avenue, between Auburn-Folsom Road and the project area, is lined with multi-family and single-family residences and a preschool. These homes front on Pacific Avenue, have direct driveway access, and have no fencing separating the front yards from the street.

L-168

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Tim and Kathy Twietmeyer
ADDRESS:	4045 Eagles Nest
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	PH: 530 885 0429 FX: same
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

SEE ATTACHED.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ *Please check here if you would like to be on the project mailing list.*

L-168, pg. 2

November 13, 2001

Draft EIS/EIR Comments, Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 9582

Following are our comments on the proposal to add recreation access and parking facilities in the American River Canyon off Maidu drive as part of the river restoration project:

A

Maidu drive is a poor choice for access to the river. There is already a parking and staging area available at the Auburn Dam Overlook and Western States horse staging area off Pacific Street. This area is already used for access to the recreation area and can facilitate additional users without any modifications. Maidu drive is already seeing new development for homes and is a standard access path to Skyridge School. With no sidewalks, and hundreds of kids going to and from school on this road, having Maidu as the access to the river will only subject these kids to additional traffic hazards.

Parking and recreational access isn't needed IN the canyon. There is a fine parking and staging area available off Pacific Street. This should be the staging area for all recreational users of the canyon. Adding parking IN the canyon will only encourage users uninterested in recreating to the river. I see this every day as a regular user of the river. Check with the State Parks people and they'll tell you that some parking areas along the river in plain view of the highway (near the confluence on the Cool side) are not recommended for parking due to the high burglary and vandalism rate. Adding parking down in the canyon will only provide a staging area for cars to be burglarized and for people that are more interested in drinking and partying loiter there. More evidence of this problem is already available as the roads into the canyon have been painted with graffiti in several places. The parking at Pacific Street is more than adequate for today's users and many, many more. That lot rarely has more than ten cars in it and it can handle ten times that.

Providing parking below the standard residential area will only compound traffic patterns on streets that aren't designed for heavy traffic. If there is access to the river from below Maidu, it's only a matter of time before users realize that the fastest access out of there is along Riverview. With the addition of streetlights and stop signs along Sacramento Street and Auburn-Folsom road, people are already using Riverview as a bypass. This is a very poor road for additional traffic, with no sidewalks and inadequate lighting.

There is no street light at Maidu and Auburn Folsom. Routing construction trucks down Maidu would be a big mistake. Pacific street already has a light installed and access to that staging area doesn't go through a residential area.

No parking is needed in the canyon for someone to use it for recreation. Today, there are thousands of users in the canyon every weekend. There is no parking provided for those users today, and none is needed tomorrow. It's one of the nice parts of going into the canyon, there is no traffic, litter, car noise, pollution. Adding parking IN the canyon will only ruin what makes the canyon so nice as a place to spend time. With cars, parking, litter, noise, pollution, partying, and loitering, some of the best reasons for being in the canyon will be eliminated.

Sincerely,

Tim and Kathy Twietmeyer
4045 Eagles Nest
Auburn, CA 95603

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-169

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	John + DL Benson
ADDRESS:	730 Riverview Dr.
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-8972
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — A permanent access (i.e. pump station) to American River water for PCWA is many years overdue.

B — If recreational parking is constructed, it should have an alternate means of access and egress via Pacific St. This should also apply to the construction operations.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Project support for permanent pump station access noted.

B. Please refer to Master Response 3.1.10, Project Access.

L-170

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Lynnel Queen
ADDRESS:	570 Perkins Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	889-9332
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I am requesting that you do not use Maidu Dr as access to the new American River State Park for a number of reasons.

B Primarily I am concerned for my children's safety as they frequently play outside and they also walk to school up at Skyridge. Another concern is traffic since my home backs up to Maidu.

I am all for restoring the river to its natural state but please do not use Maidu as its access. Please find an alternative

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

L-171

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dorothy Michelis
ADDRESS:	414 Riverview Drive
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 885-7487
ORGANIZATION (IF APPLICABLE):	Homeowner

COMMENTS:

A I was shocked to read the "Neighborhood Impact" information left at my doorstep' concerning RECREATION AND PARKING FACILITIES in the canyon just below my neighborhood. WHY is this being considered? Who needs it? Who wants it? I believe it would be a great detriment to our otherwise peaceful and desirable neighborhood.

B The Auburn Dam and lake would have been a great addition and a long time promise of additional water and power--necessary to a growing area. A disaster when it was cancelled by Jimmy Carter, influenced by "Environmentalists". Since this cannot apparently be restored, then lets not compound the earlier mistake by turning a

C beautiful residental area into a trap of vandals, thoughtless tourists and other criminal type opportunists. As a 40 year resident of Skyridge, I ask that our wonderful area be preserved as originally planned for older and younger residents and their families to live in a peaceful and quiet atmosphere.

D The pumping installation may be necessary and useful, but the construc tion will be temporary. Turning this area into part of the National Park system would be permanent and a total disaster for the residents.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. As stated in Section 1.1 of the Draft EIS/EIR, the project has three objectives: (1) to provide permanent facilities for PCWA to convey its water entitlement to the Auburn Ravine Tunnel; (2) to eliminate the safety issue with the Auburn Dam bypass tunnel; and (3) to restore the river to its pre-construction channel to allow all of the beneficial uses of the river in what is now a de-watered channel, including recreation, navigation, fish passage and other beneficial uses.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. This project is not affiliated with the National Park System nor is the area under consideration for any change in federal status to become a National Park since any new designation of this nature would require Congressional action. As described in the Draft EIS/EIR, the project study area is located within the Auburn SRA managed by the CDPR under contractual agreement with Reclamation.

L-172

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Louwrens K. van der Linden
ADDRESS:	1810 Vista Del Lago
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	916/624-7181 Fax: 916/624-3833
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — We are very concerned about the "Recreational Park" that is planned below us in the Canyon. The increased traffic in our neighborhood is a danger to all the children who go to Skyridge School. We will have a lot more noise from the traffic as well as polution of our air. We will attract people from the Sacramento Valley, Foothills, and Surrounding areas. Our concern is the safety and security of our quiet neigborhood.

B — Furthermore we are very concerned about fires in the canyon.

C — We will have increased litter on Maidu. With all the traffic going down to the planned parking areas, what is going to happen to our wildlife habitat?

D — The 2 years of construction will bring us lots of noise, polution, and safety danger to our area. Why not use Pacific Street which is already a Commercial area with non-residential homes. Access to Parking facilities via Pacific Street would solve many traffic, litter, noise, and safety concerns.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.12, Project Area Wildlife.

D. Please refer to Master Response 3.1.10, Project Access.

L-173

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	PAUL GARY KAINE & HELENA KAINE
ADDRESS:	475 RIVERVIEW DR.
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 885-7687
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

We agree with the concerns expressed at the neighborhood meeting of Nov 7, 2001. Our special concerns are:

A 1. lack of fire protection! Our home is directly above the PCWA yard in a HEAVILY wooded area with merely a simple fire break.

B 2. Brks Dept says they are tremendously understaffed at present. Why add more when THEY say they can't take care of what is already in place?

C 3. Present Brks consideration for residents with permits issued for "hill climb or races". We do not want or need more of this!

D 4. Presently we are not able to get law enforcement help with joyriding situations on Maidu by PCWA bldg.

E 5. Re the manned gate - is it to be fortified and locked at non use hours?

F 6. Residential speeds on Riverview are currently unacceptable for everyone's safety.

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DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A Please — no river parking or access in this fire prone neighborhood!

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding. If there is insufficient funding for full implementation of these features, CDPR would further reduce the hours of operation.

C. The Ford A Speed Technology (FAST) Gold County Hill Climb, is an annual or semi-annul special event that CDPR permits within Auburn SRA. The "climb" is an event to test the performance of Model A Fords (1928-31 models). The event utilizes the portion of Maidu Drive within Reclamation property ownership. The actual climb runs from the area near the offices housing PCWA up to the building now used by the City of Auburn Department of Parks and Recreation. Event organizers provide traffic control to allow anyone wishing to pass through the area to do so. The maximum number of people allowed is 250. A food vendor does sell sandwiches and coffee. The event organizers provide insurance for the event, provide trash containers and portable toilets, and pay a nominal fee and percentage of vendor sales to the state. In the past, the event has run from 7 a.m. to 3 p.m. The City of Auburn Police Department is notified about the event. CDPR is unaware of any neighborhood complaints about this event. However, if members of the community have concerns with this event, CDPR is interested in hearing these concerns and in working to address them through the permit process.

D. Comment noted.

E. The entrance gate would be closed and locked unless the entrance booth was staffed to oversee public use of the area.

F. The lead agencies have no authority regarding neighborhood speed limits.

L-174

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kenneth and Dorothy Felkins
ADDRESS:	11090 Tanglewood Dr.
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-9153
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A We, as residents on Tanglewood Dr. for eighteen years, do not need the extra traffic your proposal expresses. At two times per day it's a long wait to enter Maidu Dr. With that accomplished it's another stop and wait to enter Auburn Folsom Rd., if you wish to go south. It's a very dangerous situation. What we don't need is more traffic on Maidu Dr. There are hundreds of homes who use this street each day to get to and return from their places of work. Put this parking facility down by the "access road" with the state board water modes. We don't need these white water rafters littering our community streets. Who is going to police the clean up and loitering these people are going to create. White Water Rafters, take what you can get - not Maidu Dr. Better yet, "Not a Life." We need water - not another RV parking lot.

B

A

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

L-175

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	TODD & RENATA KUCHENTHAL
ADDRESS:	1800 BARN OWL CT
CITY/STATE/ZIP:	Aub CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	885-2679
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

ALL OF THE CONCERNS ON THE Neighborhood impact PAGE ARE ON THE MONEY AND WE SUPPORT.

IN ADDITION THE INTERSECTION of MIADU AND Auburn Folsom, IS A VERY DANGEROUS INTERSECTION ON A Slow DAY. THROW IN Regular Traffic / Schools / AND REC USE with people coming home from work. You figure it out. MORE Lights? MORE COST?

SOME TIMES OUR Local govt AND leaders GET IT WRONG. Pacific ST IF YOU MUST, IS THE ONLY WAY TO GO.

EVERYONE I'VE SPOKEN TO IN THE Neighborhood HAVE SAID THEY will NOT STAND STILL for A MIADU OR TURNING INTO A Hwy 49 or WORSE.

Todd Kuchenthal Renata Kuchenthal

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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See following page for specific comments and responses.

L-175, pg. 2

Neighborhood Impact:

American River restoration project and planned Recreation parking facility

Are you aware?

- A major project is underway to restore the river channel and add RECREATION AND PARKING FACILITIES in the canyon just below our neighborhood.
- An entrance station to a new State Parks facility to the American River is planned on Maidu Drive.

Maidu Drive Neighborhood Information Session meeting November 7, 2001 came up with the key concerns from neighbors who attended the meeting:

A
1. If the intent of the project is to restore the river to it its historic pre-dam channel when there was no parking, **WHY IS IT NOW NECESSARY TO INCLUDE ROADS AND PARKING FOR RECREATIONAL USAGE?**

B
2. **INCREASED VEHICLE TRIPS BEYOND WHAT THE EIS/EIR IS PREDICTING.** The Presenters and the EIR contend that at peak recreation use there will be an increase of 210 vehicle trips in addition to the 1500-2000 vehicle trips per day that the City of Auburn Traffic Engineering study states. Many Residents felt that the Auburn Traffic Engineering study for Maidu Drive was on the low side and that ANY additional traffic is traffic we don't need. If the parking lots are full, visitors will be turned away at the manned gate on Maidu Drive. This means that vehicle will continue on and end up on Riverview Drive or turn around and return to Auburn- Folsom Road and that Maidu Drive will end up with many more vehicle trips than the current draft EIS/EIR is suggesting.

C
3. **SCHOOL CHILDREN SAFETY CONCERNS** for the Maidu Drive Area. Children from residences on the south side of Maidu Drive must cross Maidu to reach the Skyridge school. Increased traffic during construction, 35 to 70 additional vehicle trips, plus peak recreational increase of up to 210 vehicle trips will expose school children to unwanted and unneeded danger.
4. **INCREASED TRAFFIC NOISE** especially during pump station construction that would last about 2 years.

D
5. **INCREASED FIRE DANGER** to homes that border the canyon as a result of increased human and vehicle activity down in the canyon. There is no current plan in place that would protect homes as result of increased human recreational activity in the canyon. A fire plan is in the planning stages but would not be put into effect until after Pump Station construction is finished. The Residents felt that a fire plan should be activated at the beginning of construction and that elimination of proposed recreational facilities would be the best approach to fire protection for homes. There was a general feeling that the project should not move forward until fire hazard concerns are addressed.

C
6. **SAFTEY AND SECURITY** from undesirables that the recreation and parking facilities will likely draw from outside of Auburn. The presenters did not have any response for this issue although the Park Ranger did review situations and frequency of occurrences that could happen, vandalism being the most prominent. For the most part, the residents of the Maidu Drive neighborhoods have experienced peaceful living for several years. Opening the proposed section of the river to recreational use could and probably will open the door to an increase of people problems. The EIS/EIR does not affectedly address this situation.

E
7. **IS THERE ANY TECHNICAL LINK BETWEEN THE PLANNED RECEATIONAL PARKING FACILITIES AND THE CONSTRUCTION OF THE PUMP STATION?** The Presenters responded NO to this question. This means that in terms of local Maidu Drive neighborhood interest and benefits there is no reason to include recreational facilities in the project if the main purpose is to pump water from the river. In fact, it was noted by one Resident that except for water, there are no other desirable benefits for a majority of the residents of the Maidu Drive area. Many of the residents agreed with this point of view.

C
8. **INCREASED LITTER ON MAIDU DRIVE** has been noticed since the expansion of the PCWA facilities on Maidu Drive. Adding recreational parking facilities which means more traffic, will more than likely increase litter. What agency will pick up the litter on Maidu Drive since it is not part of the proposed ASRA recreational facility?

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.9, Fire Management.

E. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

L-175, pg. 3

F 9. **RIVER POLLUTION FROM VEHICLES IN PARKING LOTS** may occur especially during the Winter and Spring seasons. This is especially true for the lower 20 space parking lot that is very close to the river.

G 10. **RESIDENTS ALONG RIVERVIEW DRIVE ARE CONCERNED ABOUT INCREASED TRAFFIC FROM VEHICLES** taking short cuts to reach downtown or other parts of Auburn from Maidu Drive. Riverview Drive is currently plagued by through traffic, as many as 1000 vehicle trips per day. Many vehicles are traveling much faster than the residential speed limit. The draft EIS/EIR does not acknowledge or consider the affects of the proposed recreational traffic on local residential streets especially if the parking lots are full.

H 11. **PROPOSED PROJECT COST:** The weak national and state economies and the September 11th Event is straining federal and state budgets. It was noted by residents that yes we probably need the water, therefore the pumps, but the additional millions of dollars for reconstructing the river channel to pre-dam condition and adding recreational facilities cannot be justified, especially at this time in history.

I 12. **RECREATIONAL NOISE**: Although the EIS/EIR addresses construction project noise, IT DOES NOT REALLY ADDRESS RECREATIONAL NOISE, the primary concern of many residents as voiced at the meeting. The California Department of Parks and Recreation can attest to the fact that the river confluence area at Hwy. 49 has had noise problems especially with those playing drums. This is not a situation that residents in the Maidu Drive area wanting to experience. The residents north of Maidu Drive currently experience noise from the fairgrounds and downtown Auburn area and the PCWA service location. The EIS/EIR does not address the addition of potential recreational noise problems that more than likely will occur as result of allowing additional vehicles and humans into the river canyon.

J 13. **RECREATIONAL AREA PARKING ACCESS VIA MAIDU DRIVE IS BEING PROPOSED**. Most of the Residents were concern and upset regarding this choice of ingress/egress. When asked about Pacific Avenue as an access point, the Presenters responded that it would be MORE COSTLY to use that route. Also, the draft EIS/EIR on page 3-293 states that "to minimize traffic-related impacts to the future camping area near American River Canyon Overlook, construction traffic would avoid use of Pacific Avenue". Residents were surprised that deference was given to campers versus those living in the Maidu Drive neighborhoods. The Presenters were unable to successfully validate the choice of Maidu Drive versus Pacific Avenue which is already in a commercial area with no residential homes. Pacific Avenue also has Railhead Park and the Skateboard Park. Access to parking facilities via Pacific Avenue would solve many traffic, litter, noise and safety concerns.

Written comments and opinions regarding this project must be faxed or hand delivered to:

American River Pump Station Project
Draft EIR /EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825 Or Fax to: 916-286-0957

BY THE END OF THE BUSINESS DAY TUESDAY NOVEMBER 13, 2001

Due to the Veterans Holiday, we are planning to hand deliver responses from the neighborhood to make sure they are received on Tuesday, November 13 since their will be no mail delivery 11/12.

Please drop off your response to Ron Pinnick, 565 Riverview Drive by Tuesday Noon Nov. 13, 2001 OR call and we will pick up your response – 530-889-1202 – if you reach the recorder just leave your address and then place your response by your front door. We will make pick-ups once a day. Thanks for your support – Ron & Laura Pinnick

F. Please refer to Master Response 3.1.6, Public River Access Features.

G. Please refer to Master Response 3.1.6, Public River Access Features.

H. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel and Master Response 3.1.6, Public River Access Features.

I. Please refer to Master Response 3.1.6, Public River Access Features.

J. Please refer to Master Response 3.1.10, Project Access. It is noted that residences along Pacific Avenue have direct driveway access to the street, and have no fencing separating front yards from the street.

L-176

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	LINDA + LAURN LANGHOFER
ADDRESS:	4105 EAGLES NEST
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 823-6956
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A AS RESIDENTS OF FALCON'S POINT, WE ARE SADDENED TO THINK THAT OUR NEIGHBORHOOD MAY BE DRASTICALLY AND DETRIMENTALLY CHANGED BY YOUR PROPOSED PROJECT. WE WOULD APPROVE THE RESTORATION OF THE RIVER CHANNEL. BUT WE ARE EMPHATICALLY OPPOSED TO THE ADDITION OF ACCESS ROADS AND PARKING LOTS IN THE CANYON.

WE PURCHASED OUR HOME IN THIS NEIGHBORHOOD BECAUSE OF IT'S RELATIVE QUIETNESS, AND ACCESS TO THE EXISTING TRAILS INTO THE CANYON. WE THINK THAT THE ADDED AUTOMOBILE AND PEOPLE TRAFFIC WILL DETRIMENTALLY CHANGE THE CHARACTER AND SAFETY OF OUR NEIGHBORHOOD. WE ARE ALSO

B VERY CONCERNED ABOUT THE INCREASED WILD FIRE THREAT THAT WOULD BE CAUSED BY THE INCREASE OF PEOPLE IN THE CANYON.

PLEASE REJECT THE RECREATION AND PARKING FACILITIES PORTIONS OF YOUR PROJECT.

SINCERELY,

Laurn R. Langhofer + Linda Langhofer

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

L-177

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Lyle K. Young
ADDRESS:	11140 Wildwood Drive
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A Please use Pacific Ave. for the entrance Station for the American River restoration project.

B I live on Maidu Drive and already have too much traffic, noise and litter generated by PCWA. their vehichles travel very fast and create much noise and lose trash from the back of trucks etc., The trucks, tractors, trailers 24 hours a day are not conducive to a quiet neighborhood.

C To my knowledge there was no Environmental Impact study prior to PCWA Occupying the Bureau of Reclamation facilities which were built to house the dam Construction equipment and personell.

If the dam is not to be built, remove the buildings and restore our neighborhood.

L.K. Young

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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. The Proposed Project does not involve a change in use at the Reclamation buildings currently occupied by PCWA. No evaluation is required at this time.

L-178

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	DALE AND JUDITH HORTON
ADDRESS:	10095 SNOWY OWL WAY
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-6894
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

SEE ATTACHED

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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L-178, pg. 2

November 12, 2001

Draft EIS/EIR Comments
Surfaces Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: PCWA American River Pump Station and River Restoration Project

Dear Sirs:

We are opposed to the use of Maidu Drive for vehicular access during the construction phase of this project and for access to a new recreational parking facility for the following reasons:

A
1. Increased traffic on Maidu Drive and the resultant noise such traffic brings. The noise will be especially bad from construction vehicles and from large recreational vehicles.

2. Increased danger to foot traffic along Maidu Drive, particularly to children crossing Maidu Drive to and from school.

3. Excessive trash along Maidu Drive as a result of the increased traffic.

4. Greater danger to residents of the Maidu Drive neighborhood and to their property from the troublesome part of the wide range of people travelling to this new recreational facility.

B
5. Increased air pollution from the exhaust of all the new traffic both during and after construction.

C
6. Spillover of traffic onto the adjacent streets, e.g., Riverview Drive, Falcons Point and Snowy Owl Way, from the increased traffic on Maidu Drive, especially when the proposed parking facilities are full.

D
We strongly recommend that Pacific Avenue be carefully examined as an alternative to Maidu Drive for construction and future access to this project. It is felt that selection of Pacific Avenue would effectively remove the aforementioned concerns.

Very truly yours,

Dale W Horton
Dale W. Horton

Judith A Horton
Judith A. Horton

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. The Draft EIS/EIR evaluates potential air quality impacts due to construction and operation of the Proposed Project (3.15, Air Quality). Please also refer to Response L-3.C for an update to the project operations and public access evaluation.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.10, Project Access.

L-179

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Ward, Corinne
ADDRESS:	10005 Snowy Owl Way, Auburn, CA 95603
CITY/STATE/ZIP:	Auburn, CA. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530 - 888-1430
ORGANIZATION (IF APPLICABLE):	—

COMMENTS:

Opposed

I live on the Corner of Snowy Owl, Burlin and Maidu dr. at the entrance to Falcons Pt. Subdivision. I have lived here for the past 12 yrs. During that time, I have noticed the increase in use of Maidu dr. for traffic to Skyridge School, City vehicle trucks, and traffic to a number of new sub-divisions. There is also increased foot traffic by Children playing, riding bikes etc.. as well as runners on Maidu drive.

There is also litter (and weeds) which have increased at the Falcons Pt. Subdivision extrance on Maidu, which I personally have tried to clean upover these past years.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
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A. Please refer to Master Response 3.1.6, Public River Access Features.

L-180

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Howard M. Ward
ADDRESS:	10005 Snowy Owl Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I am opposed to using Maidue Dr. as the entrance to the ~~prosed~~ proposed Recreation & Parking Facilities because:

A 1. Maidue is used by 165± home sites, by parents of children attending Skyridge School when arriving & departing, by the equipment & trucks belonging to the City of Auburn.

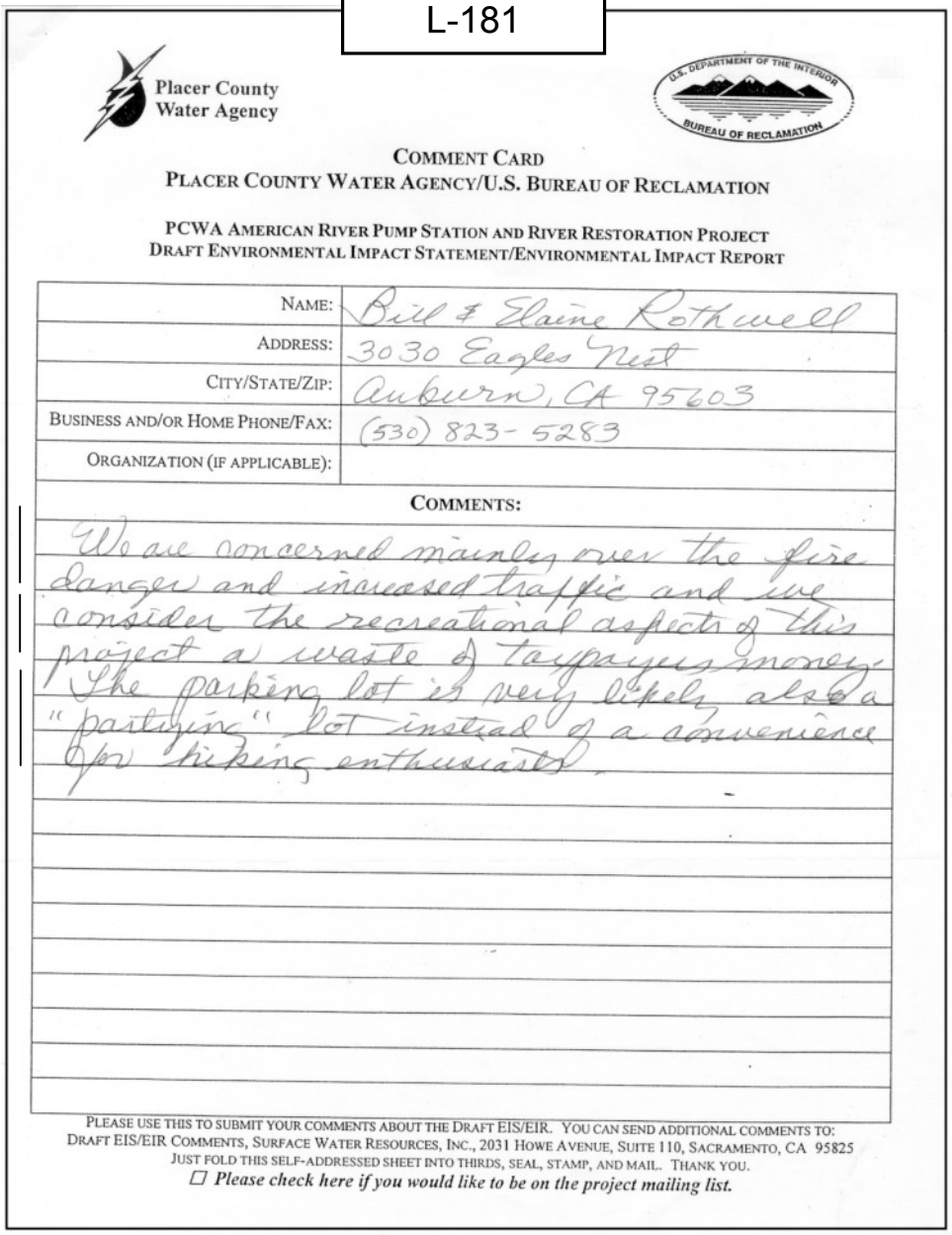
B 2. I believe Pacific Ave as the entrance should be evaluated.

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DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

L-181



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Bill & Elaine Rothwell
ADDRESS:	3030 Eagles Nest
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 823-5283
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A We are concerned mainly over the fire danger and increased traffic and we
B consider the recreational aspects of this project a waste of taxpayers money.
C The parking lot is very likely also a "partying" lot instead of a convenience for hiking enthusiasts.

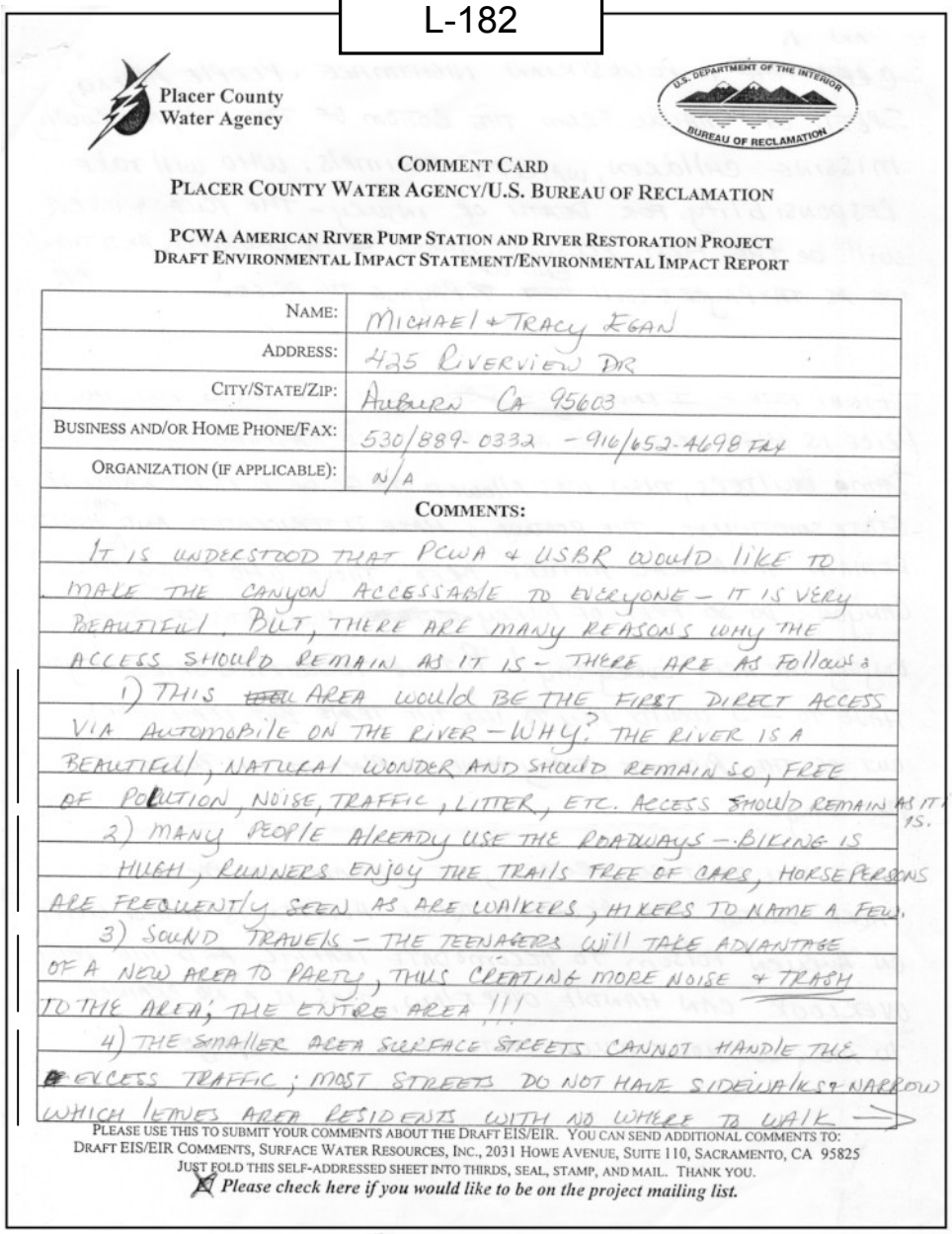
PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features. CDPR has not received any calls or complaints regarding activities near the Auburn Dam site entrance along Maidu Drive. Both the City of Auburn Police Department and Placer County Sheriff's Department patrol the area regularly and will continue to do so.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MICHAEL & TRACY EGAN
ADDRESS:	425 RIVERVIEW DR
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530/889-0332 - 916/652-4698 FAX
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

IT IS UNDERSTOOD THAT PCWA & USBR WOULD LIKE TO MAKE THE CANYON ACCESSABLE TO EVERYONE - IT IS VERY BEAUTIFUL. BUT, THERE ARE MANY REASONS WHY THE ACCESS SHOULD REMAIN AS IT IS - THERE ARE AS follows:

A 1) THIS ~~FREE~~ AREA would BE THE FIRST DIRECT ACCESS VIA AUTOMOBILE ON THE RIVER - WHY? THE RIVER IS A BEAUTIFUL, NATURAL WONDER AND SHOULD REMAIN SO, FREE OF POLLUTION, NOISE, TRAFFIC, LITTER, ETC. ACCESS ~~SHOULD~~ REMAIN AS IT IS.

B 2) MANY PEOPLE ALREADY USE THE ROADWAYS - BIKING IS HIGH, RUNNERS ENJOY THE TRAILS FREE OF CARS, HORSE PERSONS ARE FREQUENTLY SEEN AS ARE WALKERS, HIKERS TO NAME A FEW.

A 3) SOUND TRAVELS - THE TEENAGERS will TAKE ADVANTAGE OF A NEW AREA TO PARTY, THUS CREATING MORE NOISE & TRASH TO THE AREA; THE ENTIRE AREA !!!

C 4) THE SMALLER AREA SURFACE STREETS CANNOT HANDLE THE EXCESS TRAFFIC; MOST STREETS DO NOT HAVE SIDEWALKS & NARROW WHICH LEAVES AREA RESIDENTS WITH NO WHERE TO WALK →

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A. Please refer to Master Response 3.1.6, Public River Access Features.

B. These uses would continue to be permitted in the project area. The Proposed Project includes design features to minimize potential trail and roadway user conflicts. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features.

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C

CREATING A PEDESTRIAN NIGHTMARE. PEOPLE ALREADY SPEED UP MAIDU FROM THE BOTTOM OF THE HILL, NARROWLY MISSING CHILDREN, WALKERS + ANIMALS. WHO will take RESPONSIBILITY FOR DEATH OR INJURY - THE PCWA + USBR will be THE FIRST PERSONS NAMED ~~B~~ IN LAWSUITS, AND THEN WE AS TAXPAYERS will ~~HAVE~~ ~~TO~~ END UP PAYING THE PRICE.

D

FINAL NOTE - I KNOW YOU CAN'T FIGHT PROGRESS BUT THE PRICE IS HIGH HERE. THE AREA WAS ONCE RAVAGED BY THE DAM BUILDERS, THEN WAS ALLOWED TO GO BACK TO ITS NATURAL STATE SOMEWHAT. THE ROADWAYS HAVE DETERIORATED AND THIS SHOULD REMAIN A NATURAL NATURE AREA. THOSE WHO ENJOY THE CANYON, DO SO FREE OF WORRY. ~~BE THAT~~ HUNDREDS OF PEOPLE ENJOY THE AREA EVERY DAY! PUT UP PEDESTRIAN GATES IF YOU HAVE TO - I WOULD PAY TO USE THE TRAILS BUT LEAVE CARS OUT OF THE PICTURE; THEY HAVE NO PLACE AT THE BOTTOM OF THE CANYON.

E

IF YOU MUST GO FORWARD, THE ENTRANCE ON PACIFIC IS MORE SUITED FOR ACCESS. THERE ALREADY IS A STOPLIGHT ON AUBURN FOLSOM TO ACCOMODATE TRAFFIC AND THE DAM OVERLOOK CAN HANDLE OVERFLOW, THIS IS A "NO BRAINER" TO ME, WITHOUT MUCH COST TO US THE TAXPAYER.

D. Please refer to Master Response 3.1.5, Project Area River Restoration and Master Response 3.1.6, Public River Access Features.

E. Please refer to Master Response 3.1.10, Project Access.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Paul + Marti Magenheimer
ADDRESS:	1730 Vista Del Monte
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

We would like to express our concern about the PCWA American River Pump Station + River Restoration Project. We very strongly object to Maida Dr being the access road for the recreation users to get to the river. We have noticed a marked increase in traffic since the Placer County Water Agency has moved their office to Maida Drive. Adding recreational users traffic to our residential neighborhood is unacceptable.

A

We are concerned about the school children who have to cross Maida Dr to get to Skyridge School. People would start using Riverview Dr, through a residential neighborhood to reach Maida from town. There has been no research of alternative access, such as Pacific St + Hwy 49.

With the state economy being so bad we fel it will involve too much money to finance a recreational facility. We also think its not necessary to spend money to close the tunnel at this time.

B

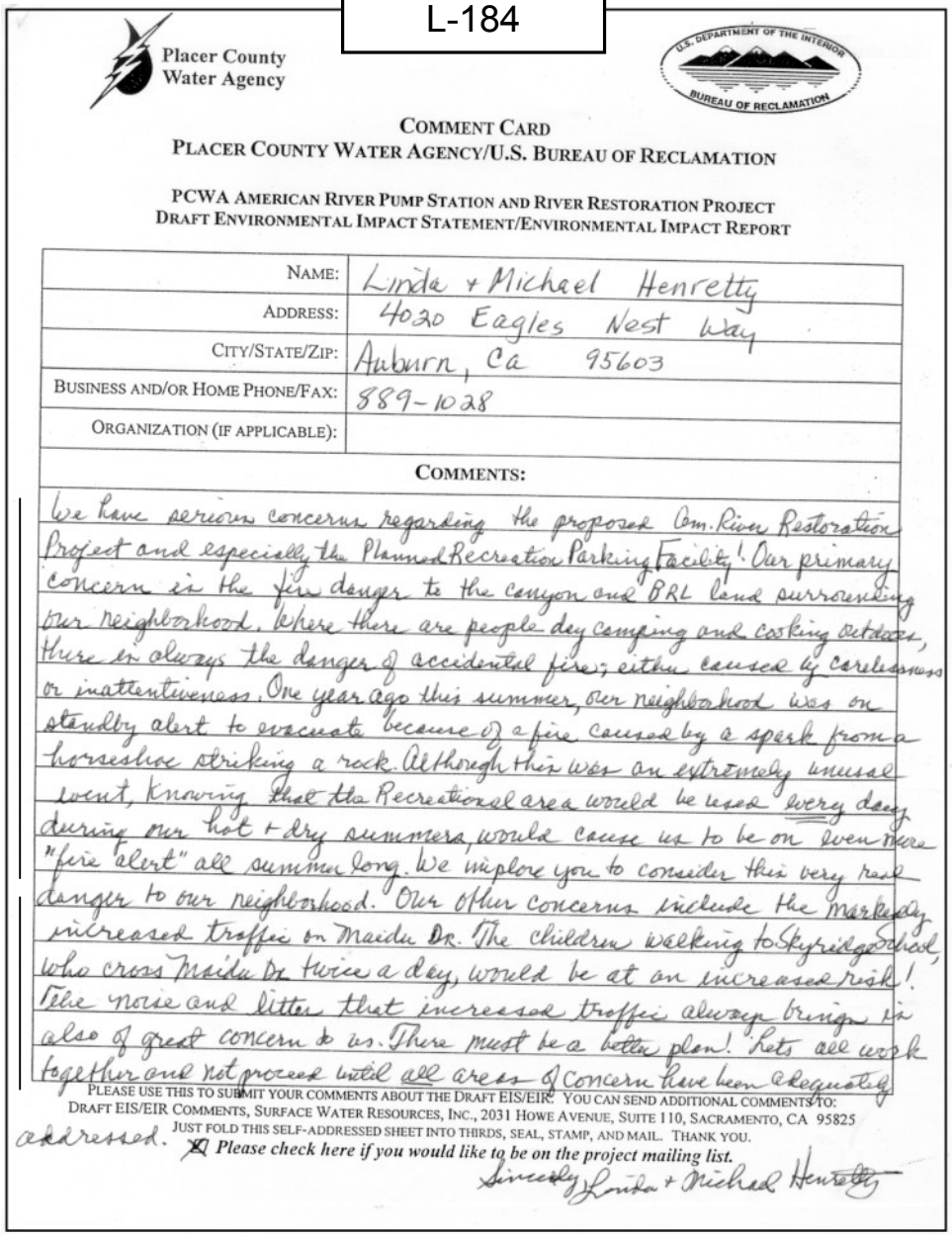
PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel and Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Linda + Michael Henretty
ADDRESS:	4020 Eagles Nest Way
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	889-1028
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

We have serious concerns regarding the proposed Am. River Restoration Project and especially the Planned Recreation Parking Facility! Our primary concern is the fire danger to the canyon and BRL land surrounding our neighborhood. Where there are people day camping and cooking outdoors, there is always the danger of accidental fire; either caused by carelessness or inattentiveness. One year ago this summer, our neighborhood was on standby alert to evacuate because of a fire caused by a spark from a horseshoe striking a rock. Although this was an extremely unusual event, knowing that the Recreational area would be used every day during our hot + dry summers, would cause us to be on even more "fire alert" all summer long. We implore you to consider this very real danger to our neighborhood. Our other concerns include the markedly increased traffic on Maidu Dr. The children walking to Skyridge School, who cross Maidu Dr twice a day, would be at an increased risk! The noise and litter that increased traffic always brings is also of great concern to us. There must be a better plan! Lets all work together and not proceed until all areas of concern have been adequately addressed.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

Sincerely Linda + Michael Henretty

A

B

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	DAVID HALBROOK
ADDRESS:	401 MAIDU DR
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530 885-3680
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A — I am very much opposed to providing vehicle access to the roads in the canyon below Maidu and Riverview Drives. The access roads should remain closed. Increased traffic, camping and other recreational uses will greatly increase noise polution. The trail along the Canal is already used by lots of people trespassing over private property. The easements for the canal were never intended for recreational uses but were intended only for access to transmit water and to maintain the canals.

B — There is extreme fire danger in this area already and nothing has been planned to decrease the fire danger. Howard Leal, the retiring fire chief has said on many occasions that an oakland type fire is inevitable in this area. It is not a matter of if but a matter of when according to Leal. As homeowners we have no ability (over)

C — [illegible]

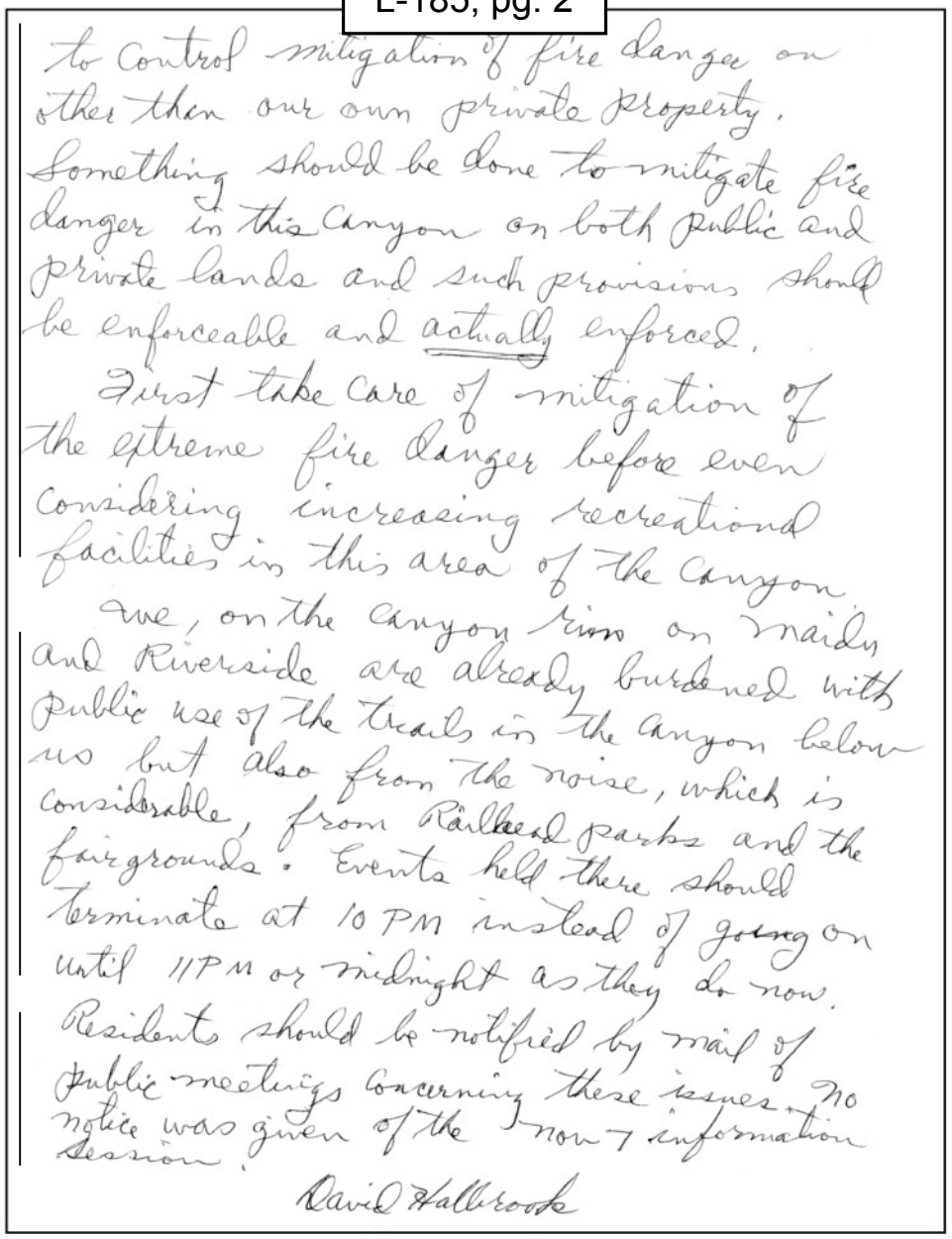
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A. Please refer to Master Response 3.1.6, Public River Access Features.

B. PCWA does not own the property, but, has access easements along the raw water conveyance canals throughout its service area. Some portions of these canals fall within the Auburn SRA and Reclamation/CDPR permit public use (hiking) along these paths. PCWA reports receiving only about three calls per year from landowners concerned about public use on private lands.

C. Please refer to Master Response 3.1.9, Fire Management.

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to control mitigation of fire danger on other than our own private property. Something should be done to mitigate fire danger in this canyon on both public and private lands and such provisions should be enforceable and actually enforced.

C

First take care of mitigation of the extreme fire danger before even considering increasing recreational facilities in this area of the canyon.

We, on the canyon rim on Maidu and Riverside are already burdened with public use of the trails in the canyon below us but also from the noise, which is considerable, from Railhead parks and the fairgrounds. Events held there should terminate at 10 PM instead of going on until 11PM or midnight as they do now.

D

Residents should be notified by mail of public meetings concerning these issues. No notice was given of the now 7 information session.

E

David Hallbrook

D. Please refer to Master Response 3.1.6, Public River Access Features for discussion of project-related noise. Noise issues arising from events held at Railhead Park and the fairgrounds exceed the boundaries and jurisdiction of this project and the matter should be referred to city or county officials.

E. The lead agencies have provided public notice of meetings and environmental documentation availability as required by CEQA and NEPA. Please refer to Response L-95.A.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	John A Mark
ADDRESS:	395 Riverview Dr.
CITY/STATE/ZIP:	Auburn, Ca.
BUSINESS AND/OR HOME PHONE/FAX:	8856064
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

The recomendation that a Parking Lot For Trucks & buses For Rafting & other Facilities is bad. It is a purely a lucrative business venture, It is not The P.C.W.A's Function To Provide Funds & Land For business Purposes. As For Potential income For Auburn That is nonsense. The Rafting co. originate in Eldorado Cnty, And The income will surely go back To Eldorado county & unless of course some benefits should find Their way back To some officials by way of Gifts or soft campaign Funds If The Canyon was so beautiful That Millions of Dollors of Tax Payers Money is To be spent on Diverting The river, & restoration of The American river To its original image. What is The rationalization & allowing unruly conglomeration of old Trucks buses & hundreds of Turists, Many of Them, Drunck milling about in Auburn's Canyon? Let Them build it Somewhere on The Eldorado or Sacramento side.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.6, Public River Access Features. CDPR is not proposing or permitting commercial rafting use in this section of the river, as part of this project. It also is noted that CDPR would prohibit alcohol in the area.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	GEORGE COLT
ADDRESS:	1665 VISTA DEL LAGO, ~~AUBURN~~
CITY/STATE/ZIP:	Auburn
BUSINESS AND/OR HOME PHONE/FAX:	916-773-6636
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A 1. WHAT IS POTENTIAL FOR INCREASED FIRE EXPOSURE?
B 2. INTERSECTION MAIDU RD/AUBURN FOLSOM - LEFT TURN OUT TO AUBURN/FOLSOM CURRENTLY PROBLEM DURING COMMUTE HOURS - WHAT IMPACT WILL PROJECT HAVE ON THE INTERSECTION?
C 3. ARE WE TRACKING 210 TRIPS PER DAY? - WHAT HOURS?
D 4. WHAT ARE PRO'S AND CON'S OF PACIFIC VS MAIDU ACCESS?
E 5. WHO DID THE EIR?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
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A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features. The City of Auburn will install a traffic signal at the Maidu Drive/Auburn-Folsom Road intersection later this year (2002).

C. Please refer to Master Response 3.1.6, Public River Access Features. The lead agencies, in consultation with CDPR, have reduced the total number of parking spaces at the project site from 70 to 53. This change results in an estimated peak value of 206 river-related trips to the project site. Specific hours of operation have not been determined; however, it is anticipated that the area would have limited and seasonal hours tied to boating uses through the area.

D. Please refer to Master Response 3.1.10, Project Access.

E. Chapter 5 of the Draft EIS/EIR lists the agencies and companies involved in preparation of the EIS/EIR and supporting documentation.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Gerald & Muriel Del Agostino
ADDRESS:	165 River View Drive
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	885-1266
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A The apparent goal of this project was to restore the river channel to its original course and construct a new pump station for PCWA.

B There is no need or apparent reason to build any recreational facilities which were not there before. These would only bring additional trash along access roads and greatly increase fire danger. For some reason the existing pump station which is noisy to those of us living along River View Drive, was not addressed. Will the new pump station be louder and carry up to the homes? There must be a way to eliminate

C this frustrating ~~noi~~ noise when the new pump station is to be built. As far as we are concerned, we would prefer to have this entire project cancelled!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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☑ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Hanna Wilfley
ADDRESS:	10100 Snowy Oak Way
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-889-1253
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I acknowledge the need for the proposed pumping station, and the desire to return the river to its natural state.

B However: opening the recreation site to parking lots and creating an access road through / existing residential areas is not "returning to a natural state."

C Those improvements create real problems for those residents who have invested in homes here. Our families would be put in jeopardy.

D Our property is in increased personal danger from an up-slope fire with every increase in the number of people who have access to the area below us.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Comment noted.

B. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.9, Fire Management.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Beverlee Holm
ADDRESS:	540 Riverview Dr.
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-8054
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A As a home owner in this area I have two, I believe, serious objections to this project. One, Maidu Dr. is busy enough with residents and Sky Ridge School. It is not equipted to accomidate the amount of traffic this would generate. Two, the danger of fire. Maidu Dr. was closed to all but emergency vecicles last year due to the fire below Folsoms Point. I sincerely hope

B these problems and others have been taken into consideration.

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☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

L-191

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	BETTY BROUGHER
ADDRESS:	1755 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530.823.5151
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I think you should consider the entrance at Pacific street. for the following reasons:

A Maidu would become dangerous (a) for the school children, (b) increase traffic load, (c) increase pollution, (d) easy access for transients and homeless to live and or sleep there (e) would increase the insecurity of the home owners.

B I DEFINATELY OPPOSE THE MAIDU ENTRANCE!!!

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☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

L-192

Steven L. Hiatt P.E.
545 Riverview Drive
Auburn, CA 95603

November 9, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

SUBJECT: American River Pump Station Project - Draft EIS/EIR Comments

To whom it may concern:

As a resident off Maidu Drive in Auburn, I am particularly interested in the upcoming PCWA American River Pump Station project. My family and I have lived in Auburn for over twelve years and believe that this project, as described in the Draft EIS/EIR, will have both positive and negative impacts on our lifestyle.

A I have obtained and read a Draft EIR/EIS as well as the two volumes of appendices. I also attended the Public Hearing on October 11, 2001, and the Maidu Drive informational meeting on November 7, 2001.

In general, I am in favor of the proposed Mid-Channel diversion alternative and the three specific items identified as the project purpose: 1) to provide a pump station to convey Middle Fork Project waters; 2) to eliminate safety issues associated with the existing bypass tunnel; 3) to restore the river channel. However, there are elements associated with the recreational aspects of restoring the river channel that I am opposed to and I believe need further study. In particular, I am against the idea of allowing vehicular traffic into the canyon other than PCWA maintenance crews, and emergency vehicles. I feel that items within the environmental document associated with transportation and circulation into the recreational area, and fire hazards within the canyon are not properly addressed. My comments under these two headings follow:

FIRE HAZARDS

B 1) I am amazed that Chapter 3.0, Affected Environment and Environmental Consequences, of the Draft EIR/EIS do not include a section on fire hazards. I believe that the increase in fire hazards due to increased public access into this area of the canyon is a SIGNIFIANT ENVIRONMENTAL CONSEQUENCE.

c:\hiatt\pcwa letter.doc

A. Project support noted.

B. The Draft EIS/EIR recognizes the potential for increased fire hazards associated with the Proposed Project. Please refer to Master Response 3.1.9, Fire Management.

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B

There are very few areas within the Draft EIR/EIS that comment on fire hazards due to the increased public use of the canyon. Since facts are not stated in the document, I can only assume that the increased fire risks are great! It was commented by Mike Lynch of the California Department of Parks and Recreation, at the November 7, 2001 informational meeting that the American River confluence area has a major fire every three to four years. Whereas the unpopulated reach of the canyon near the dam site experienced its first major fire last year, since about 1977. I interpret this to mean that the populated areas of the canyon experience fires about six to eight times as frequently as non-populated areas. This seems like a VERY SIGNIFICANT IMPACT to the homeowners in my neighborhood, who were just reminded of the local fire danger about a year ago.

Obviously, a method to minimize the fire hazard with this reach of the canyon is to eliminate public vehicular access into the recreational area. I request that public vehicular access into the canyon remain prohibited at the project site, just as it currently is. This action will help protect homeowners who live on the edge of the canyon from future fires.

2) A comprehensive fire prevention and suppression plan is to be completed prior too opening the area for public use, as stated in the environmental document. Since many activities will occur during construction that may result in increased fire hazards, it seems prudent that the fire prevention and suppression plan be completed and implemented prior to beginning construction. Of course, I assume that the local fire districts and CDF will be instrumental in preparing and implementing this comprehensive fire prevention and suppression plan.

TRANSPORTATION AND CIRCULATION

3) The proposed project is to create two entrances into the canyon, by either Maidu Drive or Pacific Avenue, as stated in the Draft EIR/EIS. Access to the Pump Station is to be through the Pacific Avenue entrance. I understand that this component of the project will require some new road construction from approximately the tunnel portal to the pump station. Public access to the river is currently thought to be via Maidu Drive. This access will also require some road construction.

C

I recommend, that if it is determined to allow public vehicular access into the canyon, that all access is through only one entrance at Pacific Street. Pacific Street currently has a lower Average Daily Traffic (ADT) than Maidu Drive, and is used to access several other recreational areas, such as Railhead Park, the Auburn Dam Overlook, the new skateboard park, the Western States 100 trail, and the future camping area near the American River Canyon Overlook. In addition, "residences exist along Maidu Drive but not along Pacific Avenue" (as per page 3-288 of the DEIR/DEIS). Therefore, there is a greater impact to Maidu Drive properties then to Pacific Avenue when considering access into the canyon.

In order to access the two proposed parking lots from a Pacific Avenue entrance, roadway improvements will be required at the location of the existing temporary roadway and the

C. Please refer to Master Response 3.1.10, Project Access.

L-192, pg. 3

C

Dam keyway. I understand that at this location, a substandard roadway width exists, as well as an unacceptable horizontal curve. Construction costs to improve this condition are minimal when compared to the $31 million project cost. Furthermore, this option will continue to hold the quality of life benefits of the residences off of Maidu Drive.

I request that if it is determined to allow public vehicular access into the canyon, the option of using only a Pacific Avenue entrance be further studied and reported on in the Final EIR/EIS. I also request that the Maidu Avenue access into the recreational area be eliminated from the Final EIR/EIS.

D

4) Section 3.14.2.5 Environmental Protection and Mitigation Measures, of the Draft EIR/EIS states that "Pacific Avenue would not be used for construction related traffic". This indicates that during the construction period, all traffic is to use the Maidu entrance. Because of the points presented in item 3 above, I am opposed to the use of Maidu Drive as a construction entrance to the project.

E

5) The Draft EIR/EIS states that the estimated vehicle trips per day into the recreation area are 210. This is based upon the use of 70 spaces with only half the spaces being used by two vehicles per day. My opinion is that this estimate on a peak recreational day is extremely low. It was even stated by Jim Micheaels, of the California Department of Parks and Recreation, at the November 7, 2001 informational meeting that this may be a low figure. The traffic data should be reanalyzed so that more accurate numbers can be reported on in the Final EIR/EIS.

Section 3.14.1.1 of the Draft EIR/EIS reports on ADT volumes for Highway 49, and the intersection of Auburn-Folsom Road and Maidu Drive. However, the document does not address what the current ADT is on Maidu Drive, nor is the Level of Service (LOS) reported on. With this in mind, how can the proponents of the project possibly state that the impact significance on Maidu Drive due to increased traffic levels is "Less than Significant"? It appears that not enough factual information is known. I request that this information be reported on in the Final EIR/EIS, and the option of using Maidu Drive as a vehicular entrance into the recreation area is removed.

If you should have any questions regarding my comments on the Draft EIR/EIS, please feel free to contact me. I also request that I be informed of any future public meetings on this project. Please send me a copy of the Final EIR/EIS, and a Record of Decision upon completion of those documents.

Sincerely,

Steven L. Hiatt P.E.

c:\hiatt\pcwa letter.doc

D. Please refer to Master Response 3.1.10, Project Access.

E. Please refer to Master Response 3.1.6, Public River Access Features.

L-193

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Bryan + Michelle Cooke
ADDRESS:	535 Riverview Drive
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	823-5498
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A We understand the need to put in a new pumping station, and your desire to return the river to its natural flow. However, using Marsh Drive as an entrance for a recreational area is not acceptable. There is another alternative for a finished entrance site with less impact to surrounding homes, on Pacific. It would be fine for the construction trucks to access the construction site via Marsh due to cost and the weight of the trucks, but Pacific should be used as the best alternative for light vehicle traffic as there would be considerably less of an impact on the residents. We do not wish to have a Douglas Blvd / Folsom Lake entrance problem in our community. Why not just use your money

B to make Rattlesnake Bar more user friendly?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-194

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Marianne E. Rose
ADDRESS:	1825 Vista Del Lago
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 889-1954
ORGANIZATION (IF APPLICABLE):	n/a

COMMENTS:

Having attended a meeting this past Wednesday night 11/7/01, listed are my main concerns regarding the proposed project "American River Restoration". There are many concerns, one is making this a recreation facility and having the entrance on Maidu Drive just below my home. The increase in traffic for one is not desirable, as they stated 70 cars will be allowed to park, but what about the ones who do not get in and park along Maidu Drive??

A

FIRE IS A BIG CONCERN.... Nothing has been done to this BLM land in 20 years. The underbrush is horrible. We are in eminent danger of a fire, and adding the public to this area, just makes it worse. A fire can come up the canyon and destroy this entire housing area. What is worse is the fact that there are not too many outlets if a fire does come up the canyon, so not only are we in danger to getting out, but so is the public all trying to get out on Maidu.

B

Then there is the problem of littering. Once you get a group of people in an area, there is debris. The rangers cannot keep our national parks how is one ranger going to keep this area from vandelism, or any other crime. Our homes are in danger.

C

No other alternative was recommended. Just Maidu. Why? There are other areas that could be considered, one being Pacifica street. There are no private homes in that area, not like it is off of Maidu.

D

Maidu drive is inadequate to accommodate that much traffic. There is a new housing development off of Maidu with 27 new homes, dumping

C

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.10, Project Access.

L-194, pg. 2

C | out on Maidu. Not to mention the Skyridge school. Little kids cross our streets everyday, it is a danger to them.

You cannot get out and make a left turn on Auburn Folsom Road. Think of the traffic on a weekend turning on Maidu to go to this facility.

E | Why when we have the Folsom Dam so close by do we need public facilities in our neighborhood. The lobbyists from the rafters ~~much~~ must have put up a lot of bucks to push this through.

And who will be responsible to police the area if this is a Federal area???

I feel you can do a better job of relocating this idea. I am definitely against it and will be writing my congressman, senator, etc.

Sincerely,

Marianne E Rose

Marianne E. Rose
1825 Vista Del Lago
Auburn, Ca 95603

E. Please refer to Master Response 3.1.6, Public River Access Features.

L-195

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Linda Simpson
ADDRESS:	11220 Rosemary Dr.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-889-9269
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A The addition of recreational parking essentially changes a quiet suburban neighborhood into a thoroughfare for a commercial zone. A projected vehicle increase of over 310 trips per day is a whopping 10-15% - more than just statistically significant. Considering the number of children and others crossing Maidu + walking or biking in the area, we would certainly be opposed to an increase in traffic and presence of outsiders.

B It is in everyone's best interest to use the established route on Pacific St. I would not be too concerned about campers in that area being disturbed by traffic noise - I imagine that many of them would be those very persons driving through our neighborhood to find access there. Perhaps having everyone in that proximity would make oversight and clean up more effective and less costly for all citizens.

C

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features. CDPR is not proposing or permitting commercial rafting use in this section of the river, as part of this project.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

L-196

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Eugene F HANSEN
ADDRESS:	445 Riverview Dr
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530 885 4856
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — (1) The Neighbor impact information packet of which you should have a copy certainly lays the issues on the line. They are absolutely correct and I support them.

(2) A factor neglected is that in the 1960s original proposal for a bridge not considered here & will increase traffic unaccounted.

B — (3) the loud voices for Save our Canyon are probably a small local minority OVERLOOKing the advantages of a lake to have more recreation available to MORE people than a Canyon which older or infirm find it difficult.

C — (4) I fear camping in a residential area is just asking for problems.

(5) SAVE OUR BeautiFul TOWN.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ *Please check here if you would like to be on the project mailing list.*

A. Comment noted.

B. Comment noted.

C. The Proposed Project would not include any provisions for overnight parking or camping. Please refer to Master Response 3.1.6, Public River Access Features.

L-197

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Jill Sweeney
ADDRESS:	580 Perkins Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	925.875.1887 fax 530.885.6786 phone
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — We live on the corner of Maidu and Berlin, We are against the proposed use of Maidu as an access road for the American River restoration project and park facility in the Canyon below our neighborhood. The increase in traffic behind our home would make the noise level unbearable and the increase in air pollution is a health concern to my family. We have two small children who attend Skyridge elementary and the increase in traffic is a serious safety risk to our children. We do not want to

B — See an increase in litter and river pollution from all of the tourist that will be traveling to the park. We would like to see Pacific Ave

C — used as the access point.

jillsweeney

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

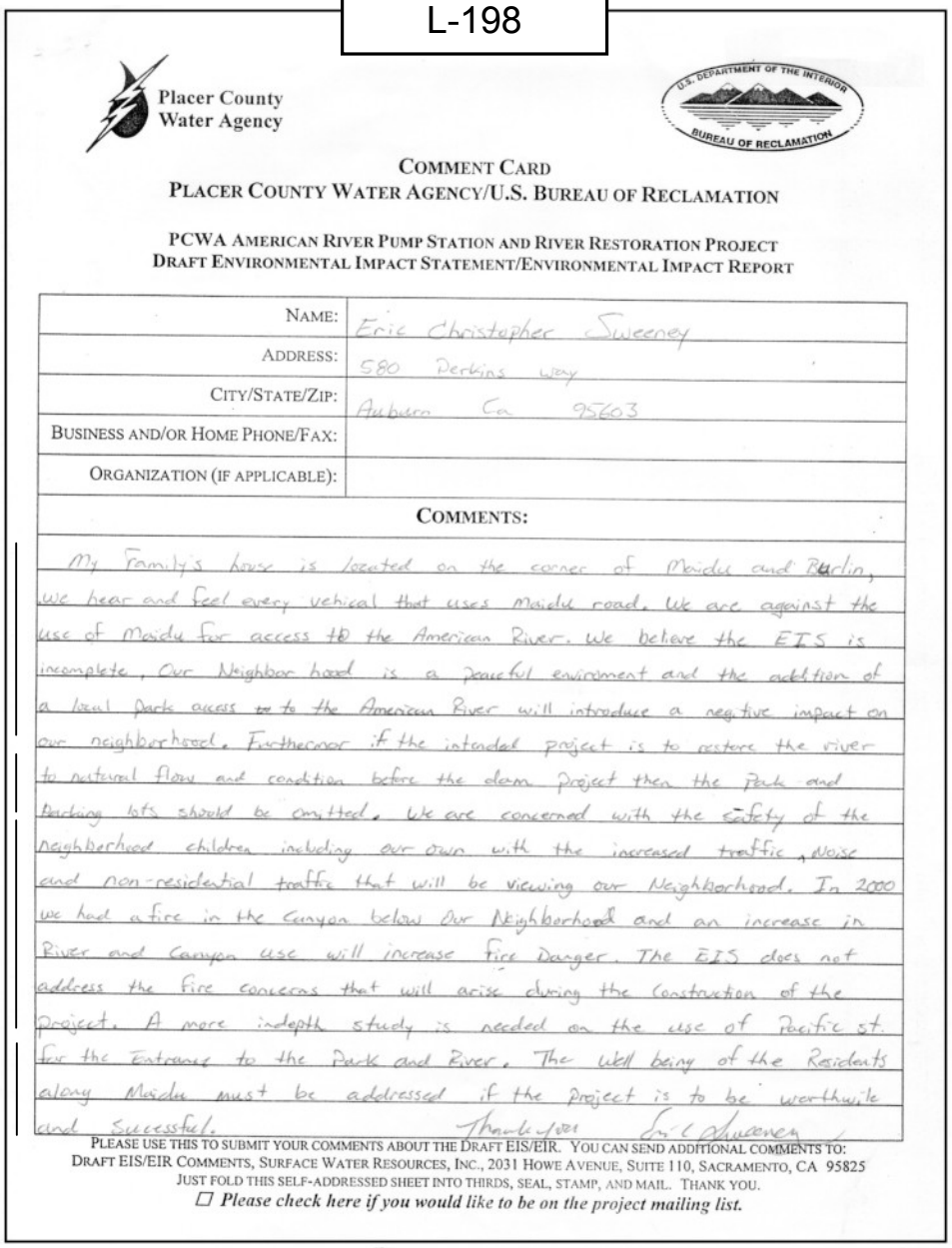
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

L-198



Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Eric Christopher Sweeney
ADDRESS:	580 Perkins Way
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — My Family's house is located on the corner of Maidu and Berlin, we hear and feel every vehical that uses Maidu road. We are against the use of Maidu for access to the American River. We believe the EIS is incomplete. Our Neighborhood is a peaceful enviroment and the addition of a local parks access to the American River will introduce a negitive impact on our neighborhood. Furthermore if the intendal project is to restore the river

B — to natural flow and condition before the dam project then the Park and parking lots should be omitted.

C — We are concerned with the safety of the neighborhood children including our own with the increased traffic, Noise and non-residential traffic that will be viewing our Neighborhood. In 2000 we had a fire in the Canyon below Our Neighborhood and an increase in River and Canyon use will increase fire Danger. The EIS does not address the fire concerns that will arise during the Construction of the project. A more indepth study is needed on the use of Pacific st.

D — for the Entrance to the Park and River. The well being of the Residents along Maidu must be addressed if the project is to be worthwile and successful.

Thank you Eric Sweeney

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.9, Fire Management.

D. Please refer to Master Response 3.1.10, Project Access.

L-199

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	RANDY AND KATHRYN RICE
ADDRESS:	4130 EAGLES NEST
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 889-4314
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

(WHEN ECONOMICALLY FEASIBLE-NOT NOW)
WE ARE 100% FOR THE PUMPSTATION + RIVER RESTORATION.
WE ARE 100% AGAINST RECREATIONAL PARKING FACILITIES BEING AT THE BOTTOM OF MAIDU DR. WHY WOULD THAT EVEN BE CONSIDERED WHEN SUCH EXISTS ALREADY AT THE FORMER DAM OVERLOOK SITE? THAT AREA IS ALREADY A RECREATIONAL AREA — RAILHEAD PARK, SKATE BOARD PARK, HORSE TRAIL ACCESS + PARKING, THE GOLD COUNTRY FAIRGROUNDS — THESE EXIST THERE + ADDING BETTER RIVER ACCESS THERE MAKES SENSE + IS MORE COST EFFECTIVE. PATHS EXIST, ROADS EXIST — TO US THIS IS A "NO BRAINER" DECISION. ADDITIONALLY, WE DON'T SEE HOW IT CAN BE "MORE COST EFFECTIVE" TO START ANEW AT THE BOTTOM OF MAIDU. ALL OF THE CONCERNS ADDRESSED AT THE NOV 7TH MEETING ARE VALID, JUST AND REAL. TO CONSIDER THIS PATH IS A TRAVESTY — TO PROCEDE AMID VERY ARTICULATE AND JUST CONCERNS WOULD BE A TRANSGRESSION.

Randy W Rice Kathryn A Rice

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

A

A. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

L-200

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dawn Andrade
ADDRESS:	520 Perkins Way
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-889-0211
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A Maidu Dr is currently a two-lane road. The traffic it receives from Skyridge school currently is not even adequate to handle at this time. Any additional traffic would hinder school bus schedules as well place a risk of pedestrian injuries. Should a traffic accident occur, the road would be gridlocked. Consequently, as volumes of cars increase, parents will resort to getting to school thru our residential backstreets creating more problems. A new subdivision of homes at the corner of Shirland Tract and Maidu is underway. What about this additional population added?

B If this takes place, a traffic signal would most definitely need to be placed at the corner of Maidu & Auburn Folsom Rd I thought

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. The City of Auburn has plans to install a traffic signal at the Maidu Drive/Auburn-Folsom Road intersection later this year (2002).

L-200, pg. 2

C

the city of Auburn did not want the Auburn Dam due to increased population issues such as this. Isn't this defeating the purpose. Mardo road (at the top) has been closed since the 70's when the Auburn Dam was halted. What is the reasoning all of a sudden to open it up after all this time and what are the advantages/ improvements it will make to our local community.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-201

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	RITA + JOE KRAYNIK
ADDRESS:	1735 FOXRIDGE CIRCLE
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A AGAINST ACCESS DOWN MAIDU DRIVE, ALREADY TOO MUCH TRAFFIC CONGESTION.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-202

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	David Ryan
ADDRESS:	11155 Rosemary Drive
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-5820
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A — I object to road access and parking lots of the proposed Restoration Project. Maidu drive is a neighborhood road which primarily serves Sky ridge Elementary School. It is negligent to direct traffic along this school access route. The use of Pacific Avenue is an obvious choice for the construction project.

B — Parking lots are an eyesore and a source of pollution.

A — Automobile access will bring trash, noise, and danger to the river.

C — Restoring the river to its natural beauty is a good idea. Increasing traffic, noise and pollution by building parking lots is only detrimental to the river ecosystem.

D — The increased access will also increase fire danger and adversely affect security in the surrounding neighborhoods. Please do not build parking lots and do not use Maidu Drive.

E — Your plan is flawed and you have not actively asked for public input. STOP!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.6, Public River Access Features. The Proposed Project design includes extensive environmental protection measures to minimize and avoid impacts.

D. Please refer to Master Response 3.1.9, Fire Management.

E. Please refer to Response L-95.A

L-203

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	RON PINNICK
ADDRESS:	565 RIVERVIEW DR.
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-889-1202
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

PLEASE SEE ATTACHED.

THANKS!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ ***Please check here if you would like to be on the project mailing list.***

L-203, pg. 2

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825

I would like to call your attention to concerns I share with many other Auburn residents regarding the proposed PCWA American River Pump Station Project.

I recognize and agree with the primary purpose of the project which is to install permanent pumps in the American River.

However, I am really concerned about the proposed recreational parking facilities and the use and impact on Maidu Drive as the main access route.

I strongly feel that the many impacts on the surrounding residential neighborhoods will negatively alter our quality of life as we know it today and have for many years.

I believe that the impacts on the Maidu Drive neighborhoods has not been adequately considered and deserve further review.

Please review the following attached concerns.

Responses to my concerns will be very much appreciated.

Regards,

Ron Pinnick
565 Riverview Drive
Auburn, CA 95603

530-889-1202

Detailed comments labeled on following pages.

L-203, pg. 3

A

1. If the intent of the project is to restore the river to it its historic pre-dam channel and pump water, WHY IS IT NOW NECESSARY TO INCLUDE ROADS AND PARKING FOR RECREATIONAL USAGE? Please respond as to how and why recreational facilities are important to this project.

B

2. INCREASED VEHICLE TRIPS BEYOND WHAT THE EIS/EIR IS PREDICTING. The EIR contends that at peak recreational use there will be an increase of 210 vehicle trips in addition to the 1500-2000 vehicle trips per day that the City of Auburn Traffic Engineering study states. I feel that the Auburn Traffic Engineering study for Maidu Drive is on the low side and that ANY additional traffic is traffic we don't need. Has an EIR been drafted for the current PCWA service location on Maidu Drive?

   IF THE PARKING LOTS ARE FULL, visitors will be turned away at the proposed manned gate on Maidu Drive. This means that vehicles will either continue on and end up on Riverview Drive or turn around and return to Auburn- Folsom Road and that Maidu Drive will end up with many more vehicle trips than the current draft EIS/EIR is suggesting. Please respond as to how these traffic concerns would be mitigated.

C

3. SCHOOL CHILDREN SAFETY CONCERNS for the Maidu Drive Area. Children from residences on the south side of Maidu Drive must cross Maidu to reach the Skyridge school and then return home. Increased traffic during construction of at least 35 to 70 additional vehicle trips per day will expose school children to unwanted and unneeded danger. After construction, anticipated recreational vehicle trips could reach 210 per day per the EIS/EIR in addition to the 1500-2000 trips Maidu Drive currently experiences. Please respond as to how school children safety will be maintained under increased traffic conditions. An alternate access location such as Pacific Avenue would be a better solution.

D

4. INCREASED FIRE DANGER to homes that border the canyon as a result of increased human and vehicle activity down in the canyon. There is no current plan in place that would protect homes as result of increased human recreational activity in the canyon. A fire plan is in the planning stages but would not be put into effect until after Pump Station construction is finished. I feel that a fire plan should be activated at the beginning of construction and that ELIMINATION OF PROPOSED RECREATIONAL FACILITIES WOULD BE THE BEST APPROACH TO FIRE PROTECTION FOR HOMES. Please provide detailed fire prevention measures that can be shared with other homeowners.

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.9, Fire Management.

L-203, pg. 4

C

5. CRIME - HOMEOWNER AND PERSONAL SAFETY AND SECURITY from undesirables that the recreation and parking facilities will likely draw. The EIS/EIR does not appear to have any response for this issue although the Park Ranger did review situations and frequency of occurrences that could happen, vandalism being the most prominent. For the most part, Maidu Drive neighborhoods have experienced peaceful living for several years. Opening the proposed section of the river to recreational use could and probably will open the door to an increase of people problems. Please respond to how safety and security would be managed and by whom.

E

6. IS THERE ANY TECHNICAL LINK BETWEEN THE PLANNED RECEATIONAL PARKING FACILITIES AND THE CONSTRUCTION OF THE PUMP STATION? The answer that I heard was NO. Why then does the PCWA Pump Station project include recreational parking facilities? It is not clear from the EIS/EIR as to HOW RECREATIONAL PARKING FACILITIES GOT INTERTWINED WITH A WATER ENTITLEMENT PROJECT. Please explain how the EIS/EIR process concluded that recreation access should be part of the project.

C

7. INCREASED LITTER ON MAIDU DRIVE has been noticed since the expansion of the current PCWA service facilities on Madiu Drive. Adding recreational parking facilities in the canyon or anywhere, which means more vehicle traffic, will more than likely increase roadside litter. What agency will be responsible for picking up the litter on Maidu Drive since it is not part of the proposed ASRA recreational facility? Please respond.

F

8. RIVER POLLUTION FROM VEHICLES IN PARKING LOTS may occur especially during the Winter and Spring seasons. This is especially true for the lower 20 space parking lot that is very close to the river. Please respond as to the methods or engineering design elements that will be used to protect the river from oil and other vehicular pollution.

C

9. RESIDENTS ALONG RIVERVIEW DRIVE ARE CONCERNED ABOUT INCREASED TRAFFIC FROM VEHICLES taking short cuts to reach downtown or other parts of Auburn from Maidu Drive. Riverview Drive is currently experiencing as many as 1000 vehicle trips per day. Many vehicles are traveling much faster than the residential speed limit. The draft EIS/EIR does not acknowledge or consider the affects of the proposed recreational traffic on local residential streets especially if the parking lots are full and vehicles are to be turned away at the Maidu gate entrance. How will parking overflow traffic be managed so as not to flood local residential streets? Please respond as to what the recreational traffic management plan is for Maidu Drive and local residential streets and what agencies will be involved.

E. Please refer to Master Response 3.1.6, Public River Access Features.

F. Please refer to Master Response 3.1.6, Public River Access Features.

L-203, pg. 5

G

10. PROPOSED PROJECT COST: The weak national and state economies and the September 11th Event is straining federal, state and local government budgets. I can understand the need for pumping water, therefore the need for pumps. However, the additional millions of dollars for reconstructing the river channel to pre-dam condition and adding recreational facilities does not seem like a good use of taxpayers money, especially at this time in history. Please respond as to why the PCWA feels that the less expensive Upstream Diversion Alternative is not acceptable for its future water supply responsibilities.

H

11. RECREATIONAL NOISE: Although the EIS/EIR addresses construction project noise, IT DOES NOT REALLY ADDRESS RECREATIONAL NOISE, the primary concern of many residents as voiced at the meeting. The California Department of Parks and Recreation can attest to the fact that the river confluence area at Hwy. 49 has had noise problems especially with those playing drums. This is not a situation that I want to experience in my neighborhood. We currently experience noise from the fairgrounds and downtown Auburn area and the PCWA service location. The EIS/EIR does not address the addition of potential recreational noise problems that more than likely will occur as result of allowing additional vehicles and humans into the river canyon. Please respond as to how the sponsoring agencies intend to keep our neighborhood as it is today.

I

12. RECREATIONAL AREA PARKING ACCESS VIA MAIDU DRIVE IS BEING PROPOSED. I am concerned regarding this choice of ingress/egress. PACIFIC AVENUE as an access point should be reconsidered. The draft EIS/EIR on page 3-293 states that "to minimize traffic-related impacts to the future camping area near American River Canyon Overlook, construction traffic would avoid use of Pacific Avenue". I was surprised to learn that deference was given to campers versus residents living in the Maidu Drive and Riverview Drive neighborhoods. Pacific Avenue is already in a commercial area with no residential homes. Pacific Avenue also has Railhead Park and the Skateboard Park. Access to parking facilities via Pacific Avenue would solve many traffic, litter, noise, and safety concerns in an established residential neighborhood.

J

13. PROPERTY DEVALUATION: I am really concerned about this issue. I moved to this location in Auburn 8 years ago because it was near open space and away from state parks and commercial activity. Now I find out that a state park facility is being proposed that will certainly make this a less desirable neighborhood and push our property values down. I have reviewed the draft EIS/EIR which does not seem to address this issue. Please respond to: How do the lead sponsors and agencies intend to protect our property values?

K

14. What precedence is there for leading traffic through existing residential neighborhoods for the purpose of State Park access?

L

15. What other studies are available for review and what other information is being prepared for public review regarding this project?

G. Please refer to Master Response 3.1.2, American River Pump Station Project Funding. It is noted that while the Upstream Diversion Alternative would meet PCWA's primary project objective to obtain reliable, year-round access to its Middle Fork American River Project water entitlements, this alternative would not meet Reclamation's project objectives to respond to the California State Attorney General's request of the federal government that the Auburn Dam bypass tunnel be closed to address public health and safety concerns and a return of all pre-Auburn Dam construction beneficial uses to the North Fork American River. Please also refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel and Response L-103.C.

H. Please refer to Master Response 3.1.6, Public River Access Features.

I. Please refer to Master Response 3.1.10, Project Access.

J. Please refer to Master Response 3.1.6, Public River Access Features.

K. Please refer to Master Response 3.1.6, Public River Access Features.

L. The American River Pump Station Project Draft EIS/EIR is the first project document prepared and circulated for public review; however, other planning studies and materials also are available for viewing at either PCWA or Reclamation offices. Interested members of the public may contact the lead agencies at the addresses listed below if they wish to make general inquiries or requests pertaining to the availability of any additional project information and planning materials.

Placer County Water Agency
144 Ferguson Road
Auburn, CA 95604
(530) 823-4882

U.S. Bureau of Reclamation
7794 Folsom Dam Road
Folsom, CA 95630
(916) 988-1707

The Final EIS/EIR was distributed to all responsible and trustee agencies and a notice of its availability was provided to all agencies, individuals, and interest groups who commented on the Draft EIS/EIR.

L-204

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

JOSEPH L. DYE NAME:	JOSEPH L. DYE
1470 BUCKEYE CT. ADDRESS:	1470 BUCKEYE CT
AUBURN. CA 95603 CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530/885-1110
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

I AM VERY SORRY THAT I MISSED THE MEETING WHICH TOOK PLACE ON NOVEMBER 7TH. WELL, HERE WE GO AGAIN. THIS REALLY UPSETS ME AND MOST ALL OF MY NEIGHBORS. WE HAVE BEEN LIVING HERE FOR THE PAST SIXTEEN YEARS, AND GOOD OLD MAIDU DRIVE IS STILL TAKING A BEATING WITH VERY HEAVY TRAFFIC DUE TO SEVERAL NEW HOMES. TWENTY TWO ADDITIONAL HOMES ARE NOW BEING PLANNED AT MAIDU AND SHIRLAND TRACK. IT SEEMS TO ME THAT RESTORATION PROJECT AND REC. PARK HAVE COME ABOUT WITH ABSOLUTELY NO CONSIDERATION OF THE RESIDENTS IN THE AREA. TO ME, THAT'S AN INVASION OF PERSONAL PROPERTY RIGHTS WITHOUT ANY KIND OF VOTE. I SUGGEST GETTING MAIDU DRIVE OUT OF THE PICTURE ALTOGETHER AND USE THE PUMP STATION (YES, WE CAN USE THAT) BUT I DO NOT FEEL WE NEED A RECREATION FACILITY AT THIS TIME. IF WHOEVER IS RESPONSIBLE FOR THE PROJECT INSISTS ON USING MAIDU DRIVE AS A MAIN THOROUGHFARE, THEN IT WOULD BE ONLY FAIR TO HAVE NOISE ABATEMENT WALLS CONSTRUCTED EIGHT TO TEN FEET HIGH ON BOTH SIDES OF THE ROAD FROM OLD AUBURN FOLSOM ROAD UP TO THE ENTRANCE OF THE PARK OR PUMP STATION.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-205

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	FRANK STEVENSON
ADDRESS:	570 RIVERVIEW DR.
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I DEFINITELY FEEL THAT THIS WILL HAVE AN ADVERSE IMPACT ON MY NEIGHBORHOOD. THE INCREASE IN TRAFFIC WILL POSE AN ADDITIONAL THREAT TO THE SCHOOL CHILDREN. I AM NOT FONY OF THE FACT THAT ADDITIONAL TRAFFIC MEANS MORE EXPOSURE TO VANDALISM, ETC FOR THE NEIGHBORHOOD.

I AGREE WITH THE STATEMENT THAT "EXCEPT FOR THE WATER, THERE ARE NO DESIRABLE BENEFITS FOR THE RESIDENTS IN THIS AREA"

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-206

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	KARL + ROSEMARY DREHER
ADDRESS:	1775 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-3321
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

SEE ATTACHED

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

Please see specific comments (D through H on following page).

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.6, Public River Access Features. The roads to the river access and pump station facilities would be improved as part of the Proposed Project.

L-206, pg. 2

In review of the PCWA American River Pump Station Project, draft EIR/EIS, August 2001, SCH# 1999062089 we have the following comments:

1. We have no objection to the proposed water distribution portion of the project, just the proposed recreational usage.

A 2. Recreational access is sufficient now and does not need to be increased.

B 3. Access should be provided for emergency purposes and can better be provided at other locations (i.e. between Railhead Park and the old Auburn Dam Overlook from Pacific Ave.). There are access roads available from this location and the road provided better access to the general community. Intersections and other traffic controlling facilities are currently available. The Railhead and overlook provide good staging areas for the canyon entrance in that area.

C 4. The existing roads from Maidu Dr. to the proposed parking lots is narrow, winding and does not meet current standards.

D 5. Who will patrol and maintain the proposed parking facilities, roads, provide restroom, etc./ for the proposed recreational facilities? How will use be kept to 70 vehicles when people will park on the roads (as is done is other areas, like the confluence) creating over use, congestion and hazardous conditions?

A 6.Recreation access via Maidu Dr. is currently available by bike, horseback or hiking. This is sufficient for this area.

E 7.The proposed new road construction of crushed rock would contribute to sediment runoff and reduce water clarity in the river.

F 8.There is no way the four mitigation actions proposed will prevent or even reduce the fire hazard in this area. Opening this area to more used will create a much higher fire hazard. Who will pay the insurance or provide liability coverage?

9.A public Information Program is insufficient to mitigate for increased traffic.

10.LOS is always impaired when traffic is added to a route (pg.2-114).

G 11.Maidu Dr. is close to Skyridge School and Maidu Fire Station. Additional traffic would interfere with both of these public facilities.

12. (Pg. 2-114) Avoiding the Pacific Avenue area would increase impacts to the Maidu Dr. area. This is irresponsible in light of the school and fire station on Maidu Dr.

13.The intersection of Auburn-Folsom and Maidu Dr. is currently inefficient and the proposed increase in traffic would make the situation worse.

H 14.The proposed development area is in a non-containment area for air quality. The increased recreational trips would increase emissions in the area. These increases are not less than significant because of the cumulative impacts that they contribute too.

D. CDPR would be responsible for management and maintenance of the proposed public river access features, including patrol and enforcement of all applicable rules, regulations, and posted orders. Parking would be restricted to designated areas only; tickets would be issued to vehicles in violation of parking or speeding limits. Please refer to Master Response 3.1.6, Public River Access Features.

E. The Draft EIS/EIR addresses these issues in Chapter 3, Section 3.7, Water Quality.

F. Please refer to Master Response 3.1.9, Fire Management.

G. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

H. The evaluation of potential impacts due to construction and project-related air pollutant emissions was performed in accordance with methods recommended by the local air pollution control districts and the California Air Resources Board. The results of the air emissions calculations and further consultation with the APCDs indicate that, with the exception of construction-related NO_x emissions under the Proposed Project, non-attainment pollutant emissions would be below the impact significance thresholds, and therefore would be considered to result in less-than-significant impacts. Additionally, during construction, Reclamation's construction contractor would be responsible for implementation of extensive air pollutant emission reduction measures. These measures were developed with assistance from the APCDs, and would be enforced through periodic inspection by Reclamation and APCD. The Draft EIS/EIR recognizes that project-related NO_x emissions would potentially contribute to cumulative conditions during the construction period. In consultation with APCDs, the lead agencies have identified appropriate NO_x emission reduction measures and have incorporated these measures into the Mitigation Monitoring and Reporting Program/Environmental Commitments Plan for the Proposed Project (Appendix D to the Final EIS/EIR).

L-207

Surface Water Resources Inc.
American River Pump station and River Restoration EIR/EIS
2031 How Ave. #110
Sacramento CA 95825 fax 916-286-0957

DEC. NOV 9, 2001

Dear Sir or Madam,

I support the overall American River Pump Station and River Restoration Project. I do not support public vehicular access to the American River Canyon near the project site.

I live in the neighborhood directly adjacent to Maidu Drive and our home is approximately 1200 feet from Maidu. Our back yard looks out into the river canyon. One of the primary reasons that I purchased this home is for the serenity and scenic value it provides to my family and me. Allowing vehicular access to the river canyon would greatly reduce the pleasure that my home currently provides. Quiet evenings and mornings would now be impacted by vehicular noise winding up and down the virtually unused roads in the canyon.

I am also very concerned about many other issues caused by vehicular access to the canyon and the possibility of entrance via Maidu Dr. I have outlined the concerns and questions below.

Please respond to each of these issues.

A **1. Fire Danger**
How will fire danger be mitigated? Has a general plan been established that provides guidelines for smoking, barbeques, campfires, vehicular access or other fire hazards? Has a complete analysis been done to identify the increased fire risks associated with the proposed recreation area?

I am very concerned with the increased risk to my family and personal property caused by higher population of users and the ability of users to convey an increased amount of materials into the canyon. This is a very dry and steep area with lots of fuel. A fire could be started quit easily and then grow very rapidly.

B **2. Trash and litter**
Has a general plan been developed to maintain rubbish control? Are there proven proposed policies to govern this and maintain the environment?

With an increase in use and vehicular access comes more trash. With the proposed recreation sites people will be able to bring in many items that they may decide to leave behind. This could have a detrimental impact on the environment and the general appearance of the ASRA.

C **3. Fluctuations in river flow**
Since the river flow can rise and fall based on upstream releases of water has this been evaluated against increased swimming and other associated direct water recreation use?

D **4. Traffic**
The traffic study that was performed describing the impact to Maidu Drive seems flawed. There is currently very minimal traffic on Maidu east of Berlin Drive. The quoted engineers study indicated 1500-2000 cars daily? This may be correct for the west end of Maidu but not for the road area that is proposed to be used for access.

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. As discussed in Section 1.1 of the Draft EIS/EIR, one intent of the Proposed Project is to eliminate the hazards associated with the diversion tunnel and to restore the river to allow all beneficial uses of the North Fork American River. Doing so would no longer prohibit recreational use of the river above the project area and the river access facilities will allow for safe and effective management of anticipated river recreation uses.

Water releases, particularly with regard to weekday and weekend use, tend to generally follow prescribed release patterns based upon previous hydropower generation service area demands. Members of the public may obtain water release schedules from hydropower operators to assist them in determining the timing and degree of flow regime variations on managed rivers in which they have an interest in pursing recreational activities.

Rivers are dynamic systems regardless of management actions that are imposed upon them and river users should note that water levels and river flows may fluctuate suddenly and unexpectedly, potentially posing a hazard risk. Although one of CDPR's goals is to provide a safe recreation experience, there is a certain degree of inherent risk associated with these activities. Ultimately, members of the public should check field conditions and verify current regulations prior to entering the water and should use caution and judgment according to individual skill levels and abilities.

D. Please refer to Master Response 3.1.6, Public River Access Features.

L-207, pg. 2

Increased traffic through our South Auburn neighborhood will have a direct impact on our lives. Many children live and play in this area. If the canyon is opened for vehicular access via Maidu many people and vehicles that are unfamiliar with the area will be traveling through it. I am very concerned for the safety of my children.

B | I am also concerned with the increased noise that vehicles will bring. This is a very quiet neighborhood. With vehicular access comes a major increase in noise.

E | Foot traffic and parking issues could also result from the new vehicular access on Maidu What will drivers and groups of people do once the parking lots are full? Currently with the canyon closed to vehicles during any popular recreation periods (weekends-evenings) there are usually not more than 1-2 cars parked near the canyon access gate. I foresee a major increase in this number, and the possibility of people parking on our neighborhood streets.

F | If vehicular access were a requirement I think an access point near the Skate Park off of Pacific Avenue would be a much better alternative. This access point would not pass through such a populated area as Maidu.

G | Has an air quality impact study been done associated with the increased traffic flows?

B | **5. Alcohol**
I am aware that there are significant issues with alcohol consumption and the associated results in Folsom area parks. I am very concerned that with vehicular access will come alcohol. This will cause an increased safety hazard to me and my family, our property, our neighborhood, and the canyon environment due the impaired judgment of those individuals who indulge in such activities.

H | **6. Vehicle size restrictions**
Have any vehicle size restrictions been established? Larger vehicles will make more noise, more pollution and pose an increased safety hazard.

I | **7. Shuttling**
Most of my above concerns are further increased with shuttling. If users decide to make multiple runs up and down the canyon in their vehicles to pick up and drop off rafter's or others traffic, noise, and many other issues become dramatically multiplied. What processes or controls will minimize the impact of this?

Sincerely,

Ben Troia
3095 Eagles Nest
Auburn CA 95603

E. Please refer to Master Response 3.1.6, Public River Access Features.

F. Please refer to Master Response 3.1.10, Project Access.

G. Please refer to Response L-3.C.

H. Please refer to Master Response 3.1.6, Public River Access Features.

I. Please refer to Master Response 3.1.6, Public River Access Features.

L-208

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Wallace B & Rosanna Everson
ADDRESS:	1735 Vista Del Monte
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 887-9424
ORGANIZATION (IF APPLICABLE):	N/A or Monticielo Homeowners Assn.

COMMENTS:

~~November 9, 2001~~

Draft ESI/EIR Comments

Surface Water Resources, Inc.

2031 Howe Avenue, Suite 110

~~Sacramento, CA 95823~~

As a homeowner in Monticielo Subdivision just off Maidu Drive, I do not question the proposed PCWA Pump Station or the restoration of the American River to it's historical channel. Neither do ~~I have a problem with the development of recreational facilities along the river since I see each of the~~ fore mentioned proposals as reasonable for the area in question. I am, however, **VERY** concerned with the proposal to designate Maidu Drive as public access to the river for the following but certainly not all inclusive reasons:

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ ***Please check here if you would like to be on the project mailing list.***

L-208, pg. 2

Comments: Draft ESI/EIR
Page 2
November 9, 2001
Wallace B. Everson

A
- Maidu Drive is not a **COMMERCIAL** street. It is a **COLLECTOR** street in a **RESIDENTIAL** neighborhood. Homeowners in the area took this into consideration at time of purchase of their respective homes. Opening Maidu Drive to commercial traffic, such as rafting service companies, would have dramatic impact on the current and continuing peace and tranquility of those homeowners who sought out that environment when selecting the neighborhood in which they chose to live

B
- The estimated 210 car increase in private vehicles on "peak days" is misleading. Those 210 cars would ingress **AND** egress meaning an additional 420 traffic movements on Maidu.

C
- With recreational parking for only 60 cars, overflow parking would impact the neighborhoods in the immediate vicinity **(US)**
- Access from Maidu onto Auburn-Folsom Road is currently crowded and difficult at peak hours of the day. With additional traffic movements, a traffic signal would certainly be in order for the intersection and should be part of the equation **BEFORE**, **DURING** and not **AFTER** all other considerations
- Additional traffic **ALWAYS** results in additional trash and garbage cast out of vehicles along the traveled way and which would adversely affect property values

D
- Access to the river **ALREADY EXISTS** via State Highway 49. Additional access with minimal impact to local residents can and should be developed from the scenic overlook above the dam site

In summary, one only need look as far as Hwy 89 at Fanny Bridge in Tahoe City to observe first hand the enormous traffic bottlenecks that develop **EVERY DAY ALL SUMMER LONG** where traffic and recreational facilities share the same space. We do not want or need that on Maidu Drive.

Thank you for your studied attention to the foregoing concerns.

Sincerely,

Wallace B Everson

Wallace B. Everson
1735 Vista Del Monte
Auburn, CA 95603
(530)887-9424

A. Reclamation constructed Maidu Drive to serve as a construction access and haul route for the Auburn Dam project. The City of Auburn General Plan identifies Maidu Drive as a collector road. The public river access features associated with the Proposed Project do not include use of the area by commercial rafting companies; CDPR is not proposing or permitting commercial rafting use in this section of the river, as part of this project. Please refer to Master Response 3.1.6, Public River Access Features.

B. The Draft EIS/EIR describes the number of parking spaces and associated vehicle trips. A trip is defined as traveling one way to or from the site, with the origination and destination points of each trip located outside the City of Auburn (page 3-290); therefore, the estimate of vehicle trips includes the ingress and egress movements. Please also refer to Master Response 3.1.6, Public River Access Features.

C. The City of Auburn plans to install a traffic signal at the Maidu Drive/Auburn-Folsom Road intersection later this year (2002). Additionally, it is noted that project-related traffic generally would not coincide with peak commute and school-related traffic.

D. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.

L-209

NOV-13-2001 05:41 PM P.01

November 13, 2001

American River Pump Station Project, Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825
Fax: (916) 286-0957

As I did not receive notice of the proposed November 7, 2001 Information Session re: the Auburn Dam Diversion Tunnel Closure and AR restoration project in time to voice my comments, the following are presented by fax.

As a recent new owner of property in Auburn (i.e., Monteciello Development), I am against these projects. I purchased the property in Auburn with the purpose of retiring in a quiet community dedicated to the quality of life.

A Auburn is known as a "bedroom" community with a large population of retired or semi-retired residents. Who is to pay for these additional projects? The retired do not need additional tax burdens and would not utilize these recreational activities. Young people do not need the additional tax burdens with all the recent and on-going job losses in our present economic situation.

B A new entrance station is not needed; use the existing one (Pacific?) where ~~crisis~~ residential impact would be at minimal.

Environmental impact:

C
- Increase in traffic and noise.
- Increased hazard for people already using Maidu Dr. for exercise (running, walking, etc.).
- Increased hazard for children crossing Maidu Dr. for school.
- Garbage/trash dumping.
- Increased people bring drugs, smoking and loitering problems.

D
- A big item - ADDITIONAL FIRE HAZARDS.

C
- Dump for vehicles.
- General criminal activities.

NOV-13-01 TUE 5:00 PM P. 1

A. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.9, Fire Management.

L-209, pg. 2

NOV-13-2001 05:42 PM P.02

November 13, 2001
Page 2

Re: Auburn Dam Diversion Tunnel Closure, etc.

C (cont)

- Hours of operation.
- Overnight camping problems.
- Policing of operation for safety of users as well as near-by residents.
- Increased safety for playing children in area.

Having unknown people coming into residential communities presents many opportunities for criminal activities.

As I stated previously I am against this project. BUT, if it does progress, at least use an area that is not through residential neighborhoods.

J. L. Taylor

NOV-13-01 TUE 5:01 PM P. 2

L-210

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
c/o Surface Water Resources, Inc.
2031 Howe Avenue
Sacramento, CA 95825

Gentlepeople:

I support the No Project/No Action alternative described in the draft EIS/EIR for the American River Pump Station Project for the following reasons:

A *Purpose:* The project is simply not necessary. In terms of safety for boaters or other users of the river, no accidents or incidents in the history of the tunnel suggest that the proposed action of tunnel closure is justified. Documents mentioned in the draft that supposedly define a safety issue were unavailable for reference and are suspect. Other rivers such as the Etowah in Georgia incur highly popular use for boating through tunnels without safety problems. It is inconceivable that the project sponsors have suddenly realized a safety issue on this site after so many years without problems. In terms of

B water supply, the existing seasonal diversion and the Sacramento River and groundwater sources are sufficient to support a reasonable level of development within the PCWA service area at a more favorable cost per unit of water and lower energy costs. The Bureau of Reclamation should exercise its option to supply alternative sources to meet the basic requirements under Article 11 of the Land Purchase Agreement with PCWA.

C *Safety and Convenience:* Thousands of hikers, equestrians, mountain bikers, and runners use trails that would be closed by the proposed alternative. If the tunnel crossing is closed, and the trail partly buried by rock debris as proposed, the Western States Trail (WST) will become overused and congested to the point of presenting a seriously dangerous situation as well as maintenance problems. The WST is narrow, steep, and rocky single-track that cannot serve the volumes or types of traffic that the tunnel crossing serves. People and horses will be at a much greater risk for potentially deadly accidents involving collisions and falls on the WST. The loss of a trail crossing at the tunnel site would incur additional safety problems when visitors attempt to negotiate the slippery rocks on the river bed there along with fluctuating flows.

D *Aesthetics:* The project proposes to pile vast volumes of loose rock material onto slopes adjacent to the river in the dominant view of trails users, boaters, and the Overlook. The proposed design makes no provision for planting such unsightly areas. This 'dumping' concept would degrade the value of the area for visitors and for the community.

Thank you for this opportunity to comment.

Sincerely, Uriel Diaz

1025 University Ave #93
Sacramento, CA 95825

A. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

B. PCWA demonstrates their need for increased surface water supplies, including from their Middle Fork Project water entitlement on the American River, in the Surface Water Supply Update for Western Placer County Discussion Paper (March 2001). Please also refer to Response L-21.A.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

D. Please refer to Master Response 3.1.5, Project Area River Restoration.

L-211

FAX – 916-286-0957

To

American River Pump Station Project
Surface Water Resources Inc.
2031 Howe Ave. Suite #110
Sacramento, Ca. 95825

From

William & Natalie Jarred
305 Americano Dr.
Auburn, Ca. 95603

Nov. 13, 2001

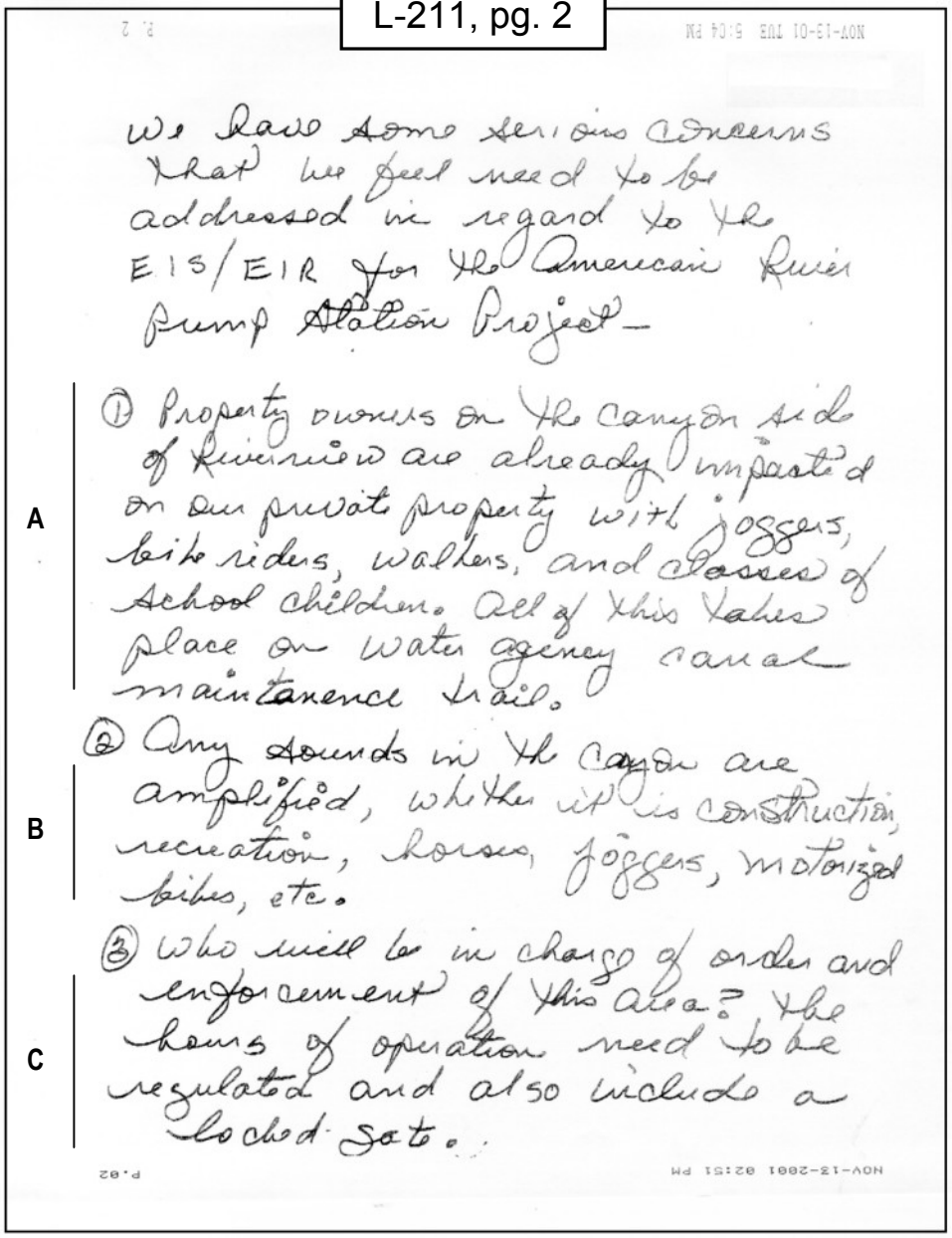
Subject

Comments on Draft
EIS/EIR for the
American River Pump
Station Project

P.01

NOV-13-2001 02:51 PM

L-211, pg. 2



We have some serious concerns that we feel need to be addressed in regard to the EIS/EIR for the American River Pump Station Project.

A ① Property owners on the canyon side of Riverview are already impacted on our private property with joggers, bike riders, walkers, and classes of school children. All of this takes place on water agency canal maintenance trail.

B ② Any sounds in the canyon are amplified, whether it is construction, recreation, horses, joggers, motorized bikes, etc.

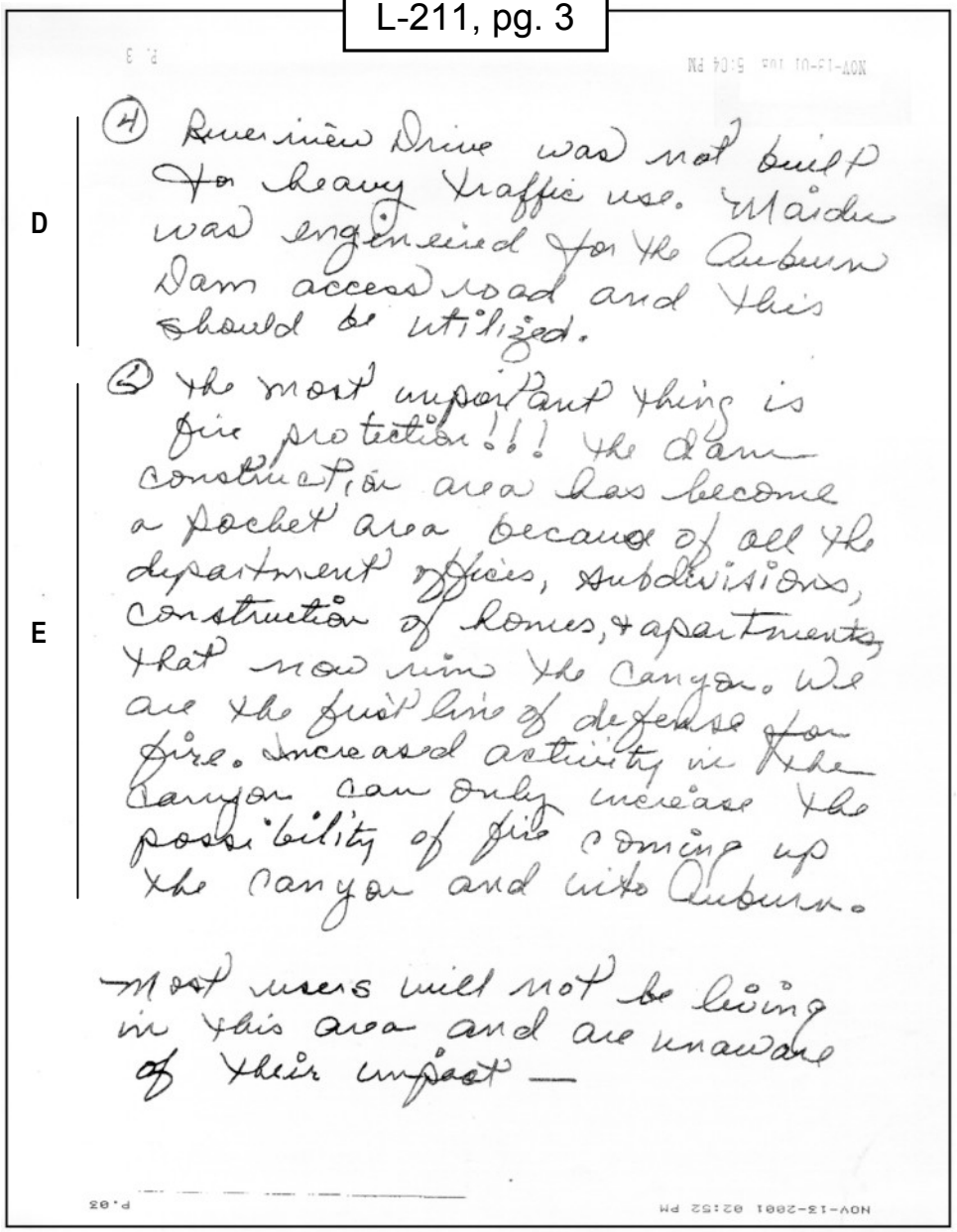
C ③ Who will be in charge of order and enforcement of this area? The hours of operation need to be regulated and also include a locked gate.

A. Please refer to Response L-185.B.

B. As noted in the Draft EIS/EIR (Chapter 3, Section 3.16, Noise), Reclamation's construction contractor would be required to comply with current City of Auburn, Placer County, and El Dorado County noise ordinance standards. Please also refer to Master Response 3.1.6, Public River Access Features.

C. CDPR would be responsible for the management and enforcement of all rules, regulations, and posted orders related to the public river access features and public use of the area. These activities would include restricting vehicular access according to set hours of operation and locking the entrance gate when the area is closed. Please also refer to Master Response 3.1.6, Public River Access Features.

L-211, pg. 3



(4) Riverview Drive was not built for heavy traffic use. Maidu was engineered for the Auburn Dam access road and this should be utilized.

D

(2) The most important thing is fire protection!!! The dam construction area has become a pocket area because of all the department offices, subdivisions, construction of homes, & apartments that now ring the canyon. We are the first line of defense for fire. Increased activity in the canyon can only increase the possibility of fire coming up the canyon and into Auburn.

E

Most users will not be living in this area and are unaware of their impact —

NOV-13-2001 02:52 PM P.03

D. Please refer to Master Response 3.1.10, Project Access.

E. Please refer to Master Response 3.1.9, Fire Management.

L-212

11-13-2001 5:02PM FROM P. 1

FAX

Federation of Fly Fishers
Conserving-Restoring-Educating Through Fly Fishing
Northern California Council
9270 Oak Leaf Way, Granite Bay, CA 95746
Phone (916) 791-6391 FAX (916) 791-6574

Date: November 13, 2001

Number of pages 3 (including cover sheet) :

To:
Bureau of Reclamation: Rod Hall
Surface Water Resources

Number:
989-7208
286-0957

From: Rob Ferroggiaro

Subject: DEIR/S
PWCA Pump Staition

NOV-13-01 TUE 4:55 PM 9167916574 P. 1

L-212, pg. 2

11-13-2001 5:02PM FROM P. 2

FEDERATION OF FLY FISHERS™
Conserving • Restoring • Educating Through Fly Fishing
Northern California Council

November 13, 2001.

To: Bureau of Reclamation
Surface Water Resources, Inc.

Via Faximile
(916) 989-7208
(916) 286-0957

Subject: American River Pump Station Project - Draft EIR/EIS Comments

I am writing on behalf of the Northern California Council of the Federation of Fly Fishers (NCCFFF). NCCFFF represents over 30 affiliated angling clubs and thousands of anglers in Northern California. Our members are interested not only in fishing, but they are frequently involved in river and stream restoration projects.

We are not necessarily opposed to this project, however we believe that good science must be applied during the planning process to insure there is no negative impact to wild fish or to existing or planned fish recovery efforts. We offer the following comments on the above draft EIR/EIS:

A

1. There is documented evidence that wild steelhead have been found Auburn Ravine. The EIR/EIS should include a careful analysis of the current status of steelhead in the Ravine and should analyze possible flow regimes in light of the ESA listing of Central Valley steelhead.
2. Any change to flows should be evaluated regarding impact on native steelhead. Of particular concern is the potential to affect the "homing instincts" of the native fish as source water changes. Conclusions in this regard should be subject to scientific peer review.
3. The potential for attraction of steelhead not native to Auburn Ravine must be fully considered since ESA listed fish from other streams and rivers could be impacted.
4. The EIR/EIS should include more detailed documentation of consultation with the National Marine Fisheries Service, and consultation with California Department of Fish and Game's salmonid experts.
5. Should the project proceed, the project should include a monitoring plan to evaluate the effects of flow variations on native steelhead and supporting aquatic habitat and aquatic life.

Finally, this project was highlighted for us by concerned local citizens. The EIR/EIS availability notification and the report itself seem to ignore the activities of current groups involved in restoration and protection of Auburn Ravine. These include the Ophir Property Owners, and the Auburn Ravine/Coon Creek Watershed Group, or CRMP. The final EIR/EIS should include

NOV-13-01 TUE 4:56 PM 9167916574 P. 2

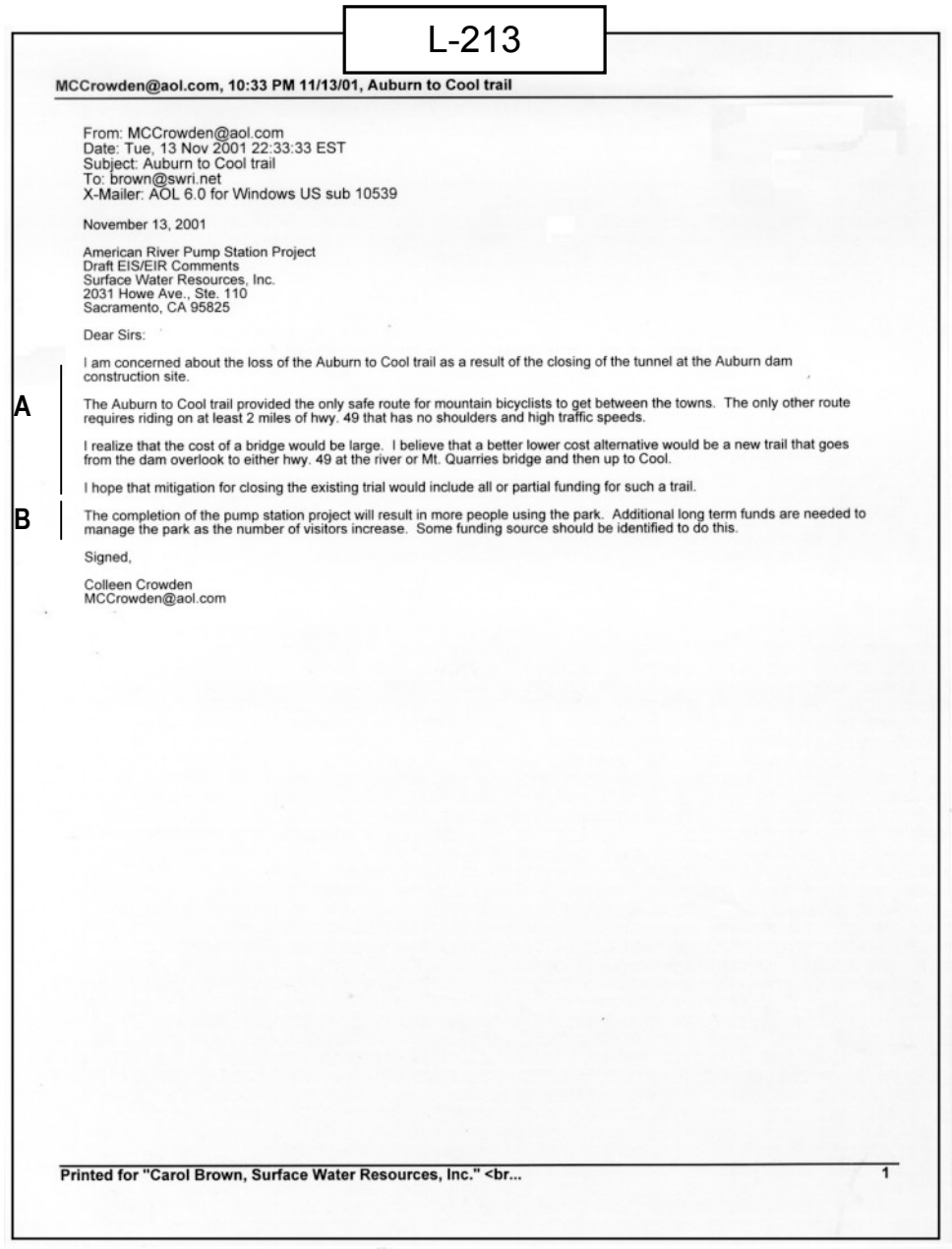
A. Please refer to Master Response 3.1.13, Auburn Ravine.

L-212, pg. 3

A | analysis of how this project supports or otherwise affects current restoration and protection efforts

Thank you for the opportunity to comment.

Robert N. Ferroggiaro
Vice President, Conservation
Federation of Fly Fishers - Northern California Council
9270 Oak Leaf Way
Granite Bay, CA 95746
(916) 791-6391 Tel
(916) 791-6574 Fax
Email rob@surewest.net



L-213

MCCrowden@aol.com, 10:33 PM 11/13/01, Auburn to Cool trail

From: MCCrowden@aol.com
Date: Tue, 13 Nov 2001 22:33:33 EST
Subject: Auburn to Cool trail
To: brown@swri.net
X-Mailer: AOL 6.0 for Windows US sub 10539

November 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave., Ste. 110
Sacramento, CA 95825

Dear Sirs:

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

A The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool.

I hope that mitigation for closing the existing trial would include all or partial funding for such a trail.

B The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

Signed,

Colleen Crowden
MCCrowden@aol.com

Printed for "Carol Brown, Surface Water Resources, Inc." <br... 1

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

L-214

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	CAROLYN L. KEMMLER
ADDRESS:	29080 RIDGE VIEW RD
CITY/STATE/ZIP:	FORESTHILL, CA 95631
BUSINESS AND/OR HOME PHONE/FAX:	530-367-2180
ORGANIZATION (IF APPLICABLE):	—

COMMENTS:

A We certainly applaud and appreciate the Bureau's choosing as its preferred alternative closing the diversion tunnel and restoring the Noth Fork American to its natural course at last. Also appreciated is the Bureau's recognition that the tunnel as it presently exists is an effective barrier to fish migration in a river once prodigious as a fishery. Nowhere, however, do we see who, if anyone, will be monitoring the newly-restored riverway for its effectiveness as a renewed fishery.

B Apparently there is no plan to replant acquatic vegetation lost in what now looks like a moonscape and what could end up just being a smoothed over shoreline of rock debris left over from the failed coffer dam of l986.Mother nature may not be able to under these circumstances to repair riparian habitat quickly enough. Although the Bureau says it plans to replant those areas damaged by construction acrivities of the new project, nothing will be done about other denuded areas. We think appropriate replanting of these areas should be done as well.

C A primary concern is the extent to which PCWA's all-year pumping will dewater the river, especially in dry years. It is said that PCWA must allow a minimum flow of 75cfs. On completion of the project PCWA will double its outake from 50 to l00 cfs, and, as times goes on, take quite possibly more. After l00 cfs, the tak-out controls seem quite murky. Many of us do not prefer swimming pools, golf courses, and new development over the health of our river. Who will monitor the take-out after project completion, and how will the public know? In dry years with lower flows water temps will increase and cold water fish will not survive. Who will monitor the fishery under thse circumstances and be in a position to do something about it?

D As for requests to cross the river with a bridge or by some other means, we would vastly prefer that you not put in a shallow ford or any but minimal obstructions in the river.

It is not often thank goodness that a major public agency such as the Bureau is given the right to construct a coffer dam that fails, makes a huge mess, creates a public safety problem and mostly cuts off access for about 25 years and then gets 3l million dollars to clean it up. Never the less the Bureau has our full support in this effort.

The river is a public resource. The river is a public resource. We will be watching.

Thank you for this opportunity to comment. Carolyn L. Kemmler

FOLD SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

A. The Proposed Project includes restoration of the river to the dewatered channel. Design considerations include creation of riffles and pools to provide more natural habitat conditions than currently exist at the site. Additionally the project includes installation of fish screens on the water supply intake structure. The fish screens are being designed in consultation with CDFG fish screen experts. CDFG will review and approve the final design and have the opportunity to inspect the facility during and after construction, prior to initiation of project operations. PCWA would ensure that the fish screen and pumping plant facilities are operated and maintained properly for acceptable fish screen performance. PCWA would submit quarterly fish screen operation/performance reports to CDFG for the first two years of operation of the project. Following the first two years, reports on the operation and performance of the fish screen would be supplied to CDFG upon request. This information is included in the Final EIS/EIR, Chapter 3.0, Section 3.5 Fish Resources and Aquatic Habitat and in the Mitigation Plan (Appendix D to the Final EIS/EIR). This information does not alter the conclusions presented in the Draft EIS/EIR. These design and operational considerations would result in an overall improvement of project area conditions for fish resources. No further mitigation is required.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. PCWA would reoperate Middle Fork American River Project water releases at Ralston Afterbay. Preliminary project design information for the Proposed Project indicates a minimum flow requirement of 175 cfs to meet both the minimum instream flow requirement for fish (as required by both SWRCB and FERC) and to ensure proper functioning of the pump station intake/diversion facility.

PCWA must operate the MFP and the pumping plant at the Auburn Dam site to satisfy the terms and conditions of their SWRCB water rights permits and their FERC license. Additionally, PCWA operates the MFP in accordance with their agreements with Reclamation (storage and release of American River water) and PG&E (operations for hydropower). Therefore, PCWA must keep records of reservoir releases and diversion intake amounts. This information is reported to the regulatory agencies as required by each permit, license, or agreement.

D. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-215

November 12, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

To Whom It May Concern:

A

I would like to comment on the closure of the old dam construction tunnel and restoration of the original river channel. While I am in favor of this option, I am concerned for recreational users who utilize the dry land connection as a benefit of the diversion tunnel between the towns of Auburn, CA and Cool, CA. A significant number of equestrian, hikers, runners, and mountain bike enthusiast utilize this dry land bridge to connect between these two recreational areas. With restoration of the original river channel, mountain bike enthusiast in particular would be forced to utilize State Highway 49 to make this connection. The portion of Hwy 49 mountain bikers would be forced to utilize is very winding, steep, has many blind corners, no shoulder, and heavy vehicular traffic between the towns of Auburn and Cool. This would create a serious safety hazard for mountain bikers.

While the equestrian and runner community is in favor of building a bridge for recreational crossing in the area of the old dam site, this would be an expensive alternative to a better option. The best "bang for your buck" is to construct a new, multi-user trail that would follow the contours of the American River Canyon within the boundaries of the American River Recreational District. The trail would originate at the old Auburn Dam Overlook in Auburn, CA, travel upstream to the local No Hands Bridge, and then go downstream to terminate on the ridge above the old Auburn Dam site. This new ridge-to-ridge trail connection would add miles of badly needed trails, cost a fraction of what a new bridge would cost, and continue to provide the connection for all recreational users between Cool and Auburn.

This option would be cost effective, mitigate one of the significant effects of tunnel closure on recreational users, and enhance the recreation use within an area that is already of regional significance.

Sincerely,

Wesley A. Dill

Wesley A. Dill

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-216

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	EMILE J. CARRIERE
ADDRESS:	1765 VISTA DEL MONTE
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 889-2212
ORGANIZATION (IF APPLICABLE):	CARRIERE + ASSOCIATES, INC

COMMENTS:

I would support this project if two changes are made.

A (1.) change the access from Maiden Drive to Pacific Avenue. Maiden Drive is a main thoroughfare for a major school. (Skyridge) overloading that street with tourists would be unsafe.
In addition, Maiden drive is fully residential while Pacific is not. I realize that this may involve additional funds, but long term this would be an acceptable access.

B (2) I would need to see a very thorough fire prevention & fire patrol plan.

Otherwise the project appears to serve Placer County water needs + the river restoration, badly needed.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

L-217

Keith & Teresa Kenworthy
1494 Foxridge Circle
Auburn, California 95603
(530) 889-9324
keithken@hotmail.com

November 11, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 How Ave. Suite 110
Sacramento, CA 95825

Dear Sirs:

A

I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn Dam construction site.

The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds.

I realize that the cost of a bridge would be large. I believe that a better lower cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries (No Hands) bridge and then up to Cool.

I hope that mitigation for closing the existing trail would include all or partial funding for such a trail.

B

The completion of the pump station project will result in more people using the park. Additional long term funds are needed to manage the park as the number of visitors increase. Some funding source should be identified to do this.

C

In addition, I am concerned about the proposed parking lot to be constructed close to the river near the bottom of Cardiac Trail. I think it would be more approriate to build the parking lot directly off of Maidu Drive, near the Bureau of Recreation office due to potential fire hazard, cost and safety.

Sincerely,

Keith & Teresa Kenworthy

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.2, American River Pump Station Project Funding.

C. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

L-218



To Whom It May Concern:

This is a letter in regard to the future of the American River Project at the Auburn Dam Site. I am a professional kayaker, filmmaker, event organizer, and local citizen living in the Auburn area. I have paddled this stretch of water more than 30 times in the last four years. I am very familiar with the terrain down stream of the Highway 49 bridge. It has been brought to my attention that several things are planned for the future of this stretch of river. I would like to offer my expertise and opinions to help with this project.

I would like to express some views that may or may not be worth considering. As you know, from the Highway 49 bridge to the Aurburn Dam Site via the American river, there is an incredible recreation resource. It offers in my opinion five major points and opportunities that should be taken into consideration:

1. Returning the river back to a natural state should be taken with the up most respect.

2. There are three incredible economic benefits that can be created around this project from a river usage perspective.

A

a. Whitewater Rafting would be the first consideration. This stretch of river is an excellent whitewater rafting location. Not only from a commercial rafting perspective, but also from a private boater and raft rental angle. Amongst the river community it is considered a very safe stretch of water. It mostly consists of class 1 & 2 rapids making it safe for all ages.

b. Whitewater Freestyle kayaking would be the next consideration. Without any changes made to this stretch there is a rapid that exists approximately ½ of a mile above the Auburn Dam Tunnel. It is considered a world-class river feature for freestyle kayaking. For years the American Whitewater Association and local kayakers have viewed this rapid as a potential spot for a freestyle competition. The main reason there hasn't been an event is because of access to the river. For more than four years kayakers have been putting on this stretch of river at the Highway 49 bridge and paddling down to the whitewater spot. Kayakers are forced to then turn around and attain approximately 2 miles back up stream to the Highway 49 bridge because of limited access issues. I cannot stress enough that if we were to manipulate this feature and potentially create a few more that could accommodate different river level's, we would have an incredible resource that would draw professional athletes and recreational kayakers from around the world. It is my belief it would take very little money to implicate these kinds of features into this stretch of river.

SL PRODUCTIONS · SCOTT LINDGREN
331 Rio Vista Dr # 10 Auburn, CA 95603 USA
530-823-5360 P 530-823-5485 F
fluid@inreach.com

A. The Proposed Project would not include development of a whitewater park on the North Fork American River. Future Auburn SRA planning activities will be undertaken by Reclamation and CDPR later this year.

L-218, pg. 2

SLP

c. Whitewater Slalom kayaking is on the same sort of magnitude as freestyle kayaking. According to recent news the Olympic Committee is considering the site for the 2008 Olympics. I am sure that there are many benefits to offering this section of river as an Olympic Site. However, I most bring up that Slalom kayaking is a very small community. Much smaller than the freestyle community. It has been on the decline for many years and the only reason the sport exist to date is because of the Olympics. American Canoe Association statistics show that freestyle kayaking has grown at an annual rate of 20% for the last 8 years. Slalom kayaking has basically declined to the point where all of the sports sponsors and events have been scaled down to such a degree that kayak manufactures have stopped producing Slalom boats. It would be crazy to only design a slalom course and not a freestyle park. A slalom park would have minimal recreational value after the Olympic venue, where as a freestyle park would generate recreational use for years to come. The committee should seriously consider consulting with the American Whitewater Association and the American Canoe Association in regards to the growth of both sports. I know it would educate the committee on where slalom kayaking sits and instill the idea that we need a freestyle whitewater park to be a part of this project.

A

3. It is my opinion that these recreation areas should be designed around the summer low water flow from the Middle Fork of the American River. The recreation parks should not be designed around a contributing flow from the North Fork American River. The season is to short on the North Fork American and would offer minimal usage for both Freestyle and Slalom whitewater parks.

B

4. It is important keep open all trails for mountain biking, horseback riding and walking.

C

5. There should be parking at the Auburn Dam Site that could accommodate all of the above. I believe that there should be nothing less than 40 parking spots for recreating for all of the above activities

I have included my resume along with one of my films that will give you an idea as to my experience and expertise in the field. Please feel free to contact me with any questions. If there is any way that I can help with this project I would be more than happy to contribute. I have film footage of the canyon below that documents the freestyle spots mentioned above in paragraph 2a. I would be more than happy to make that available upon request. Thank you for taking the time to read what I have to say.

Sincerely,

Scott Lindgren

SL PRODUCTIONS · SCOTT LINDGREN
331 Rio Vista Dr # 10 Auburn, CA 95603 USA
530-823-5360 P 530-823-5485 F
fluid@inreach.com

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-219

CURLY MEDIA – A SL PRODUCTION

Auburn Dam Site Project Manager,

A I am an Auburn resident, avid outdoorswoman and would like to participate in the Auburn Dam Whitewater Park as a volunteer if needed. I am a class 4 kayaker and feel I can be beneficial to a successful design the entire community can enjoy. Let me know if you need photos of the area, I have many in my library.

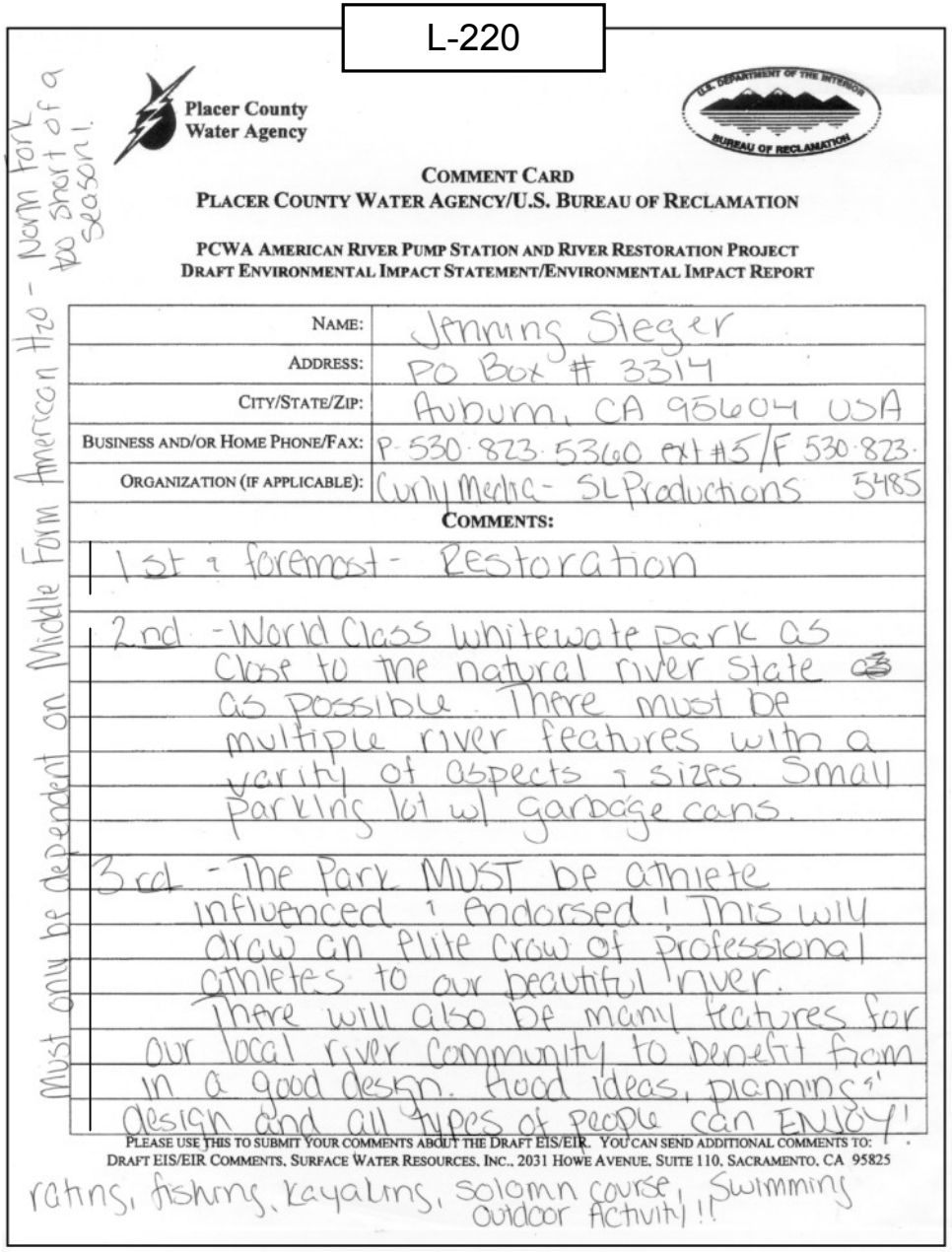
Sincerely,

Jenning Steger
Photographer
CurlyMedia@excite.com

PO BOX # 3314 • AUBURN, CA • 95604-3314 USA
PHONE: 530-823-5360 EXT #5 • FAX: 530-823-5485

A. The Proposed Project would not include development of a whitewater park on the North Fork American River. Future Auburn SRA planning activities will be undertaken by Reclamation and CDPR later this year (2002).

L-220



Placer County Water Agency

U.S. Department of the Interior Bureau of Reclamation

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Jenning Steger
ADDRESS:	PO Box # 3314
CITY/STATE/ZIP:	Auburn, CA 95604 USA
BUSINESS AND/OR HOME PHONE/FAX:	P-530-823-5360 ext #5/F 530-823-
ORGANIZATION (IF APPLICABLE):	Curly Medic - SL Productions 5485

COMMENTS:

A. 1st & foremost - Restoration

2nd - World Class whitewater park as close to the natural river state as possible. There must be multiple river features with a variety of aspects & sizes. Small parking lot w/ garbage cans.

B

3rd - The Park MUST be athlete influenced & endorsed! This will draw an elite crew of professional athletes to our beautiful river. There will also be many features for our local river community to benefit from in a good design. Good ideas, planning & design and all types of people can ENJOY!

Must only be dependent on Middle Form American H_2O - North Fork to start of season!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825

rafting, fishing, kayaking, slalom course, outdoor activity!! Swimming

A. Please refer to Master Response 3.1.5, Project Area River Restoration.

B. The Proposed Project would not include development of a whitewater park on the North Fork American River. Future Auburn SRA planning activities will be undertaken by Reclamation and CDPR later this year (2002).

L-221

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	BILL SIDNAM
ADDRESS:	11110 TANGLEWOOD DR
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-1703
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A 1- Concerned about wildfire threat from recreation part of the project

B 2- Please find an alternate route other than Maidu Drive, a residential area, with children walking to and from school. Increase in traffic is not acceptable.

3- Pacific Ave. would be a non-residential alternative for construction and other traffic.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	JODY SIDNAM
ADDRESS:	11110 Tanglewood Dr.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-1703
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I have no objection to the pumping Station and the river being returned to its natural state. I am concerned about fire danger and added traffic down Maidu. A,B

Can't the project be done without opening it to the public. C

If it is a done deal then Pacific St access should be used.

Jody Sidnam

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Bill Ray
ADDRESS:	10115 Snowy Owl
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	916-782-2300
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A (1) Recreational activities and parking will substantially increase traffic on Maidu, and probably even other residential streets in the area. This is a risk to children playing and riding bikes. Huge safety concern. A residential area with schools is not appropriate for a multi-use recreational park facility!

B (2) Fire risks in the canyon!

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Jillie Lorinergy Monroe
ADDRESS:	10025 Snowy Owl Wy
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	885-4272
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A,B Concerns I have regarding this project is increased traffic on Maidu (wish I oppose), fire hazards - due to increased population in the area. People/teens going down there to "party"; drunk drivers which may be coming through our neighborhood. and the general population going into a pristine area ~~to~~ which will then be changed forever and most C likely abused. There is a lot of wildlife that lives in the canyon which will be driven out - and where will they relocate to. People need to stop "moving in" on the wildlife that lives there - its their area. The river can be restored without having to increase recreational use/parking

* We already have a lot of traffic during the summer/spring/fall A months on Maidu and on weekend/evenings we have a lot of "speeders", "burners" that drive down Maidu. I have a 22 month old daughter and another child on the way. I don't want to have increased traffic in my neighborhood. My family and I walk down to the canyon often (from our home) and we walk along Maidu Rd.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.12, Project Area Wildlife.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Bob Schmitt
ADDRESS:	1389 Buckeye Ct.
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-885-0997
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

I have no objection with you moving forward with your project. I believe many people will benefit from this project. I strongly suggest that you drop Maidu Drive from your plan & make your point of entry off the Pacific Drive access road. This makes more sense.

A

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☑ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Mark Clark
ADDRESS:	3040 Eagles Nest
CITY/STATE/ZIP:	Auburn, Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-6014
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A Models of the flume used for the pumping should be completed in regards to safety under different flows prior to approval of the impact report.

B Fire mitigation plans should be completed prior to approval of the report. Fire mitigation should be implemented prior to recreation use – parking lots open at bottom of canyon. Fire mitigation should not consist of denuding the canyon.

C Wildlife impacts should also be addressed.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. The project river restoration design engineers are developing models of the river system to evaluate safety and operational aspects of the diversion structure both for navigation and water supply needs.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.12, Project Area Wildlife.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Mark Clark
ADDRESS:	3040 Eagles Nest
CITY/STATE/ZIP:	Auburn, Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-6014
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

Problems caused by vehicles down in canyon have not been sufficiently addressed:

A
- Fire Hazards
- Current uses - horseback riding, hiking, biking not compatible with increased traffic,

B
- Cars in canyon will degrade experience in park. There are already plenty of areas with car access, few where hiking, etc can be done with traffic hazards.
- Increased traffic through residential areas

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Richard Hadley + Janet M. Hook
ADDRESS:	625 Parker Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(916) 414-6483 (H) (530) 887-0757
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A 1) Prefer entrance to new State Park be established at Auburn Dam Overlook location.

B 2) If entrance is established at Maidu Residence should receive free admission to park as mitigation for increase traffic and Noise.

C 3) Park should assume responsibility for Fuel reduction to prevent wildfire spread as mitigation for increase wildfire risk associated with increased use.

D 4) EIS/EIR is inadequate because it failed to analyze all reasonable access points for construction and long-term recreational access.

E 5. Traffic impacts not adequately mitigated.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☒ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.9, Fire Management.

D. Please refer to Master Response 3.1.10, Project Access.

E. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Sandy Amara
ADDRESS:	1850 Vista Del Lago
CITY/STATE/ZIP:	Aub. Ca. 95603
BUSINESS AND/OR HOME PHONE/FAX:	823-7279 (530)
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — I am supportive of the project, however if there could be an alternate route for access (ie Railhead Park) I would appreciate that consideration. Unfortunately I do not feel this has been thoroughly explored. This project is not of the same dimension as the Dam project and the Pacific Street access should be possible.

Thank you for your consideration

B — One additional matter is that it is my hope that the pumpstation be extra insulated as sound travels up the canyon and is very disruptive to residents above. Please consider added insulation (as I know there will be some) to insure continued peace and quiet as the river canyon should be.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.10, Project Access.

B. As indicated in the Draft EIS/EIR (Chapter 3, Section 3.16, Noise), the proposed pump station would be insulated to ensure compliance with City of Auburn, Placer County, and El Dorado County noise ordinance standards for nearby residential areas.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dirk Amaro
ADDRESS:	1850 Vista Del Lago
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	823 7279
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A Please consider an alternative access route to the site, specifically the Auburn Dam Overlook area as an access point.

Proving the main (or only) access to be Maidu Dr. through a residential area would be less preferable than access through a non-residential area such as Pacific St. Access through a non residential area will not have the same negative impact and potential for accidents (young children crossing the street and the proximity of Skyridge school) as a residential access.

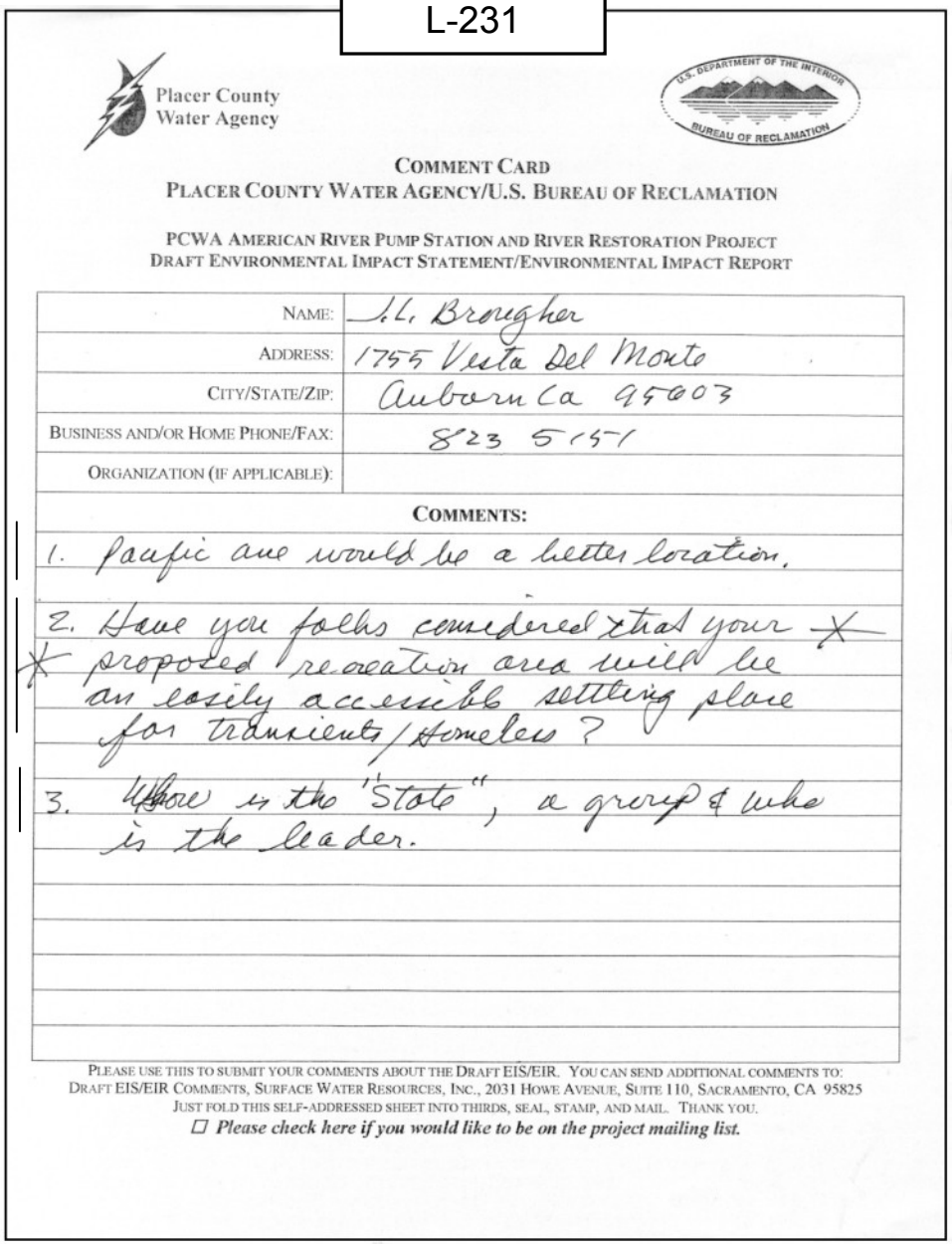
B We support the project but feel strongly that an alternate access is needed.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	L.L. Brougher
ADDRESS:	1755 Vista Del Monte
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	823 5151
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A 1. Pacific ave would be a better location.

B 2. Have you folks considered that your proposed recreation area will be an easily accessible setting place for transients/Homeless?

C 3. Where is the "State", a group & who is the leader.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. The California Resources Agency, CDPR, and CDFG have participated in the development of proposed public river access features, river channel restoration, and fish screen design considerations and related impact mitigation measures.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	CLINT STUDEBAKER
ADDRESS:	1920 VISTA DEL LAGO
CITY/STATE/ZIP:	AUBURN CA.
BUSINESS AND/OR HOME PHONE/FAX:	916-823-1907 phone/FAX
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A - PARKING ~~FOR~~ AND # OF CARS IS NOT ACCURATE, PEOPLE WILL PARK OUTSIDE THE GATES AND CARPOOL, FOR RAFTING etc!

B - ACCESS VIA MAIDU DR DOES NOT MAKE SENSE, WHY NOT UTILIZE, IF YOU MUST VIA SACRAMENTO STREET WHERE COMMERCIAL PROPERTY AND FAIRGROUNDS ARE NOT ASIMPACTED?

C - WILL A STOP LIGHT BE REQUIRED AT MAIDU AND AUBURN FOLSOM?

D - WHO WILL KEEP THE ACCESS ROADS, INCLUDING MAIDU CLEAN?

- WILL PARKING be permitted on Maidu?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. The City of Auburn plans to install a traffic signal at the intersection of Maidu Drive/Auburn-Folsom Road later this year (2002).

D. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

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PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	PAUL ARONOWITZ
ADDRESS:	1830 VISTA DEL LAGO
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530)823-9736
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

Why is recreational access being run from Maidu as opposed to Pacific street? Access from Maidu runs the risk of exasperating traffic problems at the corner of Maidu and Auburn Folsom. It generates additional traffic close to an elementary school and residential areas. Additionally access from Maidu is steeper. Pacific Street is closer to Auburn-Folsom and has a light at the corner to control traffic. Additionally access from Pacific was originally established to transport materials from rail head to the Dam construction, is a wider road, is less steep. While I am in favor of restoring the river, I believe safely relative access be run from Pacific Street NOT Maidu.

Thank you for your attention to this matter.

PS Have alternative routes for access been adequately reviewed?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.10, Project Access.

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Placer County Water Agency

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PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Richard Miller
ADDRESS:	680 Perkins Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530-823-8287
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I am supportive of the overall project. I believe the access to the project would be better handled via Pacific Street by the former dam overlook area rather than via Maidu Drive. Maidu Drive cuts through heavy residential neighborhoods, schools, etc. The impact on these B neighborhoods will be significant and negative compared to the impact on Pacific Street. From what I heard at the meetings it does not appear that the Pacific Street access was given adequate consideration. Have the increased traffic flow on Maidu been adequately addressed in the environmental analysis; have alternative access routes been analyzed and addressed?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Pat Thomas
ADDRESS:	10060 Snowy Owl Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530 888-0784
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A I would like a copy of the most current environmental ~~impact report~~ study. The air quality alone is an issue

Pat Thomas

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Comment noted. Commenter added to report distribution list. Air quality issues are evaluated in the Draft EIS/EIR and Final EIS/EIR, Chapter 3.0, Section 3.15.

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Placer County Water Agency

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COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Louise Knop
ADDRESS:	11060 Rosemary Dr.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	N/A
ORGANIZATION (IF APPLICABLE):	N/A

COMMENTS:

A Consideration should be given to the Pacific Street enterance into the canyon. There is an existing parking structure and the existing road into the canyon can be picked up at Rail Head Park. Maidu is a residential road and should remain so. Skyridge school is off of Maidu and will be greatly impacted. I Strongly agree

B with restoring the river, and building the pumping station. But providing a parking lot is not the answer. Auburn already has a recreational area at the Dam Overlook. Please consider using this existing structure.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	STEVE MATTERN
ADDRESS:	11121 TANGLEWOOD DR
CITY/STATE/ZIP:	AUBURN, CA
BUSINESS AND/OR HOME PHONE/FAX:	530 889-0432
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A OVERALL PROJECT PROVIDES A NUMBER OF BENEFITS ADEQUATE STUDIES NEED TO CONSIDER, TRAFFIC FLOW THROUGH A MAJOR

B RESIDENTIAL AREA, FIRE DANGER AND PROTECTION.

C FURTHER CONCERNS REGARDING WILDLIFE PROTECTION.

D ALTERNATIVE ACCESS IS AVAILABLE THROUGH PACIFIC AVE, EXISTING STUDY UTILIZED NO BETTER THAN 1ST GRADE MATH, NO CONCERN OR PROVISION FOR TURNAROUND TRAFFIC THAT IS NOT ABLE TO PARK IN THE RECREATION AREA, IM IN FAVOR OF THE PROJECT BUT FEEL THAT WE CAN DO WITHOUT THE PARKING THAT PROMOTES ALL OF THE ABOVE.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.12, Project Area Wildlife.

D. Please refer to Master Response 3.1.10, Project Access.

L-238

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Fran Mattern
ADDRESS:	11121 Tanglewood Dr
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A While this project in itself sounds like something we need as far as water station & restoring the river - Our objections rise to the increased use of recreation in our canyon with the increased fears of fire danger.

B The access street proposed (Maidu) is totally unacceptable when the Pacific Ave access is available. It's were said to be the reason — but with Skyridge School being involved & all the residential area in the Maidu area, that should take presidence. Over the cost of the Pacific Ave. access.

C

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
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JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.6, Public River Access Features.

L-239

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	ALFRED W CLARK
ADDRESS:	1492 STONE WAY
CITY/STATE/ZIP:	AUBURN, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 885-1076
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

AS A LOCAL RESIDENT I SUPPORT OPENING THE PROJECT AREA FOR PUBLIC RECREATION. IT WILL A NEED FOR SENIORS TO HAVE ACCESS WHICH WAS PREVIOUSLY FEASIBLE USING THE EXISTING TRAIL SYSTEM, BE SURE AND PROVIDE PARKING FOR DISABLED AS WELL THE RIDER FOR FISHING ETC. PARKING HALF WAY UP THE HILL IS NOT ACCEPTABLE. I SUPPORT THE REVIEW OF LOOKING AT ACCESS FROM THE DAM OVERLOOK AREA.

11/7/01

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Project support noted. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

L-240

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Robert S Israel
ADDRESS:	485 Perkins Way
CITY/STATE/ZIP:	Auburn 95603
BUSINESS AND/OR HOME PHONE/FAX:	530- 823-7574
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A — Concerning Maidu drive: Why is there no entrance on the current road from Pacific. It would only need an intersection and there are no house to be impacted.

B — Why not use the original plan of a pumping plant only

C — More people drown at the confluence than at the Tunnel. A fish ladder would allow for migration.

RS Israel
11/07/01

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.10, Project Access. Houses along Pacific Avenue face the street, have driveway access directly to Pacific Avenue, and have no fencing separating the front yards from the street. Houses near Maidu Drive do not face front-ways to the street; there are no direct driveway access points; and all homes are set back and behind wooden, brick or stone fencing.

B. Since the time of the original proposal in 1995, the lead agencies and responsible state agencies identified additional needs for the project study area. The Proposed Project would meet all of the stated objectives of the lead agencies (See Draft EIS/EIR, Chapter 1, Introduction).

C. The Proposed Project includes design and installation of fish screens on the new intake/diversion structure. CDFG fish screen experts would be involved in the review and approval of the design and would have the opportunity to inspect construction and operation of the facility. The Proposed Project does not require or involve a fish ladder.

L-241

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	MARK ANDERSON
ADDRESS:	2005 Falcons Point
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	916-788-5639 ofc / 530-888-0215
ORGANIZATION (IF APPLICABLE):	Homeowner

COMMENTS:

A I don't believe the traffic conditions have been properly forecasted. You are benchmarking against school-drop-off hours. If you consider the impact versus the "normal" quiet traffic patterns, you will see a substantial impact.

B I am opposed to the proposed increase traffic down Maidu from Auburn Folsom road. I don't feel alternate routes have been adequately considered. For example, use the access road from the DAM OVERLOOK instead of through my ~~me~~ neighborhood. I am also concerned about

C the increased fire danger due to the invitation (parking) for increased recreational use. A fire in the canyon would race right up the canyon wall to my house!

I am opposed to the recreation part of this Proposal. The Pump Station and tunnel closure are fine, but please do NOT create access to the river in this area.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

There are ~~to~~ many children in our neighborhood. We feel the increased traffic, both during the construction, and after the parking area is complete, will create a risk for injury.

→ (over)

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.9, Fire Management.

L-241, pg. 2

C

A fire prevention plan, and funding for that should be part of the EIR/EIS — not after the fact.

I'm opposed to decimating the canyon (~~clearing~~ clearing) for the creation of a fire blockade.

A

More on traffic

- I don't believe the traffic impact was correctly estimated. What about those who drive down Maidu only to find no parking — they still impact the traffic on Maidu.

C

Concerned about environmental impact
- Air quality (CARB)
- oil
- garbage

C

At our informational meeting, the project manager stated that the access to public-access area from Pacific Street was not considered. This has less impact and should be considered instead of the Maidu access.

If one major goal is to return the river to its ~~an~~ natural (historic) state, then do not add the recreational part to this proposal!

L-242

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kevin Dimmick
ADDRESS:	11175 Rosemary Dr.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	Bus: (916) 748-7240 Home (530) 823-5116
ORGANIZATION (IF APPLICABLE):	N/A

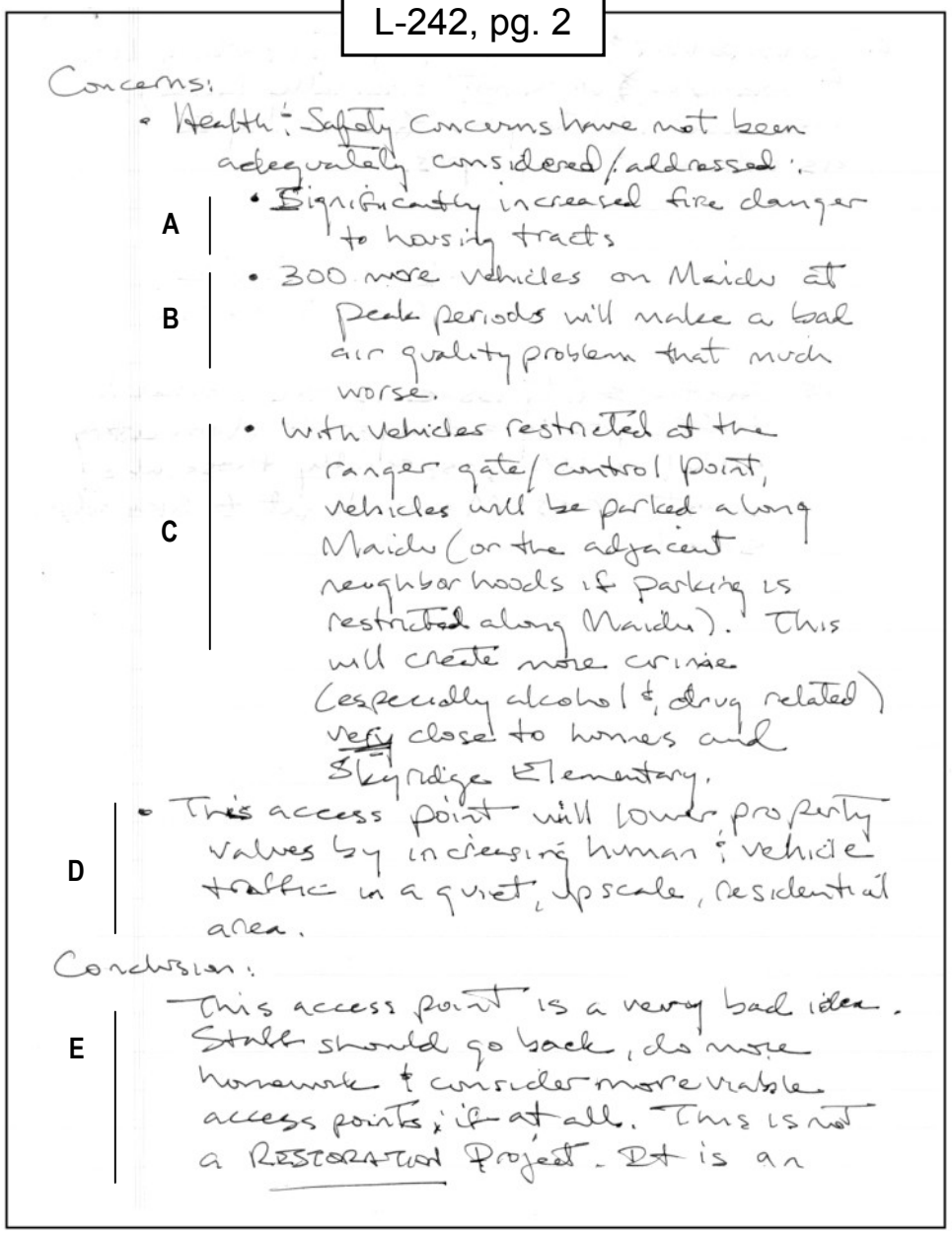
COMMENTS:

See attached

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
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☐ ***Please check here if you would like to be on the project mailing list.***

L-242, pg. 2



Concerns:

- Health & Safety Concerns have not been adequately considered/addressed:
  - **A** | Significantly increased fire danger to housing tracts
  - **B** | 300 more vehicles on Maidu at peak periods will make a bad air quality problem that much worse.
  - **C** | With vehicles restricted at the ranger gate/control point, vehicles will be parked along Maidu (or the adjacent neighborhoods if parking is restricted along Maidu). This will create more crime (especially alcohol & drug related) very close to homes and Skyridge Elementary.
  - **D** | This access point will lower property values by increasing human & vehicle traffic in a quiet, upscale, residential area.

Conclusion:

- **E** | This access point is a very bad idea. Staff should go back, do more homework & consider more viable access points, if at all. This is not a RESTORATION Project. It is an

A. Please refer to Master Response 3.1.9, Fire Management.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.6, Public River Access Features.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. Please refer to Master Response 3.1.10, Project Access.

L-242, pg. 3

E

IMPROVEMENT & CHANGE project. (Parking lots, for example, ½ were not originally there). Feels like a State grab of our rights as citizens & tax payers.

– Kevin Dimmick
(530) 823-5116

C

P.S. Another safety issue is the increased traffic posing a danger to elementary school children, especially those who must cross Marden to get to Skymidge School.

L-243

United States Department of the Interior

BUREAU OF RECLAMATION
MP CONSTRUCTION OFFICE
1140 West Wood Street
P.O. Box 988
WILLOWS, CALIFORNIA 95988-0988

IN REPLY
REFER TO:
MPCO-232
PRJ-8.10

NOV 14 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento CA 95825

Subject: Comments to Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR)--American River Pump Station Project--Statement No. DES 01-26 SCH# 1999062089--Placer County Water Agency (PCWA)--Auburn, California

Ladies and Gentlemen:

We have reviewed the subject draft EIS/EIR and provide the following comments.

A

1. Page 2-33, Survey and Identify Bat Habitat: The Draft EIS/EIR states that prior to construction, a survey of the construction area, would be conducted to determine the presence of bat species of concern.

Comment: Clarify what is meant by prior to construction. Will the survey be conducted prior to the completion of the final design specifications so the results can be reflected in the solicitation for bids, or will the survey be conducted after the award of a contract?

B

2. Page 2-34, Water Quality: The EIS/EIR states that the contractor will be required to perform daily monitoring of turbidity. The EIS/EIR also states that the monitoring and reporting requirements will be determined in consultation with the RWQCB and implemented by the contractor.

Comment: Clarify if the monitoring and reporting requirements stated in the EIS/EIR will be incorporated into the final design specifications prior to solicitation and bidding.

C

3. Page 2-38, paragraph above Geology and Soils: This paragraph discusses Cultural Resources at Shasta Reservoir.

Comment: Clarify if this paragraph about Shasta is correct or if it needs to be removed.

D

4. Page 2-41, Particular Matter, top of page: The EIS/EIR states that "All Grading operations would be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

Comment: Make data available that will show the frequency of occurrence of wind speeds over 25 miles per hour within the construction area. This requirement could pose a significant impact on a contractor, and bidders should be able to take this into account when bidding the project.

E

5. Page 2-41, Particular Matter, last paragraph under this heading: The second sentence states "Because it is uncertain whether or not the emissions can be further reduced to below the Placer County APCD's quarterly emissions threshold, the emissions above the threshold represent a potentially significant impact."

Comment: Indicate what impact this will have on construction if the threshold cannot be met. State what action Placer County APCD's will take if this happens.

A. The design consultant, together with Reclamation's Folsom Area Office and PCWA, are consulting with CDPR, CDFG, USFWS and NMFS to address and mitigate any potential wildlife concerns that are related to or directly impacted by activity within the construction area. It is intended that the bat habitat survey and any recommendation or restrictions thereby generated would be concluded prior to issuance of specifications for bidding so that the recommendations or restrictions can be incorporated into the construction specifications for contractor bidding purposes. If the consultation process is not completed prior to invitation for bids, it will be completed before notice to proceed is issued by Reclamation and any restrictions would be incorporated into the construction contract by amendment.

B. The lead agencies and the design consultant are currently in consultation with state and federal agencies regarding permitting requirements. It is intended that all permit requirements will be known prior to solicitation and bidding, so that the contract specifications can accurately reflect any necessary mitigation requirements to be imposed on the construction contractor, and the contractor can likewise integrate any additional costs associated with said requirements into bid prices.

A storm water pollution prevention plan (SWPPP) would be a requirement in the construction specifications. Turbidity monitoring during storm periods or when in-river work is taking place will be a requirement of the SWPPP. If the extent of turbidity monitoring is not accurately reflected by construction specifications, and only comes to light after the contract has been awarded, a modification to the contract will be necessary or the Reclamation construction manager could elect to perform any work not required of the contractor, but required as a permit condition.

C. The discussion regarding mitigation for the potentially significant cumulative cultural resources effects at Shasta Reservoir are correct. Reclamation is consulting with SHPO regarding the content of the programmatic agreement.

D. This information will be provided in the construction specifications.

E. The construction contractor would be required to include all air pollution control mitigation measures adopted by the lead agencies in the Mitigation Plan. Such measures would be included in the construction specifications.

F. Reclamation has not performed any on-site asbestos monitoring. The asbestos language in the Draft EIS/EIR is based upon the fact that some of the rock types at the project site have the potential to contain asbestos deposits within them. As a precautionary measure, the construction specifications would require the contractor to obtain air samples periodically during earth moving and drilling operations to document that no asbestos hazard exists. Other control measures, as required by CARB and APCDS, would be included in the Mitigation Plan. The Mitigation Plan would be incorporated into the constructions specifications.

L-243, pg. 2

F

6. Page 2-42, Public Health and Worker Safety, Exposure to Asbestos Fibers: The last sentence says that "Based on the results of on-site monitoring, construction workers also may be required to wear protective clothing and use respiratory equipment."

Comment: Clarify if Reclamation performed any onsite monitoring at the site that may indicated the levels of asbestos or if this is going to be a contract requirement for the contractor to monitor and determined the levels.

G

7. Page 2-79, Water Quality: Under the Environmental Protection and Mitigation Column, it states that the contractor would ensure proper implementation of water quality protection BMPs required by RWQCB.

Comment: Indicate that the BMPs will be incorporated into the specifications.

H

8. Page 2-80, Water Quality: Under the Environmental Protection and Mitigation Column, it states that the National Pollutant Discharge Elimination System permit compliance would include the development and implementation of a Stormwater Pollution Prevention Plan for the construction site.

Comment: Clarify who is responsible for the development and implementation of this Stormwater Pollution Prevention Plan for the construction site. Note that this is usually a standard contract requirement.

I

9. Page 2-95, Visual Resources: In the Impact Issue column, Action Alternatives, the first paragraph states that "Improvements to trail from turnaround to Oregon Bar would be performed manually, no construction equipment would be introduced to that area."

Comment: Clarify if this work will be performed by the contractor or other parties (CDPR). State the dimensions of the trail being constructed. Clarify if the trail size could potentially accommodate smaller pieces of equipment (for example Bobcat and Compact Excavators). If the trail can accommodate smaller pieces of equipment, it may be advantageous to all parties both in cost and time if the contractor were allowed to used some smaller motorized equipment to perform this work.

J

10. Page 2-122, Public Health and Worker Safety: Under the Environmental Protection and Mitigation Column, Preconstruction, it states that a geotechnical survey and mapping of serpentine rock will be conducted within areas to be excavated and blasted.

Comment: State who is responsible for conducting this survey and mapping work. Clarify if Reclamation has already conducted this survey.

K

11. All permits should be acquired and permit terms reflected in the specifications.

L

12. An appendix should be developed that consolidates all environmental commitments in one place.

If you wish to discuss this with us, please contact Walter Shaw of my staff at (530) 934-7066 or TDD (530) 934-7089. Please direct all correspondence regarding this matter to the Construction Engineer, Bureau of Reclamation, MP Construction Office, PO Box 988, Willows, California 95988-0988.

Sincerely,

for Richard A. Welsh
Construction Engineer

G. Construction specification requirements regarding water pollution control plans and storm water pollution control plans will adequately satisfy this requirement.

H. Reclamation will be issuing the solicitation and specifications for bid. Reclamation intends to make the development of the storm water pollution prevention plan a requirement of the contractor.

I. The commenter asks for clarification regarding the role of the contractor and any associated duties relating to trail improvement including trail-related construction activities and motorized equipment usage.

The lead agencies, along with the design consultant and CDPR, have decided that trail development will not be part of the construction contract and will be accomplished by others, such as CDPR personnel.

The Draft EIS/EIR has stated in the Action Alternatives (Table 2-7, Section 3.9) that no motorized equipment will be introduced into the area and all trail improvement work will be performed manually. Therefore, no small motorized equipment such as a Bobcat or Compact Excavator will be used during trail construction or improvement activities. All of this work will be done outside of the construction contract.

J. Reclamation would be responsible for survey and mapping of serpentine rock within the areas to be excavated and/or blasted.

K. The design consultant is obtaining the necessary permits with assistance from PCWA and Reclamation's Folsom Area Office. As nearly as practicable, all permits will be acquired prior to issuance of specifications for bidding so that the terms and conditions of the permits can be reflected in the specifications.

L. All aspects of the project design and issues raised in this comment letter have been closely coordinated with Reclamation Willows construction office.

L-244



United States Department
of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

IN REPLY REFER TO:
American River Cumulative Analysis

December 13, 2001

Memorandum

To: Area Manager, U.S. Bureau of Reclamation
Central California Area Office (Attention: Rod Hall)

From: Acting Field Supervisor, Sacramento Fish and Wildlife Office
Sacramento, California

Subject: Planning Aid Memorandum for the Cumulative Impact Analysis of the Placer County Water Agency's American River Pump Station Project.

The Bureau of Reclamation (Reclamation) has consulted with the Fish and Wildlife Service (Service) under guidance and provisions of the Fish and Wildlife Coordination Act (FWCA) to define a cumulative impact analysis for a number of American River-related reasonably foreseeable actions, including the Placer County Water Agency's proposed American River Pump Station Project (PCWA Project). The Service provided Reclamation with a Planning Aid Memorandum (PAM) (dated August 17, 2001) to document the Service's final recommendations on the cumulative analysis draft outline (draft outline) (dated May 1, 2000). The present PAM conveys the Service's comments and recommendations to Reclamation regarding results of the cumulative impacts analysis, as contained in the Draft EIS/EIR for the PCWA Project. These comments and recommendations are provided pursuant to the FWCA and the National Environmental Policy Act (NEPA).

The cumulative analysis is intended to help Reclamation meet several environmental regulatory requirements for the American River-related reasonably foreseeable actions, including NEPA, Endangered Species Act (ESA), and FWCA. There are more than 30 American River-related actions in the cumulative analysis, which include new, amendatory, and renewed water service contracts; Warren Act contracts; construction and operation of associated facilities, and dry year water deliveries to meet provisions of the Water Forum Agreement (USBR 2001). Water demands and service area effects are projected out to the year 2025. The cumulative analysis is to be applied to each of the American River-related actions, which Reclamation plans to assess on an individual action basis, beginning with the PCWA Pumps Project.

See Responses to Recommendations at L-244, page 8.

L-244, pg. 2

The Service advised Reclamation in the August 17, 2001, PAM that the cumulative analysis outline described in Reclamation's May 1, 2000, draft report; as amended by revised modeling assumptions, water demand projections, and impact indicators; appeared generally suitable for assessing cumulative impacts of the American River-related reasonably foreseeable actions. Exceptions included the significance criteria associated with the impact indicators; project description and modeling assumptions for the East Bay Municipal Utility District's (EBMUD) supplemental water supply project, which were not yet defined by Reclamation; and the lack of a baseline that could be used to isolate the cumulative effects of Reclamation's American River-related actions from those of non-Reclamation actions included in the cumulative analysis.

The Service has conducted an initial review of Reclamation's draft cumulative analysis for the PCWA Project (USBR 2001) and offers the comments below. Additional comments will be provided by the Service following additional review of the analysis.

Cumulative Analysis Content

- On initial review, the cumulative analysis appears to include most of the analysis topics contained in the cumulative analysis draft outline, with exceptions noted below.

- The cumulative analysis does a good job of summarizing a large amount of complex information regarding proposed actions, impact analyses, and results. Organization and graphics are generally clear and logical.

- Project descriptions address pertinent information needed by the Service for biological evaluation. However, because of the large amount of information presented and complexity of potential projects, we cannot determine, without further review and consideration of the data presented, whether the analysis contains all information that may be needed by the Service to address all impacts, including interrelated, interdependent, and cumulative aspects of the PCWA Project and other American River-related reasonably foreseeable actions.

- Sufficiency of information for ESA purposes cannot yet be determined by the Service, as review of the cumulative analysis for ESA purposes is not completed. Also, the approach for ESA consultation on future American River-related projects has not yet been determined and, therefore, the utility and sufficiency of data for species listed under the ESA (listed species) must be further considered.

- Analysis of the EBMUD water contract amendment targeting a Sacramento River diversion rather than the Folsom South Canal is acceptable to the Service, but modeling assumptions for EBMUD diversion amounts and timing is unclear, as the contribution of EBMUD water diversions to American River water demands, as provided in demand summary tables, is not provided in the cumulative analysis. For this reason, comparison of water demands for the American River presented in water demands tables are lacking some perspective due to omission of this significant amount of EBMUD water.

2

L-244, pg. 3

- During the interagency cumulative analysis planning meetings and per the draft outline, it was agreed that an analysis of bed load movement would be incorporated into the cumulative analysis. Bed load movement is an important river function, as it affects fisheries habitat structure and riparian vegetation substrates. This information has not been included in the present cumulative analysis.

- The monthly time-step limitation of PROSIM model was discussed during interagency meetings for the cumulative analysis. PROSIM cannot assess conditions for short-term events, such as a single day or week, but such short-term events can have serious adverse effects on American River aquatic habitat and fisheries (e.g., too warm water temperatures). During cumulative analysis planning (meetings and correspondence), the Service requested that Reclamation qualitatively describe the probability, extent, intensity, and consequences of short-term adverse conditions that may harm aquatic resources due to implementation of the cumulative American River-related actions. These projections would address environmental conditions that would most likely result in significant adverse effects (e.g., low flows and high temperatures at critical times in the lower American River, and their effects on aquatic life). This information has not been included in the present cumulative analysis.

- Diversion of nearly 300,000 acre-feet of additional water planned for the American and Sacramento rivers would add to existing impacts of the lower American River, Sacramento River, and Delta, making it more difficult to mitigate for these existing impacts, yet alone new impacts. During cumulative analysis planning (meetings and correspondence), the Service requested a modeling presentation to show environmental effects of increasing increments of total water diverted under the cumulative condition as a form of sensitivity analysis (e.g., flow and temperature in the lower American River would be assessed in increments of 10 or 20 percent of the total cumulative diversion amount). This analysis would help show thresholds of water diversions where adverse impacts to the biological environment begin to occur. As we realized it could be difficult to develop this analysis, we requested that Reclamation instead develop a best estimate of the threshold amount of water that could be diverted without additional impacts. This is an important consideration because the Central Valley river ecosystems, including the American River, are already under stress and in need of mitigative measures for impacts of existing water diversions. The threshold for new water diversions would help put the additional water demands in perspective regarding the capability of the river ecosystems to meet these new demands. This information has not been included in the present cumulative analysis.

Cumulative Impacts

- Because of the complexity of the cumulative analysis and time constraints for review, the Service has not completed its review of cumulative impacts presented in the cumulative analysis and cannot offer complete comments on results of the cumulative impact analysis at this time. Comments and recommendations on several aspects of the cumulative analysis; however, are provided below. The Service will continue its review of the

3

cumulative analysis as applied to future Reclamation projects and provide additional comments to Reclamation.

- Some of the impact indicators and significance criteria are too often based only on special-status species, alone. Some environmental alterations that are seemingly substantial were determined to be insignificant under the significance criteria used, but other potential impacts were not addressed. For example, upper Sacramento River flows reduced by up to 9.4% in the cumulative condition is considered less than significant, based on winter-run chinook salmon biological opinion criteria. However, a 9.4% reduction is substantial and could adversely affect other species, such as resident fish (non-anadromous), aquatic invertebrates, amphibians, and river-associated terrestrial species. These species could be adversely affected by loss of aquatic habitat area, shaded riverine aquatic habitat, and vegetation adjacent to the river (similar to a reservoir "bathtub ring" during drawdown).

- Some significance criteria are vague, as they are open ended and subjective. These criteria state that sufficient magnitude of effect must occur to be significant, but the magnitude that would be sufficient is not defined. No supporting biological data is provided for some conclusions that magnitudes of effects are too small to be significant, such as cottonwood growth and maintenance, backwater recharge on the lower American River, and others. For example, flows in the lower American River of at least 2,000 cfs during the cottonwood growing season decrease under the cumulative condition by 6.4% at H Street Bridge. This is determined by the analysis to be "less than significant," but no data are provided to support that conclusion, or what percent decrease would be considered significant. Similar conclusions are made for riparian habitats on other streams and for other impacts in the analysis, and possibly other non-riparian related indicators. The Service is continuing review of impacts to lower American River cottonwood habitat and associated wildlife species due to changes in instream flows, and we will provide further comments to Reclamation when review is completed.

- Several "potentially significant" impacts are identified in the cumulative analysis, including fall-run chinook salmon rearing habitat in lower American River due to reduced flow and increased temperature, splittail riparian habitat loss in the lower American River due to reduced flow, winter-run chinook salmon early lifestage survival in upper Sacramento River due to increased temperature, long-term average water temperatures in lower Sacramento River, shifts in X2 due to reduced Delta outflow, long-term average flow reductions in lower Feather River, and service area effects. However, it is not clear what contribution Reclamation's American River-related actions have made to these cumulative impacts because these actions are combined with non-American River-related actions contained in the cumulative condition (e.g., reduced Trinity River imports, increased demands of the State Water Project, and increased demands of the Contra Costa Water District) and only a total effect is presented in the analysis results. The Service provides recommendations on this problem below under "Programmatic View of Cumulative Actions."

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- Related to the preceding comment, the contribution of the PCWA Project to cumulative impacts is determined by Reclamation to be "less than significant." The same could probably be concluded for impacts of other American River-related reasonably foreseeable actions in the future, which Reclamation would address using the cumulative analysis. Each Reclamation project may have impacts considered by Reclamation to be less than significant, but the sum of impacts from multiple Reclamation actions (cumulative impacts) may be significant. This raises concerns about how Reclamation would make decisions on implementing individual projects, and how mitigation needs for Reclamation-specific cumulative impacts, which are presently obscured in the analysis with other cumulative impacts, would be determined. Additional comments on this topic is provided below under "Programmatic View of Cumulative Impacts."

Mitigation of Cumulative Impacts

- As cumulative impacts due to Reclamation actions are obscured in the cumulative analysis, mitigation needs for cumulative impacts due to Reclamation actions cannot be determined. No specific mitigation or further action by Reclamation to address cumulative impacts is proposed for cumulative impacts in the present cumulative analysis. Reference is made to an Environmental Protection and Mitigation Plan that is under preparation and is to be included in the final EIS/EIR process for the PCWA Project, but this reference regards only the selected alternative and not cumulative impacts. Reclamation should be more specific in how mitigation needs will be determined and mitigation actions be planned and implemented. Confounding of the sources of cumulative impacts is one reason the Service previously recommended, during cumulative analysis planning, that Reclamation address American River actions programmatically and isolate Reclamation's portion of cumulative impacts (see further comments on this topic below under "Programmatic View of Cumulative Actions").

- It appears that the ongoing programs and activities in the Central Valley described in Appendix A of the cumulative analysis are being referenced by Reclamation as potentially mitigating for the PCWA Project and other American River-related reasonably foreseeable actions contained in the cumulative analysis. It is the Service's position that CVPIA programs for habitat conservation [e.g., Central Valley Project Conservation Program and CVPIA (b)(1) "Other"] described are intended as mitigation for past CVP impacts, and are not to be used as mitigation for new impacts, such as from new water deliveries or other new CVP actions.

- If the CALFED Bay-Delta Program will be expected to provide mitigation for proposed water diversion projects, the specific CALFED Program elements that would provide the mitigation should be identified, and the nature of the mitigation actions should be described (e.g., locations and types of action).

- If Reclamation's Central Valley Project Wetlands Program is to be considered a conservation or mitigation measure for cumulative impacts (Cumulative Analysis Appendix A), figures for wetland acreage created, restored, and enhanced by the Program should be provided as an accounting of this program's potential contribution to mitigation

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of cumulative impacts. Purposes, objectives, and commitments of the program for mitigating past impacts also should be defined.

- Other conservation measures for water service areas that are part of local and regional plans are described in Appendix A of the cumulative analysis. While conservation measures and mitigation from local and regional plans are desirable, the Service does not always consider them adequate for mitigating impacts (including those related to non-special-status species) that are enabled by new Reclamation water supplies (i.e., indirect and interrelated impacts). The Service does not believe that Reclamation should rely on local and regional plans, alone, to satisfy mitigation needs related to delivery of Reclamation water. In order to define the effectiveness of local and regional mitigation/conservation plans, and determine the adequacy of these plans for service area impacts, an accounting of past and planned actions associated with these plans should be taken. Reclamation should compare past and future expected impacts in the service areas with past and planned mitigation, and make a determination of sufficiency of mitigation. Reclamation should assist locals in augmenting mitigation, as needed.

- Although the PCWA Project is part of the Water Forum Agreement, it is not clear how Reclamation will consider mitigation and conservation measures contained in the agreement. For example, is the Water Forum's Lower American River Habitat Management Element considered to adequately mitigate for Lower American River impacts, and does Reclamation support a new flow standard for the Lower American River as a mitigative measure?

Programmatic View of Cumulative Actions

- The Service believes that a cumulative analysis is necessary for assessing cumulative impacts of the American River-related reasonably foreseeable projects, but we have concerns about the project-by-project approach to decision making under NEPA, and that Reclamation has not developed a master plan for managing the multiple demands on American River water. Having considered the more than 30 American River-related reasonably foreseeable projects, the Service believes that the group of projects should be evaluated together in a programmatic Environmental Impact Statement (EIS), rather than on a project-by-project basis. We believe that the projects are interrelated and interdependent, as described below, and that, in addition to cumulative analysis of impacts, the decision making process would best be served with a programmatic EIS and programmatic Record of Decision.

- The Council on Environmental Quality states that "the preparation of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other or proposed agency actions, share common timing or geography. For example, when a variety of ..... projects may be located in a single watershed, ... the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts ..... within that geographic area" (Federal Register 46:55, 18026-18038). All of the American River-related reasonably foreseeable actions are dependent on a common resource–the American River– which must be managed as a

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whole by Reclamation's Folsom Dam and other diversion facilities in order to protect and enhance fish and wildlife resources and meet environmental standards in the lower American River and Delta.

- Another circumstance supporting the need for a programmatic EIS is that many of Reclamation's American River-related reasonably foreseeable actions were developed within a cooperative negotiation process among multiple American River water purveyors known as the Sacramento Water Forum. These projects are a part of a package produced by the Water Forum–the Water Forum Agreement– which includes linked actions based on many "quid pro quos," and can be considered a program. Diversion amounts, dry year reductions, conservation measures, and mitigation measures are all negotiated components of the Water Forum linked to many of Reclamation's American River-related reasonably foreseeable actions. For purposes of state regulatory compliance, the Water Forum developed a combined (essentially programmatic) Environmental Impact Report, which could serve as a starting point for a programmatic EIS. Implementation of negotiated agreement components would be inherent in individual actions implemented by Reclamation and require modifications to CVP operations. In this respect, Reclamation would be committing to, and implementing components of, the Water Forum Agreement when it implemented actions such as the PCWA Project, but without Programmatic consideration of cumulative impacts or program-level alternatives.

- The Service is concerned that without a programmatic EIS, Records of Decision for the individual projects would consider only the incremental contribution of the proposed action to the cumulative impact, which could result in project approval without full consideration of impacts. As described above, each project alone could result in a relatively small incremental contribution toward the cumulative impact and, therefore, each incremental impact could be considered less than significant. However, the cumulative analysis indicates some impacts are substantial and considered by Reclamation to be significant. The problem is further complicated by the pooling of Reclamation-related impacts and non-Reclamation-related impacts in the cumulative analysis' results sections, making it impossible to discern Reclamation's cumulative impacts from the others. It is unclear how Reclamation intends to consider cumulative effects of their American River-related reasonably foreseeable actions, and how mitigation needs would be determined.

  Under a programmatic EIS, all American River actions under Reclamation's purview could be considered together as a program, and the Record of Decision could consider the Reclamation-specific cumulative impacts in defining a program plan for the American River Basin, rather than making incremental management decisions based on incremental impacts. The programmatic EIS could develop alternatives to comprehensively address existing water demands and environmental conditions, potential American River actions, environmental effects, and mitigative measures. Reclamation could then produce a programmatic Record of Decision defining a holistic, ecosystem-level plan for managing the high demands being put on water resources in the American River Basin. The Record of Decision could determine whether the Water Forum Agreement, as a program, would

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be part of Reclamation's preferred alternative for federal action, and whether Reclamation would be able to meet increased demands on the already stressed American River water resources, while fulfilling obligations to protect and enhance the American River, Sacramento River, and Delta ecosystems.

Endangered Species Act Consultation

- As the Service believes that many of the American River-related reasonably foreseeable actions are interdependent and interrelated, and that the actions must be considered and managed as a whole to protect and recover federally listed species within the area of environmental effects, we request that Reclamation enter into discussions with the Service to develop an ecosystem-based, programmatic consultation under section 7 of the ESA on the group of American River-related reasonably foreseeable actions.

Recommendations

A 1. Keep the Service informed of new information for the PCWA Project, as available, so that we can update our recommendations.

B 2. Qualitatively describe the probability, extent, intensity, and consequences of short-term adverse conditions that may harm aquatic resources due to implementation of the American River-related reasonably foreseeable actions.

C 3. Estimate threshold amounts of water diversions that would adversely impact the biological environment, as defined by impact indicators, so as to identify the maximum amount of new water that could be diverted by the American River-related reasonably foreseeable actions in the future without diminishing the environmental baselines for Delta smelt and Sacramento splittail, or adversely affecting other biological resources.

D 4. Further substantiate conclusions on significance of impacts, where necessary, by citing supporting data or scientific rationale related to the important water qualilty and flow parameters (such as X2 and instream flow) that the Service uses to determine baselines for Delta smelt and Sacramento splittail, and assess other biological resources that have relatively subjective impact conclusions (e.g., riparian vegetation effects).

E 5. Further substantiate conclusions on significance of impacts, where necessary, by citing supporting data or scientific rationale related to important environmental parameters affecting other biological resources having relatively subjective impact conclusions in the cumulative analysis (e.g., riparian vegetation effects).

F 6. Evaluate the American River-related reasonably foreseeable actions in a programmatic EIS, and develop a programmatic Record of Decision on both terrestrial and aquatic resources that isolates and considers, as a whole, the effects of Reclamation-specific cumulative impacts, as well as all other cumulative impacts, on the American River, Delta, water service areas, and other affected locations.

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A. PCWA has agreed to do so.

B. Please refer to Master Response 3.1.14, Cumulative Impact Analysis.

C. Please refer to Master Response 3.1.14, Cumulative Impact Analysis.

D. See following page for response.

E. Please refer to Master Response 3.1.14, Cumulative Impact Analysis.

F. Please refer to Master Response 3.1.14, Cumulative Impact Analysis.

Letter 244 Responses (cont.)

Response D

The Draft EIS/EIR provides significance criteria to evaluate each potential impact. For instance, the following excerpt from Table 3.5-4 of the Draft EIS/EIR (page 3-79) describes the impact indicators and significance criteria utilized for the evaluation of the Delta resource parameters described in the comment letter.

Impact Indicator	Significance Criteria
Monthly mean Delta outflow (cfs) for all months of the year.	Decrease in Delta outflow, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect Delta fish resources over the 70-year period of record.
Monthly mean location of X2 and Delta export/inflow ratios for all months of the year, with an emphasis on the February through June period.	Change in position of X2 and Delta export/inflow ratio, relative to the basis of comparison, of sufficient magnitude and frequency to adversely affect spawning and rearing habitat and downstream transport flows over the 70-year period of record.

In addition to the criteria described in the table, the Draft EIS/EIR *Assessment Methodologies* section (page 3-70) outlines more specific standards involving the analysis of potential impacts to Delta resources. For example, changes in monthly mean Delta outflow for the 70-year period of record under the Proposed Project and the cumulative condition were determined for each month of the year and were compared to monthly mean Delta outflow under the basis of comparison. The frequency and magnitude of differences in Delta outflow were evaluated relative to life history requirements for fish species of priority management concern in the Delta. Furthermore, changes in monthly mean X2 position were determined for all months of each year, with an emphasis on the February through June period, due to the potential effects on spawning and rearing habitat and downstream transport flows for delta smelt, longfin smelt, splittail, striped bass, salmonids, and other aquatic species in the Delta.

Impacts to Delta smelt, splittail, striped bass, and other Delta fish resources were considered adverse if hydrology under the Proposed Project and the cumulative condition showed a substantial decrease in monthly mean Delta outflow, relative to hydrology under the basis of comparison, during one or more months of the February through June period, if a substantial shift in the long-term monthly mean X2 position occurred, or if Delta export/inflow ratios were increased to where allowable export limits would be exceeded.

Using the indicated significance criteria, the Draft EIS/EIR (page 3-102) and the Final EIS/EIR revisions (Chapter 3.0, Section 3.5.2.4, Impact 3.5-34: Impacts to Delta Fish Populations) describe the potential diversion-related impacts of the Proposed Project relative to the existing condition. The model outputs do not exceed the values and qualifications identified by the significance criteria. The model simulations conducted for the Action Alternatives also included conformance with X2 requirements set forth in the SWRCB Interim Water Quality Control Plan. The Delta export-to-inflow ratios under the Action Alternatives would not exceed the maximum export ratio as set by the SWRCB Interim Water Quality Control Plan. The Draft EIS/EIR deemed these impacts less than significant.

The significance criteria utilized in the American River Pump Station Draft EIS/EIR to determine potentially significant impacts to Delta fish populations is very conservative (rigorous) relative to the significance criteria utilized by resource agencies in previous documents. The USFWS, in their comment D in Letter 244, request additional potential impact significance determination substantiation regarding indicators (e.g., X2) that USFWS uses for impact evaluations. The USFWS has prepared three important, relatively recent NEPA compliance documents including the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), and the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999). For each of these three documents, USFWS has utilized various significance criteria, particularly regarding evaluation of potential Delta (e.g., X2) impacts. The various approaches and significance criteria utilized in these three documents are briefly described below, for comparative purposes relative to this EIS/EIR.

Response D (cont.)

In the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the USFWS does not definitively state significance criteria. Instead, the evaluation of potential impacts relies on qualitative narrative descriptions based on the relationship between potential CVPIA actions and potential changes to environmental conditions. These assessment relationships are used to describe the manner in which environmental conditions lead to responses by representative species (pg. IV-80). The impact analysis performed in the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), although apparently somewhat more rigorous than the CVPIA analysis, also lacks definitive quantification of impacts to delta water quality parameters (e.g., movement in X2) and relies on qualitative and potentially subjective judgments to address potentially adverse impacts. The CVPIA significance criteria states (pg. 7.1-30) *"An effect is found to be significant if it substantially degrades aquatic ecosystem processes; substantially reduces structural characteristics of the aquatic ecosystem; substantially degrades conditions affecting or potentially affecting the abundance or range of a rare, threatened, and endangered species or a species having economic or social value; or has considerable effects when viewed with past, current, and reasonably foreseeable future projects."* Most recently, in the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999), the USFWS defined quantitative significance criteria to be used in the fisheries impact analysis. The *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* utilized criteria which considered impacts to Delta fisheries resources significant if the project created a *"…10 percent modeled exceedance in the ratio of Delta inflows to exports, Delta outflows, and changes in X2 position during the February through June period…over the 69-year simulation period…."* The USFWS "*judged [the 10 percent exceedance criteria] to be conservative given it would be applied over the entire analysis period"* (pg. 3-182). The USFWS Trinity River BO (pg. 30) states that the error of the model used in their analysis is +/- 3%.

The Proposed Project caused none of the 70 modeled years to result in a greater than 10% change (relative to the existing condition) in Delta outflow during the months of February through June (see table, below). In fact, the 10% threshold utilized by USFWS was never exceeded during any month for the 70 modeled years. In addition, the maximum upstream movement of X2 during the February through June period for any individual month was 0.2 km, representing a maximum change of 0.3%, far below the 10% threshold. Finally, the Proposed Project did not result in a difference in the export/import (E/I) ratio of 10% relative to the existing condition in any year for the February through June period.

Comparison of Proposed Project to Existing Condition (Baseline)

	Number of Years with a Difference in Delta Outflow of 10% or more	Number of Years with a Difference in Delta Outflow of 3% or more	Maximum Upstream Movement for any Individual Month (out of 70 years) of X2 (km)	Maximum Percent Change in Upstream Movement of X2	Number of Years with a Difference in E/I Ratio of 10% or more
February	0	0	0.1	0.2%	0
March	0	0	0.2	0.3%	0
April	0	0	0.1	0.2%	0
May	0	0	0.1	0.2%	0
June	0	0	0.2	0.3%	0

The impacts on Delta resources were deemed less than significant in the American River Pump Station Project DEIS/EIR data analysis. The USFWS criteria utilized in the *Central Valley Project Improvement Act Draft Programmatic EIS* (1997), the *CALFED Bay-Delta Program Programmatic EIS/EIR* (1998), and the *Trinity River Mainstem Fishery Restoration Draft EIS/EIR* (1999) further substantiates the significance criteria outlined in the American River Pump Station Project Draft EIS/EIR and the conclusion of less-than-significant impact. Therefore, overall impacts to Delta fish populations would be less than significant.

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7. Develop a water resources management plan for the American River Basin based on a programmatic Record of Decision.

8. Develop a mitigation plan that considers existing needs for mitigation of historical and present CVP impacts to aquatic and terrestrial wildlife and their habitats, then incorporate mitigation actions for new impacts of the American River-related reasonably foreseeable actions.

9. Enter into discussions with the Service to develop an ecosystem-based, programmatic consultation under section 7 of the ESA on the group of American River-related reasonably foreseeable actions.

The Service appreciates the opportunity to participate in the early planning stages of environmental evaluation for the American River Basins. If you have any questions regarding this memorandum or our recommendations, please contact Bart Prose of my staff at (916) 414-6558.

cc: Rob Schroeder, U.S. Bureau of Reclamation
Mike Aceituno, National Marine Fisheries Service
Larry Eng, California Department of Fish and Game
Laura Fujii, U.S. Environmental Protection Agency
Einar Maisch, PCWA

REFERENCE:

USBR (U.S. Bureau of Reclamation). 2001. American River Pump Station Project. Draft environmental impact statement/environmental impact report. Appendix D. Draft American River Basin Cumulative Impact Report. USBR, Central California Area Office, Folsom, CA.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:

December 13, 2001

Memorandum

To: Area Manager, U.S. Bureau of Reclamation
Central California Area Office (Attention: Rod Hall)

From: Acting Field Supervisor, Sacramento Fish and Wildlife Office,
U.S. Fish and Wildlife Service

Subject: Draft Fish and Wildlife Coordination Act Report for the Placer County Water Agency's Pump Station Project, Placer County, California

The Fish and Wildlife Service (Service) has reviewed the *Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) for Placer County Water Agency's American River Pump Station Project*, Placer County, California. This memorandum transmits the Service's Draft Fish and Wildlife Coordination Act Report which was prepared under the authority, and in accordance with the provisions of Section 2(b) of the Fish and Wildlife Coordination Act (48 stat. 401, as amended: 16 U.S. C. 661 et seq.) Comments and recommendations contained in the report regarding our review of the DEIS/EIR also are provided pursuant to the National Environmental Policy Act. The draft report assesses potential project effects on fish and wildlife resources and provides our mitigation recommendations to reduce potential adverse affects to those resources. The Service is providing comments and recommendations regarding the *American River Basin Cumulative Impact Report* to Reclamation in a separate Planning Aid Memorandum. Project effects on federally listed species, pursuant to section 7 of the Endangered Species Act of 1973, as amended, are being addressed separately.

If you have any questions please contact Jill Wright at (916) 414-6600.

Attachment

cc: NMFS, Sacramento, California (Attn: Michael Aceituno)
CDFG, Region II, Sacramento, California
PCWA, Auburn, California (Attn: Einar Maisch)

See Responses to Recommendations at L-244, page 29.

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U. S. Fish and Wildlife Service
Draft Fish and Wildlife Coordination Act Report
for

Placer County Water Agency's Pump Station
Auburn, California



Sacramento Fish and Wildlife Office
United States Fish and Wildlife Service
Sacramento, California

November 2001

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INTRODUCTION

This Fish and Wildlife Coordination Act (FWCA) report evaluates the effects of the alternatives described in the August 2001, draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Bureau of Reclamation's (Reclamation) proposed Placer County Water Agency's (PCWA)American River Pump Station Project near the town of Auburn in Placer County, California and recommends methods for mitigating losses, preserving and enhancing the affected natural resources. The U.S. Fish and Wildlife Service's (Service) report has been prepared under the authority, and in accordance with provisions of the FWCA (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). The FWCA requires Federal water resource development or licensing agencies to consult with the Service and to give equal consideration to the preservation, conservation, and enhancement of fish and wildlife resources with other project purposes.

This FWCA report provides 1) the Service's analyses of impacts to fish and wildlife that would result from construction and operation of the proposed project; 2) recommendations to avoid, minimize, rectify or, as a last resort, compensate for these impacts; and 3) the Service's assessment of project alternatives based on a fish and wildlife conservation perspective.

SERVICE MITIGATION POLICY

Mitigation recommendations contained in this report are based on the Service's Mitigation Policy (Federal Register 46:15, January 23, 1981), which provides guidance for establishing appropriate mitigation for projects under our purview. In addition, the Service has a Regional policy that establishes a goal of no net loss of wetland acreage or value, whichever is greater. Under the Service's Mitigation Policy, resources are divided into four resource categories to ensure that recommended mitigation is consistent with fish and wildlife habitat values effected. How a proposed action affects selected (evaluation) species occupying these habitats is one element of determining what mitigation the Service will seek for the project. The categories cover a range of habitat values from those considered to be unique and irreplaceable to those believed to be much more common and of relatively lesser value to fish and wildlife. Each of the four resource categories has a criteria with specific mitigation goals.

Resource category criteria are:

(1) areas of high value for the evaluation species and are unique and irreplaceable;
(2) areas of high value for the evaluation species which are scarce or becoming scarce regionally;
(3) areas of high to medium value for the evaluation species which are relatively abundant; and
(4) areas with medium to low value for the evaluation species.

The respective resource category mitigation goals are:

(1) no loss of existing habitat value;
(2) no net loss of in-kind habitat value;

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(3) no net loss of habitat value while minimizing loss of in-kind habitat value; and
(4) minimize loss of habitat value.

The Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA) define mitigation to include: 1) avoiding the impact; 2) minimizing the impact; 3) rectifying the impact; 4) reducing or eliminating the impact over time; and 5) compensating for the impact. The Service's Mitigation Policy uses this same definition of mitigation and considers the specific elements to represent the desirable sequence of steps in the mitigation planning process. Accordingly, we maintain that the best way to mitigate for the adverse biological impacts it to avoid them whenever possible.

BACKGROUND

In the late 1960s, PCWA built a 50 cubic feet per second (cfs) capacity pump station on the North Fork of the American River near the city of Auburn to convey PCWA water supplies to the Auburn Ravine Tunnel (a.k.a. Ophir Tunnel) for delivery to PCWA's service area. However, before PCWA's operations began, the pump station was removed by Reclamation to facilitate construction of Auburn dam in the same area. Construction activities for the dam started in 1967 and included installation of a half mile long tunnel to bypass the river around the construction area (bypass tunnel), construction of a cofferdam to divert the river from the construction site, and excavation for the Auburn Dam foundation.

In 1972, Reclamation entered into a land purchase agreement with PCWA to acquire canyon lands needed for the Auburn dam project. As part of the agreement, PCWA's 50 cfs pump station was removed and Reclamation was obligated to provide a temporary pumping facility to deliver up to 25,000 acre-feet annually (AFA) at a rate of up to 50 cfs into an existing tunnel intake structure at the intake portal of the Auburn Ravine Tunnel when PCWA needed to access its MFP water. Reclamation has been reinstalling a temporary pump each year for PCWA's use and removing it prior to the flood season. PCWA has requested a permanent pump station be constructed with a greater capacity and upgraded conveyance system.

PROJECT DESCRIPTION

Reclamation proposes to construct a new permanent pumping station (and related facilities) for PCWA. The year-round pumping facility would divert water from the North Fork of the American River in the vicinity of the Auburn Dam construction site. The diverted water would be water to which PCWA holds water rights in connection with its Middle Fork American River Project (MFP). When completed, the pump station could divert up to 35, 500 AFA of water from the North Fork of the American River to be delivered to various locations within PCWA's service area.

The proposed project is intended to meet the short- and long-term needs of Placer County and contribute to meeting future water needs for El Dorado County. The diversion facility and

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pumping station will be designed to accommodate additional pumps for PCWA's future expanded diversion amounts and use, and also would include a vacant station for installation of a pump for Georgetown Public Utility District (GDPUD) to divert water from the same location for delivery to areas in El Dorado County (outside of PCWA's service area).

Three alternatives, the No Action/No Project Alternative, and two action alternatives, the Mid-Channel Diversion Alternative, and the Upstream Diversion Alternative are considered in the draft EIS/EIR. All alternatives describe a project of diverting and delivering water from the North Fork American River at the Auburn dam site to the Auburn Ravine Tunnel. Under the No Project Alternative, Reclamation would continue to install and remove the seasonal pumps at the existing location and maintain responsibility for the operation and maintenance of the facilities.[1] PCWA would rely upon the operation of the seasonal pumps to access their MFP water supply; however, PCWA would probably request that Reclamation install the pumps earlier in the year for longer periods of use (April through November) as customer demands increase.

Both action alternatives, the Mid-Channel Diversion and the Upstream Diversion would provide PCWA with a year-round diversion and access to its MFP water supply in the American River Canyon at the Auburn dam site. Both alternatives also would provide the potential for future increased diversion capacity for PCWA as well as GDPUD. Implementation of either alternative would result in the construction and operation of a facility that would provide a year-round water supply to PCWA with an initial pumping capacity of 100 cubic feet per second (cfs) for an annual supply of up to 35,500 AF. The major features that would be constructed for both action alternatives include the water diversion/intake structures, a fish screen and trash rack, water conveyance pipelines, a new pump station placed above the 100 year flood level designed to accommodate future expansion; access roads; power lines; and safety features. After construction there would be a transfer of the pump station project ownership, operation, and maintenance responsibilities, and grant of land rights from Reclamation to PCWA.

The action alternatives differ in the locations of the diversion/intake structures, whether or not the bypass tunnel is closed, implementation of a restoration plan for the existing dewatered segment of the American River channel at the project site, and provisions for increased recreational access facilities in the area. The Mid-Channel Diversion Alternative would locate a new pump station and diversion/intake facility in the dewatered reach of the river channel, close the bypass tunnel, and restore the river channel. The Upstream Diversion Alternative would locate the pump station at the same site as the proposed project, but place the diversion/intake facilities upstream of the bypass tunnel inlet; the bypass tunnel would remain open, and the dewatered river segment would not be restored.

The intake structure for the Upstream Diversion Alternative would be located on the north river bank, about 100 feet upstream of the bypass tunnel inlet. A weir would be constructed upstream of the diversion structure, parallel to river flow for hydraulic gradient control. A seven-foot diameter pipeline would extend about 490 feet between the intake structure and pump station.

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[1]The seasonal pump station facility includes an inlet pipeline that draws water from a small sump pond about 750 feet upstream of the bypass tunnel inlet, four pump canisters (12.5 cfs capacity each), and 2,800 feet of steel pipeline placed above ground from the pump station connected to the Auburn Tunnel portal.

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Locating the diversion upstream of the bypass tunnel would not require channel restoration or tunnel closure. The project would remain closed to the public, except for designated trial use. No additional public access facilities would be developed. The pump station location and associated facilities would be the same as for the proposed project.

The proposed project is the Mid-Channel Diversion Alternative and includes construction and operation of a year-round water pumping facility, closure of the bypass tunnel, and restoration of the three-quarter mile reach of the river that was dewatered and impacted by activities associated with the construction of the foundation for the Auburn Dam. Additional facilities for GDPUD's potential use would be constructed as part of this project to avoid future and further disruption of the project area and riverbed after the river has been restored. The major construction features of proposed project include: 1) construction of a new pump station placed above the 100-year flood level; 2) construction of a water diversion/intake structure; 3) installation of a pipeline casing under the riverbed from the pump station to the east side of the river channel (for future use by GDPUD); 4) installation of a CDFG approved fish screen; 5) excavation of the cofferdam debris in the dewatered reach of the river; 6) closure of the bypass tunnel and restoration of flow to the American River channel; 7) installation of water conveyance pipelines; 8) improvements and construction of access roads for project construction and operation; 9) extension of power supply lines; and 10) construction of public river access sites/safety features and related improvements at the Auburn dam site and near Oregon Bar.

PROJECT AREA

Originating in the Sierra Nevadas, the North and South Forks of the American River join upstream of the city of Auburn; from that confluence, the river flows freely past the city of Auburn in a narrow, deep, and steep sided canyon. Downstream from Tamaroo Bar the river is funneled into the half-mile long bypass tunnel through the area known as the Auburn Dam site (about 500-foot elevation) before entering Folsom Lake.

The geographic scope of the proposed project study area and associated fish and wildlife resources are described in the draft EIS/EIR. In general, the project area encompasses: 1) the project area, 2) PCWA's water service area; 3) the lower American River, and 4) the regional setting.

The project area includes the footprint of the physical facilities of the project features and encompasses all areas where construction, operation, maintenance activities of the proposed project or alternatives would have direct effects on fish and wildlife resources, including the reach of the river between Ralston Afterbay downstream to the Oregon Bar where direct diversion-related effects on the upper American River (changes in river hydrology) would occur.

Habitat types present along the North and Middle Fork of the American River in the project area are described in the DEIS/EIR and include foothill riparian, montane riparian, montane hardwood, montane hardwood-conifer, mixed conifer, blue oak-foothill pine, blue oak woodland, chaparral, and grassland (Mayer and Laudenslayer 1988).

The draft EIS/EIR classified terrestrial habitats in the vicinity of the footprint of the project facilities as urban,[2] disturbed,[3] foothill oak woodland, riparian and wetland habitats. The Auburn dam site is situated within the project area. The natural landscape in this section of the river canyon has been severely disturbed by Auburn Dam construction activities and is generally devoid of vegetation. Cofferdam debris (excavated bedrock) is scattered in the dewatered channel and extends far beyond the bypass tunnel outlet. Mature oak woodland vegetation occurs upstream and downstream of the project area and pockets oak woodland habitat are present in areas where slopes were not graded for access roads. Sparse vegetation (grassses, shrubs, small trees) is present and riparian and wetland habitats are limited in the disturbed areas. The majority of the project area where construction would occur is either covered by boulders or loose gravel of various sizes, or by grasses and shrubs that have become establish in areas that were previously disturbed.

The PCWA's service area includes all areas of Placer County where construction and operation of the proposed project or other alternatives would have indirect effects on fish and wildlife resources through land use changes and habitat conversion within areas to which water would be delivered.

The American River Basin area is described in the draft EIS/EIR. The regional project area is defined by the indirect effect study area and encompasses the major CVP and SWP reservoirs draining to the Delta, the rivers downstream of these reservoirs, and waterways of the Sacramento River and American River basins, including the Sacramento-San Joaquin Delta, and the Yuba and Feather Rivers that could be affected by Reclamation's changes in operation of the CVP or the DWR's changes in operation of the SWP facilities.

BIOLOGICAL RESOURCES

Existing Conditions

Descriptions of biological resources in the project study area and for downstream river systems are provided in the draft EIS/EIR. The biological resources in the project study area include: 1) terrestrial plants and animals which inhabit or utilize the natural habitats and open space areas within project area; 2) various terrestrial habitats within the undeveloped open areas and agricultural lands of PCWA's service area and regional project area, including, but not limited to, valley/foothill riparian, oak woodland savannahs, chaparral and shrublands, annual grasslands, grain and pasture fields; 3) wetlands, including aquatic and riparian habitats of the Auburn Ravine and other tributaries and drainages within PCWA's service area that may be directly or indirectly affected by the proposed project; 4) plant and animal species that rely on the aquatic habitats of Folsom and Natoma Reservoirs and other areas of open water, freshwater marshes and

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[2]Urban habitat includes paved and unpaved roadways, public utilities, and residential development.

[3]Disturbed habitat is designated for areas with grasses and scattered shrubs and trees providing less that 10 percent canopy cover, areas of bare bedrock, and talus slopes and includes areas that have not been disturbed in several years, but where the disturbance has created conditions limiting tree and shrub environment (i.e., areas of cofferdam remnant, bypass tunnel, and batch plant).

seasonal streams and tributaries; 5) various anadromous and resident fishes which reside in, or pass through, not only the lower American River, but the Delta, Suisun Bay and the Sacramento River that may be cumulatively affected by indirect and interrelated project impacts; and 6) the terrestrial resources (riparian and wetland vegetation and associated species that utilize it for habitat) of the American and Sacramento rivers and reservoirs, as well as Oroville Reservoir and the Feather River that may be influenced by the proposed project or alternatives and other reasonablely foreseeable actions.

Aquatic Resources

Project Area

The aquatic resources of the Middle Fork American River from below Ralston Afterbay to the confluence with the North Fork and downstream to Oregon Bar include both warm and coldwater fish species. Resident stream fish known to inhabit the Middle Fork of the American River include rainbow and brown trout, hitch, Sacramento sucker, pikeminnow, and riffle sculpin. Additional species inhabiting the North Fork of the American River, from the confluence with the Middle Fork downstream to Oregon Bar above Folsom Reservoir include smallmouth bass, brown bullhead, green sunfish, largemouth bass, spotted bass, and other centrarchid species.

PCWA Service Area

Aquatic resources within PCWA's service area that may be affected by the proposed project include aquatic and riparian habitats of the Auburn Ravine and other perennial and intermittent streams and drainages. Besides the Auburn Ravine, a number of intermittent or perennial drainages cross the PCWA service areas. The quality of aquatic and wetland habitats in the in and along the drainages varies considerably, and is influenced by the degree of channelization, channel lining, and whether the flow is intermittent or continuous.

Daily and monthly flows in the Auburn Ravine fluctuate significantly throughout the year as the water enters the ravine from a myriad of sources including natural streamflows, stormwater runoff, irrigation conveyance and return flows, hydroelectric generation releases, and continuous effluent discharges from the City of Auburn Wastewater Treatment Plant. In contrast to natural flows, current flows are generally highest during summer and lowest during the fall months.

Using the seasonal pumps, Reclamation delivers about 4,000 AF of American River water to the Auburn Ravine tunnel to the Foothill Water Treatment Plant and to the Auburn Ravine for conveyance to irrigation customers. In addition to the American River, sources of water conveyed to the Auburn Ravine for irrigation purposes come from the North, Middle, and South Forks of the Yuba River, and the Bear River. Nevada Irrigation District also uses the Auburn Ravine to convey water for agricultural irrigation diversions. South Sutter Water District diverts PCWA water from Auburn Ravine downstream of Highway 65. From April through September, agricultural returns flow into the Auburn Ravine (CH2MHill 2001).

American River Basin

The aquatic resources of the American River Basin include all aquatic habitats and associated species that inhabit Folsom and Natoma reservoirs and other areas of open water, freshwater marshes and seasonal streams and tributaries within the regional project area. Key aquatic

species are fisheries, especially anadromous fish including chinook salmon, steelhead, American shad, and striped bass of the lower reaches of the American and Sacramento Rivers.

Because Folsom Reservoir is also used for power production, flow-regulation impoundments (afterbays) were necessary just downstream of each of these reservoirs. The afterbay is Lake Natoma (Nimbus Dam) downstream of Folsom Dam. Terrestrial habitats around the afterbay range from barren drawdown zones to narrow bands of woody riparian and herbaceous vegetation. These habitats are alternately flooded and exposed daily and seasonally. Habitat values for fish and wildlife are thus relatively limited. These nearshore habitats would not be expected to change under the without-action condition.

Regional Area

Regional aquatic resources include various anadromous and resident fishes which reside in, or pass through, not only the lower American River, but the Delta, Suisun Bay and the Sacramento River that may be cumulatively affected by indirect and interrelated project impacts.

Terrestrial Resources

Facilities construction and installation of the proposed project features would cause temporary and permanent impacts at the project site, along the alignments for the access roads and pipelines, at the recreational access parking areas, and any area of terrestrial habitat disturbance. Direct impacts from construction of a new access roads and recreational facilities could result in the permanent loss of additional wildlife habitat. The habitats and vegetative communities and acreage affected by these drainage/wetland crossings are not.

Growth inducing effects of availability of new water supplies are facilitated by the project by the direct delivery of PCWA's MFP water to the cities and unicorporated areas serviced by PCWA. Future development in the project area could result in the conversion of natural open space areas and agricultural lands that provide higher habitat values for wildlife compared to urban environments (residential, commercial, industrial). Land conversions and urban development could be facilitated on an unknown number of acres of various vegetation types within the PCWA service area.

Project Area

Terrestrial resources in the project area include the plants and animals which inhabit or utilize the natural habitats and open space areas within and near the local project area. The terrestrial habitats in the local project area have been severely disturbed by construction activities related to building the Auburn dam. For the most part, the site is generally devoid of vegetation. Previous construction activities at the site destroyed approximately 500 acres of riverine canyon and upland wildlife habitat. The Service estimated 450 acres of chaparral, 34 acres of riparian and 12 acres of riverine habitats were lost due to construction activities.[4] (FWS 1994). A flood event in 1986 broke through the cofferdam at the dam site and rock debris filled the dewatered river channel.

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[4]Acreages were delineated and planimetered by using black and white aerial photographs of scale 1:18,000 dated 1965 (pre-construction) and of scale 1:12,000 dated 1975 (post-construction).

Today, cofferdam debris (excavated bedrock) is scattered in the dewatered channel and extends far beyond the bypass tunnel outlet. Mature oak woodland vegetation occurs upstream and downstream of the project area and pockets of the same are present in areas where slopes were not graded for access roads or subject to landslides. The disturbed areas consist of vegetation at various stages of succession, from area of grasses, shrubs, and small trees to areas of some canopy cover. Limited riparian and wetland vegetation communities also are present in the project area. The majority of the project area where construction would occur is either covered by boulders or loose gravel of various sizes, or by grasses and shrubs that have become establish in areas that were previously disturbed.

PCWA Service Area

PCWA conveys and delivers the MFP water diverted from the seasonal pump station to PCWA's Service Area Zones 1 and 5. This water is used to meet current needs, serve as back-up to the Drum Spaulding Project water, and accommodate growth as projected in approved general, specific, and community planning documentation adopted from these areas of western Placer County. Water served to Zone 5 is primarily untreated and used to support agriculture. Zone 1 includes the cities of Rocklin, Loomis and Auburn, and portions of the City of Lincoln, as well as the communities of Bowman, Horseshoe-Bar, Penryn, Newcastle, Ophir, Sabre City and Granite Bay.

American River Basin

Following the construction of Folsom Dam and Reservoir in 1955, a gradual process of change began for the terrestrial resources of the lower American River. In general, the frequency and magnitude of peak flows diminished throughout the year, average winter-spring flows declined, and average summer-fall flows increased. Associated with these changes has been a decline in the rate of formation of gravel bars. Existing gravel bars are sparsely vegetated and coarser as fine sediments have been scoured and carried downstream. The amount and type of riparian vegetation, such as cottonwoods, willows and alders, associated with depositional features has decreased, especially in upper and middle sections of the river as less fines are available for long-term moisture retention. The number of cottonwoods in the active zone have been slowly declining as older trees die. Other tree species associated with high terraces, including valley and live oaks, ash, box elder, and some shrubs have been increasing in numbers along the border and in the outer zone since the dam and reservoir were completed.

A prevalent land feature of Folsom Reservoir, especially during the summer and drought periods, is the drawdown zones around the margin of the lake. This essentially barren soil zone exists as a consequence of the managed water fluctuations in the reservoir, which frequently lowers the water level by 50-100 feet or more during late spring, summer and fall. In many years, the entire shoreline of the reservoir consists of barren, decomposed-granite soil virtually devoid of vegetation. Such zones are essentially incapable of sustaining vegetation, especially woody species, because of poor soil conditions caused by wave action due to wind and boats and the erratic inundation and dewatering cycles dictated almost exclusively by existing water and power operations. Thus, habitat values for wildlife in these drawdown zones are minimal.

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Special Status Species
The Service has previously provided a list of special status species that may be affected by the project. This list identified species (mammals, birds, amphibian, reptiles, invertebrates, and plants) that are federally listed as endangered or threatened under the ESA, and that either occur or have the potential to occur in the general vicinity of the project and the project service areas.

FUTURE CONDITIONS WITHOUT PROJECT

Without any action alternative, PCWA would continue to rely upon the operation of the seasonal pumps for its MFP water supply, and within a few years PCWA would probably request that Reclamation install the pumps earlier in the year for longer periods of use (April through November) as customer demands and overall reliance on the pump station increase. Without the proposed project PCWA would continue to use water from sources already available to the water district:

(1) Pacific Gas and Electric Company's Drum-Spaulding Project on the Yuba and Bear rivers and PCWA's MFP on the American River are two sources of water currently available to PCWA to serve areas in western Placer County. PCWA has a contract with PG&E for 100,400 AFA of Drum-Spaulding Project water, at a maximum delivery rate of 244 cfs to serve Zone 1, encompassing the communities of Auburn, Loomis, Rocklin, Lincoln, Newcastle, Penryn, and parts of Roseville.

(2) PCWA also holds existing appropriative rights to divert 120,000 AFA from the MFP under Water Right Permits numbers 13856 and 13858, as authorized by the SWRCB. PCWA uses Drum-Spaulding Project water supplies first to meet service area demands. PCWA then uses MFP water supplies from the American River to satisfy demands not met by the DSP, or as needed to provide back-up supplies when the DSP is not operating.

(3) A third water entitlement is through a water service contract, most recently amended in 1992, with Reclamation for up to 117,000 AFA of water from the CVP. PCWA has never taken delivery of any water under this contract. An amendment to this contract is currently being negotiated. Since Reclamation has no rights to divert water from the American River upstream of Folsom Reservoir, the current contract negotiations contemplate the diversion of up to 35,000 AFA of PCWA's CVP entitlement from Folsom Reservoir or from the Sacramento River.

(4) In addition, PCWA has the ability to purchase and take delivery of water from Nevada Irrigation District for delivery to and use in various areas of its service area.

Reclamation has identified several reasonably foreseeable Federal actions that, over the next 25 years, would result in substantial changes in CVP system operations and an increase of American River or Sacramento River diversions for municipal and industrial and agricultural water supplies for use in the American River Basin. These actions include new and renewal CVP long-term

contracts, Warren Act contracts for the use of Federal facilities to obtain water rights water, agreements with Water Forum participants stipulating the conditions of dry year water use agreements, and various flood control projects (Folsom Reservoir), and infrastructure improvements, including the PCWA pump station project. The reasonably foreseeable Federal actions have separate utility from the proposed action and would likely be implemented whether or not the proposed project is implemented.

Aquatic Resources

Project Area

With the exception of a few stands of sandbar willows in the unstable aquatic environment of fluctuating flows in the downstream river channel, for the most part, the environmental landscape of the project area has remained unchanged for more than three decades. Without the project, the aquatic resources of the project site area would be expected to remain fairly unchanged.

PCWA Service Area

The development of and loss of habitat in PCWA's service areas are likely to continue, but may be slowed without the proposed project. The ability to divert and convey some portion of PCWA's available water supplies, acquired through MFP surface water rights, would likely be impaired without the project. Continued development and loss of habitat is likely due to the availability of alternative water sources to supply the "immediate" need of Placer County. With the constrained use of the seasonal pumps, PCWA does not currently have the ability to divert the full MFP water rights amount, and conveyance is limited in certain areas. PCWA would be limited to serving its existing service areas with currently available supplies that can be diverted by the seasonal pumps with expanded diversion periods. Adverse effects related to water diversions, such as fish entrainment at diversion points or flow/water quality issues, would be similar to existing conditions.

American River Basin

The gradual decrease in riparian vegetation along the lower American River has caused a corresponding decrease in available habitat for those species requiring riparian vegetation for perching, roosting, foraging, or nesting, including raptors, woodpeckers, wrens, neotropical migrants, and many other birds. These dynamic processes will continue uninterrupted in the future without the proposed project and subsequent operational changes. However, riparian and instream habitat improvement programs under the CALFED Bay-Delta programs may improve lower American River habitats through time.

The changes in lower American River flows and elimination of upstream gravel replenishment sources brought about by completion of Folsom Dam and Reservoir in 1955 have brought about changes in the composition, size and shape of the river channel. In particular, both riffle area and quality have declined. Without corrective actions, a slow but steady continuance of these changes can be expected. These changes will adversely affect anadromous fish, especially salmonid spawning and rearing conditions.

Conditions for anadromous fish have progressively worsened since 1985 due, in part, to 7 years of drought and a greatly increased use of Folsom Reservoir to provide flows to quickly meet

Delta water quality standards. This has greatly exacerbated existing flow and temperature problems for salmonids and other fish. The poor habitat conditions and general downward trend of natural fish production in the river will likely continue without corrective actions. However, the CVPIA's anadromous fish and instream flow-related provision may ameliorate some of these concerns, assuming that sufficient water remains available to provide for those identified needs and to maintain a pool of cool water in Folsom Reservoir for downstream temperature control. Folsom Reservoir is expected to be managed more for flood control, and so other CVP reservoirs will carry a heavier responsibility to meet Bay-Delta water quality responsibilities. In some water years, Folsom Reservoir water will still be available to quickly respond to flows needed to meet Bay-Delta water quality standards.

Under the without project conditions, aquatic habitats and resources within and adjacent to the drawdown zones of these reservoirs is not expected to change significantly from existing conditions. Without the proposed project, a persisting problem in the American River Basin would be the continued rapid urban growth of cities and unicorporated areas not only within Placer County, but Sacramento County as well. Such growth places greater water demands on the American River system and Folsom Reservoir, thereby incrementally reducing downstream water quality (increasing temperatures) and flows and ultimately further exacerbating lower American River fishery problems.

Terrestrial Resources

Project Area

Terrestrial habitats along the American River upstream and at the project area downstream to Oregon Bar would not occur without construction of the project.

PCWA Service Area

Without the proposed project and additional supply of high quality water, the PCWA would be initially limited to serving its existing service area with water supplies that are currently available. Cites and communities within Placer County might be limited in their approval of development which would minimize additional impacts on terrestrial biological resources because conversion of natural or agricultural lands to urban uses could be slowed. However, even without the proposed project, some land use changes and habitat conversion and growth within PCWA's service area could be accommodated by: 1) increasing the amounts of water diverted at the seasonal pumps, 2) water conservation measures, 3) water exchanges and/or transfers, and 4) the development of alternative water supplies, but at levels that may not meet all of PCWA's future water needs.

American River Basin

Under the without project conditions, terrestrial plants and animals within and adjacent to the drawdown zones of these reservoirs is not expected to change significantly from existing conditions. However, a persisting problem in the American River Basin would be the continued rapid urban growth of cities and unincorporated areas not only within Placer County, but Sacramento County as well.

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Special Status Species
The level of effect to federally listed and proposed for listing species without the project is difficult to determine but can be expected to be significantly less than if the project were implemented. Although land and habitat conversions always exist as potential risks for listed species, approvals for future development in the county would probably be somewhat constrained without the commitment for future water deliveries the proposed project would enable.

FUTURE CONDITIONS WITH PROJECT

PCWA intends to use the water pumped from the American River within various areas of Placer County. PCWA will convey and deliver the MFP water diverted from the pump station to PCWA service areas Zone 1 and 5. The water would be used to meet current and future needs, act as a back up to PCWA's use of Drum-Spaulding Project water, and accommodate growth as projected in approved general, specific, and community planning documentation adopted for these areas of western Placer County. Water served to Zone 5 is primarily untreated and used for agriculture purposes. Zone 1 includes the cities of Rocklin, Loomis, and Auburn, and portions of the City of Lincoln, as well as the communities of Bowman, Horseshoe-Bar, Penryn, Newcastle, Ophir, Sabre City, and Granite Bay.

Direct, indirect and cumulative effects on fish and wildlife resources within the project area are possible due to the construction and operation of the proposed project. Direct effects could result from diversions of water from the American River and conveyance through the Auburn Ravine and delivery of that water to PCWA's service area. Indirect effects could result from increased residential, commercial, industrial, and agricultural development, which would be facilitated by the availability of new water supplies. All effects can become cumulative due to multiplicity of potential future actions and continuance of actions over time.

Implementing either of the action alternatives would result in: 1) direct temporary and permanent impacts related to the construction and operation of the facilities (such as ground disturbance, upstream habitat inundation and noise); and 2) indirect diversion-related effects (such as changes in hydrology) resulting from the increased diversion of water from the North Fork American River. The facilities impacts are localized, and are mostly construction related; the potential effects of increased diversions are long-term, and may affect environmental resources beyond the local project area.

Direct effects may result from the construction and/or repair of the pipeline, such as: trenching, stockpiling excavated material, operation of construction vehicles and other construction-related activities. These activities could remove vegetation, temporarily drain wetland areas, disturb drainage channels, increase sedimentation runnoff, and cause direct mortality of plants and animals from equipment operation.

The design of the pump station for both action alternatives accommodates future expansion to provide GDPUD up to 25 cfs water diversion for use in El Dorado County. The facilities would

include a pipeline casing from the pump station, under the riverbed, to the east side of the restored river channel where it would be capped off and allow sufficient space within the pump station for a 25 cfs capacity booster pump. GDPUD's ability to take water from this location would depend upon various water exchange agreements with PCWA and Reclamation. The details of such exchanges have not been worked out at this time. Additional environmental analysis and regulatory agency review would be required prior to installation of the booster pump facility and connection and transmission of water to GDPUD.

Aquatic Resources

Project Area

Direct impacts on aquatic resources at the project site should have little or no effect on fishery resources. PCWA's initial new water diversion quantity (over the historic 8,500 AFA) and year-round pumping facilitated by the proposed project, coupled with the new Folsom Reservoir temperature control device, probably would not result in measurable aquatic impacts on the upper American River. No anadromous fish runs are present in the American River above Natomas Dam. The majority of project construction avoids direct impacts to aquatic habitats. Impacts from the conveyances crossing at creeks and drainages are localized and temporary in nature. Fish losses at diversion points are mitigated by adequately screening the intake facility. With the installation of a new CDFG-approved fish screen at the new diversion point, fish entrainment would be expected to decrease with the increased water diversions.

PCWA Service Area

Potential future increases in upper American River water diversions are projected to substantially increase with the "overbuidling" of the diversions structure and permanent pumping station and appurtenant features of the proposed project to facilitate additional pumps for future needs of PCWA and GDPUD. New and cumulative urban development could be substantial due to increases in available water supplies for PCWA and GDPUD service areas.

American River Basin

Aquatic resources may be affected by project construction and operations (i.e., changes in reservoir releases, instream flows, and water temperature).

Another problem for the American River system will continue to be the rapid urban growth of cities within Placer County. Such growth places greater water demands on the upper American River and Folsom Reservoir, thereby incrementally reducing downstream water quality and flows and ultimately further exacerbating lower American River fishery problems.

The existing severe drawdowns and fluctuations of Folsom Reservoir would continue with the proposed project. Some further declines of Folsom's fishery resources would be expected. These declines would be exacerbated by the flood control operation change and the projected in-basin population growth, which would further increase Folsom Reservoir and upstream American River water demands. These conditions will exacerbate the existing low productivity of the reservoir. Unsuccessful spawning of warmwater species will increase, causing a further decline in reservoir fish populations. In addition, as residential and commercial developments

surrounding the reservoir and foothill areas increase, the inflow of contaminants and sediments into the reservoir will also gradually increase.

As a regulating reservoir, Lake Natoma has relatively large, but consistent daily fluctuations of surface elevations and seasonal temperature fluctuations. These variations would be expected to continue as now. There would be no discernible changes in the fluctuations of water surface elevations or water temperatures at Folsom Lake and Lake Natoma, and thus no impacts to the aquatic resources would be expected within these impoundments.

The potential for detrimental impacts to the aquatic resources of the lower American River would arise from lower flows, flow changes and higher water temperature which would reduce the overall quality of the aquatic environment.

Terrestrial Resources

Project Area

Direct impacts on terrestrial resources within the local project area would result from the construction, long-term operation and maintenance of a permanent, year-round water diversion facility to replace Placer County Water Agency's temporary seasonal facility. Although the draft EIS/EIR describes habitat types in the local project area in general terms, acreages of habitats and vegetative communities that would be affected by the proposed project were not provided in the draft EIS/EIR, and it is not known what habitat types and acreage are directly impacted by project construction and related activities. Project construction, including water conveyance pipelines for the project would cause permanent impacts at the footprint of the project. The project would cause additional loss of remaining habitat with construction of new access roads, recreation facilities, access points to the river channel. Closure of bypass diversion tunnel that currently diverts the North Fork American River for 3/4 mile of its original channel. Restoration of the bypass river channel that was filled with debris during the 1986 overtopping and breaching of the cofferdam protecting the dam site.

Construction activities would cause direct mortalities of ground-dwelling amphibians, reptiles and/or mammals through vehicle strikes and crushing of burrows, and removal of habitat for escape cover, foraging, and breeding. Construction activities occurring during the breeding season of these species or nesting birds would likely cause destruction of nests and young. Disturbances from increases in ambient noise levels from blasting, operation of heavy construction equipment, movement of materials will have temporary impacts on animals; whereas, the long-term operation and maintenance of the pump station will have permanent impacts from increases in ambient noise levels. These noise related impacts would lead to temporal and perhaps permanent loss of available habitat to noise-sensitive species. Riparian habitat would also be lost from inundation near Tamaroo Bar when water back up behind the weir to be constructed. Elimination of habitat would also result in the loss of individuals. Animals that survive ground disturbing construction activities would be displaced. Animals able to move to adjacent areas may increase competition for resources in the adjoining areas, with subsequent overall loss of individuals.

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PCWA Service Area

Continued development and loss of habitat is likely due to the availability of increased MFP water amounts diverted by the seasonal pumps (and in the future, access and use of PCWA's CVP contract water either from the Sacramento River or American River at Folsom Reservoir) to supply the "immediate" need of Placer County. Open space land conversions are occurring in the PCWA service area at an accelerated rate. As more water is made available or acquired, more land conversions will occur. A balanced approach to land preservation as land development occurs is not evident in Placer County. The draft EIS/EIR points out that the immediate need is based in part on unbuilt development potential and constitutes the first phase of many to accomplish full county build-out to the projected year 2020 development level. The increased use of MFP water supplies and other available water supplies available for sale by PCWA would continue to induce growth in service areas. The resulting development would convert additional plant communities and wildlife habitat, leading to adverse environmental impacts. Although a balanced approach to development and land preservation is not evident within the service areas, the dEIS/EIR identifies land development and preservation as responsibilities of the cities and local planning departments. It remains unclear if development approvals are continuing and what water supplies are targeted for those being approved. The dEIS/EIR does not report how city and county planning departments address cumulative effects of development approvals.

Growth inducing effects would facilitated by the project by the direct delivery of PCWA water to the cities and unincorporated areas within PCWA's service areas. Future development in the project area could result in the conversion of natural open space areas and agricultural lands that provide higher habitat values for wildlife compared to urban environments (residential, commercial, industrial). Growth inducing impacts are intended to be reduced through implementation of policies and mitigation measures identified in County and city general plans, and related EIRs adopted by the local land use agencies that regulate growth, and compliance with applicable State and Federal environmental laws in the project area, and through PCWA's participation in and funding of a regional Habitat Conservation Plan.

Implementation of the project or alternatives would not directly result in land use changes with the PCWA water service study area. The proposed project or alternatives would result in increased availability of water supply that would support some level of planned growth within the service area and so is considered growth accommodating. The secondary indirect effects of the provision of the MFP water supply within these zones is included in the cumulative report.

American River Basin

The new water diversion alone would not result in lower American River terrestrial wildlife habitat effects. However, cumulative American River water diversion actions would have long-term adverse effects if continued unabated. Maximum potential water surface elevation changes at Folsom Reservoir would be more dramatic with continued flood control operation and the new water diversions could slightly affect these elevations. There would not be any discernible changes and therefore no impacts to terrestrial habitats and related wildlife, either within or adjacent to the reservoir drawdown zone due to the new water diversion project.

There would be no discernible changes in the daily and seasonal fluctuations of water surface elevations at Lake Natoma. Therefore, no impacts to terrestrial habitat or related wildlife would occur due to the new water diversion project.

To minimize future environmental impacts and financial costs, the PCWA pump station facilities would be designed to provide capacity for a future potential expanded diversion of up to 225 cfs. Expansion of the pump station and any increase of diversion above 100 cfs, including extension of infrastructure to GDPUD, would be subject to additional environmental review and resource agency approvals and permitting.

Threatened and Endangered Species
Potential for direct, indirect, and cumulative effects to federal threatened and endangered species due to the construction and operation of the proposed project should be assessed through ESA consultation, as has been requested by Reclamation.

MITIGATION MEASURES

Lower American River And Other Fisheries
The Service believes that the best approach to mitigating fishery impacts to the lower American River is to avoid the impacts. We concur with the dEIS/EIR commitment to meet AFRP flows and recommend that this commitment be included in the Record of Decision and be submitted to the State Water Resources Control Board as a change to Folsom Reservoir's operating permit. It is important to maintain these flows over time, especially as in-basin water demands cumulatively increase.

We commend the effort to improve the lower American River temperature conditions. However, we are not certain that an adequate water supply will be available in the future to accomplish the desired results. In the short-term, effects of installing a temperature control device to draw municipal and industrial water outside of Folsom Reservoir's coldwater pool for various water purveyors would be beneficial. However, considering cumulative long-term actions, this effort may not be effective without additional mitigative actions to offset increased in-basin water use.

Our review of various planning department's mitigation and compensation implemented under the CEQA process showed that terrestrial habitat protection in the past has been minimal. In recommending mitigation for adverse impacts to any of the habitats affected by the proposed project, the Service would also be following, to the extent feasible, the sequential mitigation steps recommended in the Council on Environmental Quality's regulations. These preferred mitigation steps, in order of preference, are avoidance measures, minimization measures, rectification measures, measures to reduce or eliminate impacts over time, and compensation measures.

Measures need to be included in the project that will mitigate for the temporary and permanent adverse impacts on wildlife and their habitat resulting from land conversions and development in the project area. Specific acreage of terrestrial resources impacts of the alternative are unknown.

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Through application of the Mitigation Policy, we have determined the following mitigation planning goals should apply to the proposed action: Resource Category 2 for riverine aquatic habitat of the lower American River and small creeks within the service areas (no net loss of habitat value while minimizing loss of in-kind habitat value; Resource Category 3 for upland areas along the lower American River, Folsom Reservoir, or service areas (no net loss of habitat value while minimizing loss of in-kind habitat value); Resource Category 2 for wetland habitat types, including riparian forest, riparian scrub, vernal pools, and freshwater emergent marsh (no net loss of in-kind habitat values); Resource Category 2 for oak woodland and shrubland/chaparral (no net loss of in-kind habitat values); Resource Category 3 for annual grasslands (based on open space values and foraging areas provided by this habitat for species such as raptors) (no net loss of habitat value while minimizing loss of in-kind habitat value); Resource Category 3 for pasture, grain and hay, idled fields, and other agricultural habitats (based on the open space values that they provide in an area of increasing human development) (no net loss of habitat value while minimizing loss of in-kind habitat value). Open water was designated as Resource Category 3 for its values to fish, waterfowl and other water birds, and aquatic mammals. Developed habitat was designated as Resource Category 4 because of relatively low habitat values and increasing pressures to convert more of the higher valued habitats to developed conditions.

Under Regional Service guidance, we are pursuing a goal of a net overall gain in the quality and quantity of wetlands through restoration, development, and enhancement. Furthermore, the Service believes that wetlands compensation, which is the restoration or creation of wetlands to offset losses, should only be deemed acceptable when losses are determined to be unavoidable and compensation is known or believed to be technically feasible. Wetlands restoration is the preferred form of compensatory mitigation, followed by wetlands creation. These general goals regarding wetlands have been used as appropriate in the Service's analyses and recommendations relative to the proposed new water contracts and subsequent Folsom Dam and Reservoir reoperation requirements.

DISCUSSION

Based mainly on the DEIS/EIR information, we have concluded that the following adverse impacts to fish and wildlife resources could occur as a result of the proposed project and cumulative actions for diverting additional water from the American River and Folsom Reservoir:

- There could be a continued loss of riparian-zone wetlands which may be exacerbated by the proposed new water diversion actions. However, if Reclamation is able to operate in a manner to maintain AFRP American River flows and CVPIA-related mitigation actions occur, the potential riparian-zone effects may improve.

- The chinook salmon population of the lower American River could be reduced due to higher water temperatures. Depending on how operations changed, a potential decrease in water temperatures could initially result. However, this beneficial downstream water

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temperature improvement may occur for only a short time, until cumulative water diversions are implemented. A comprehensive operational analysis was not included to determine if the potential incremental effects could be offset by relying on other CVP facilities to provide water supplies unavailable from the American River.

- Fishery populations that inhabit or pass through the Delta and are affected by water export operations could be further reduced by another small and unquantifiable, but cumulatively significant, increment due primarily to Folsom Reservoir operational changes. Affected species would include, but not be limited to striped bass, American shad, fall-run chinook salmon, steelhead trout, and winter-run chinook salmon.

- Because Placer County Planning Department approves development based on groundwater or surface water supplies, new surface water diversions can perpetuate conversions of natural land as they free up groundwater that can then be used for approval of the next level of development.

RECOMMENDATIONS

In accordance with the Service's Mitigation Policy and to meet the intent and purpose of the FWCA, the Service recommends that PCWA and/or Reclamation:

G • Avoid and minimize disturbance to wetlands and all wildlife habitats during construction and maintenance of the project, and mitigate temporary and permanent impacts consistent with mitigation planning goals of designated Resource Categories.

H • Provide delineated acreage of wildlife habitat potential effected directly and indirectly by the proposed project.

I • Include measures in the project that will mitigate for the temporary and permanent adverse impacts on wildlife and their habitat resulting from land conversion and development in the project area.

J • Mitigate losses to terrestrial and riparian areas by revegetating construction-impacted sites, including staging and borrow sites, with appropriate native vegetation.

K • Mitigate losses of wetland habitat at the project site.

L • Develop detailed mitigation, monitoring, and remedial action plans for each mitigation action and site. Coordinate all phases of mitigation plan development and implementation with the Service and CDFG and NMFS when appropriate.

M • Direct staff with biological expertise monitor construction activities and provide technical assistance to ensure avoidance of additional construction impacts that may not have been anticipated prior to start of construction activities.

G. This will be accomplished through the Mitigation Plan (Appendix D to the Final EIS/EIR).

H. The Final EIS/EIR, Chapter 3.0, Section 3.6, Terrestrial Resources, provides acres of wildlife habitat that would potentially be directly affected by the Proposed Project, either temporarily due to construction or permanently due to placement of project facilities. Indirect habitat impacts due to land use changes in the water service area are discussed in the Cumulative Report (Appendix D to the Draft EIS/EIR). This information does not alter the conclusions presented in the Draft EIS/EIR.

I. The Mitigation Plan (Appendix D to the Final EIS/EIR) has measures to minimize and avoid impacts upon wildlife and their habitat due to the direct habitat impacts at the project site. PCWA does not have land use authority within its water service area. However, PCWA has agreed to not supply retail treated water service to new development with environmentally sensitive areas of Western Placer County until USFWS has certified that the new development is consistent with the interim conservation strategies of the Placer County Habitat Conservation Plan (HCP). The Placer County HCP is currently under preparation. The area preliminarily defined as environmentally sensitive refers to the area within Placer County, west of Highway 65, south of the proposed Highway 65 Lincoln Bypass, and north of Pleasant Grove Creek.

J. Please refer to Master Response 3.1.5, Project Area River Restoration.

K. The Mitigation Plan (Appendix D to the Final EIS/EIR) addresses wetland impacts.

L. The Mitigation Plan (Appendix D to the Final EIS/EIR) includes coordination with resources agencies, as appropriate.

M. Reclamation will retain a qualified biologist to monitor construction activity to protect designated areas within the project area. Such measures are included in the Mitigation Plan (Appendix D to the Final EIS/EIR).

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N • Incorporate the commitment to meet AFRP-recommended American River instream flows described in the November 20, 1997, Department of the Interior Final Administrative Proposal on the Management of Section 3406(b)(2) water of the CVPIA.

O • Define actions that will be taken during periods when minimal instream flows exist in the American River. Diversions during these periods should be avoided or flow releases should be increased above base flows in the amount diverted to avoid fish and wildlife impacts.

P • Growth inducing impacts are intended to be reduced through implementation of policies and mitigation measures identified in County and city general plans, and related EIRs adopted by the local land use agencies that regulate growth, and compliance with applicable State and Federal environmental laws in the project area. Reclamation should encourage that PCWA's participate in supporting a regional Habitat Conservation Plan for Placer County.

N. The recent Judge Wanger decision requires that baseline Reclamation operations of the Central Valley Project be consistent with D-893. This decision supercedes USFWS' previously assumed, and Reclamation's voluntary operational goal of striving to implement the November 20, 1997 AFRP target flow objectives for various water year types. In fact, USFWS no longer recognizes AFRP flow objectives as appropriate considerations, particularly regarding 3406(b)2 allocation.

O. Please refer to Master Response 3.1.14, Cumulative Impact Analysis.

P. PCWA does support and is participating in the regional development of the Habitat Conservation Plan. Please also refer to Response L-244.I.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Robert - Helen Keshegyan
ADDRESS:	330 Riverview Dr
CITY/STATE/ZIP:	Auburn 95603
BUSINESS AND/OR HOME PHONE/FAX:	885-9476
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A. No!

Too much traffic on Riverview at present.

We wish to protect our families, dogs, cats, our deer!

Thank you!

sorry this is late

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Lou Ann Hammond
ADDRESS:	11265 Wisteria Way
CITY/STATE/ZIP:	Auburn CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	530.823.6865
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A | In Reference to restoring the River to its historic channel & putting 60 more vehicle parking spots, I strongly object. We have a severe nonattainment air quality problem already. Plus in the EIR there
B | is no solution for fire hazard - this is an extreme high fire danger area and posting signs is not going to satisfy this. I didn't see where Pacific St.
C | was looked at - the residential is nil, and there is already parking access. There are no small children
D | & no school to worry about. Where will people go to the bathroom? Will there be trash cans?
I want a full report on the fire and air quality & what will be done to meet attainment levels before anymore cars are
E | allowed. I also want to be notified of any public meetings on this development & any other in the Auburn area.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. The Draft EIS/EIR evaluated the construction and project-related air emissions in Chapter 3, Section 3.15, Air Quality. With the exception of NO_x emissions during construction, air pollutant emissions would be below the local APCD significance thresholds.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.10, Project Access.

D. The Draft EIS/EIR describes the proposed public river access features, including restroom and trash container placement and maintenance by CDPR. Please also refer to Master Response 3.1.6, Public River Access Features.

E. All those commenting on the American River Pump Station Project Draft EIS/EIR were notified of the availability of the Final EIS/EIR. Those interested in receiving information or notification regarding other projects in Auburn need to contact the appropriate lead agencies, such as the City of Auburn or Placer County.

L-247

Gerald C. Young
1005 La Reina Drive
San Marcos, CA 92069
November 12, 2001

American River Pump Station Project
Draft EIS/EIR comments
c/o Surface Water Resources
2031 Howe Ave., Suite 110
Sacramento, CA 95825

Gentlemen

A. I prefer the "Preferred Alternative"—the Mid Channel Diversion Alternative -- to this river restoration project, because it will restore boatable flows to a now dry stretch of river and it may ultimately provide access to the Confluence Parkway stretch of the American River, now off limit to the general public. I urge you strongly to adopt this alternative.

Sincerely yours

Gerald C. Young

Gerald C. Young

A. Project support noted.

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Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Deanna Marsh
ADDRESS:	3144 Manhattan Bar Rd.
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	916-663-9202
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A The plan needs to include bathroom facilities at the proposed parking areas.

B The plan must include clear details for safe horse + pedestrian trails through the canyon. This means trails away from paved roads.

C The plan must include re-vegetation for erosion control, and native beauty, as well as protection from invasive, non-native plant species. If we restore the river, we must plan to restore the plants + forest.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☑ ***Please check here if you would like to be on the project mailing list.***

A. Restroom facilities would be provided and maintained by CDPR. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.5, Project Area River Restoration.

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STATE OF CALIFORNIA -- THE RESOURCES AGENCY GRAY DAVIS, *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

November 9, 2001

Mr. Einar Maisch
Director of Strategic Planning
Placer County Water Agency
Post Office Box 6570
Auburn, California 95604

Mr. Roderick Hall, Environmental Specialist
Department of the Interior
Bureau of Reclamation
7794 Folsom Dam Road
Folsom, California 95630-1799

The California Department of Water Resources has reviewed the Draft Environmental Impact Statement/Environmental Impact Report for the American River Pump Station Project in Placer County, California dated August, 2001. We fully support the Proposed Alternative, Mid-Channel Diversion.

Enclosed for your review and consideration are the Department's detailed comments and recommendations concerning the Draft EIS/EIR. We appreciate the opportunity to comment on the Draft EIS/EIR and look forward to working with you and your team on the Project's next phase.

If you have any questions or need us to expand upon our comments or recommendations, please contact me at (916) 651-9600 or Bill Peach of DWR's Fish Passage Improvement Program at (916) 651-9615.

Sincerely,

William J. Bennett, Chief
Project Support and Resource
Restoration Branch
Division of Planning and Local Assistance

Enclosure

cc: Honorable Mary D. Nichols
Secretary for Resources
The Resources Agency
1416 Ninth Street, Room 1311
Sacramento, California 95814

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Comments on the Proposed Alternative: Mid-Channel Diversion

Department of Water Resources — Division of Planning and Local Assistance

A

Table 2-2:
Why does the Mid-Channel Proposal take only one more month to construct (22 months construction time) while costing nearly twice as much ($31 million) as the Upper-Channel Proposal (21 months construction time and $17 million construction costs)?

B

Water Quality:
The Water Quality section of the American River Pump Station Project Environmental Impact Statement/Environmental Impact Report addresses the engineering aspects of meeting current storm water pollution prevention rules and regulations through the use of appropriate Best Management Practices. The focus of discussion in this section appears to be on temporary BMP's necessary to meet permit requirements during construction activities. Beyond a few generic recommendations based upon broad assumptions, the Water Quality section does not appear to fully address the bigger issue of post-construction erosion/sediment control within the canyon both for the proposed construction work and the initial Auburn Dam construction work of the 1970's.

Without an adequate post-construction erosion/sediment control plan, the restoration of natural flows through this reach of the American River will increase the potential for sedimentation downstream of the project site, a significant impact. The vast majority of disturbed areas within the project site occur between the north side of the existing cofferdam remnant and the outlet of the 33 foot diameter diversion pipe, a 4,000 foot length of highly disturbed river canyon extending hundreds of feet up the canyon side-slopes. Essentially dry year-round, this segment of the river currently serves as a sediment trap for this extensive disturbed area. The reintroduction of natural river-flows through this segment of the river will be a significant beneficial impact; but it will also eliminate a beneficial function, sediment control, which needs to be incorporated elsewhere into the project site.

In recent years, the Regional Water Quality Control Board has been aggressively enforcing NPDES permit requirements. The Storm Water Pollution Prevention Plan, a requirement of the permit, is designed to address two distinct phases of a project, construction and post-construction. The SWPPP utilizes BMP's to minimize or eliminate storm water impacts generated by disturbed areas during and following construction. BMP's are typically divided into two categories, temporary BMP's intended as interim solutions implemented during construction and permanent BMP's which address the long-term solution for erosion/sediment control after the construction is completed. Both types of BMP's are included in a SWPPP. Other agencies will commonly budget upwards to 15 percent of their total construction dollars towards implementation of a SWPPP for a project. For economic and logistic reasons, permanent BMP's are preferably installed in lieu of temporary BMP's and as early as possible during the construction process. The lack of an adequate post-construction SWPPP, which would include permanent hillside revegetation, could be a potentially significant issue for RWQCB.

1

A. Pump station plant construction, which would occur under either alternative, would require the greatest amount of time to complete of any project component. Pump station construction would involve several steps, including concrete form work and placement, completion of the pump station building, and installation of pumps, other hardware, and electrical work. Therefore, the two alternatives would require a similar length of time to complete. Additional activities under the Mid-Channel Diversion Alternative include modification and restoration of approximately 4,000 feet of the river channel. Channel excavation would be done concurrently with other pump station construction. The Mid-Channel Diversion Alternative includes the creation of public river access improvements, including access roads, trails, and parking areas. The Upstream Diversion Alternative would not require the extensive river channel excavation work and would not provide public river access features. Therefore, due to the increased amount of earth moving and public access-related construction, the Mid-Channel Diversion Alternative would cost substantially more than the Upstream Diversion Alternative.

B. The Proposed Project would include post-construction erosion/sediment control measures as required by the NPDES SWPPP (Draft EIS/EIR, Section 3.7, Water Quality, page 3-193). As noted by the commenter, the NPDES SWPPP shall include a description of the BMPs and control practices to be used for both temporary and permanent erosion control measures. The SWPPP will describe all post-construction BMPs for the project, and show the location of each BMP on a map. Also, the SWPPP shall describe the agency or parties responsible for the long-term maintenance of these BMPs. Under the Proposed Project, the SWPPP would apply only to Proposed Project construction area and not the initial Auburn Dam project construction area. Regarding vegetation at the project site, please refer to Master Response 3.1.5, Project Area River Restoration.

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Comments on the Proposed Alternative: Mid-Channel Diversion

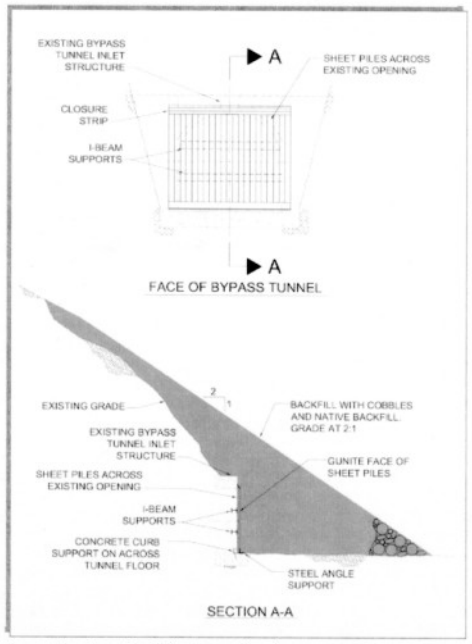
Department of Water Resources — Division of Planning and Local Assistance

C

Section 3.13, Geology and Soils, identifies the potential for increased erosion due to the highly disturbed nature of the project site and construction activities associated with the Proposed Project. The long-term viability of the pump station and related facilities due to soil and geologic site conditions has been identified as a concern by Placer County Water Agency and the Bureau of Reclamation. The Geology and Soils section recommends several environmental protection and mitigation measures to improve slope stability. Recommendation 2 "Grading to and acceptable stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes." dovetails nicely with several permanent BMP's design concepts typical of post-construction SWPPP's. This recommendation needs to be carried forward and implemented into the final design of the project.

D

Bypass Tunnel Closure:
The Proposed Alternative is recommending the closure of the existing bypass tunnel "by placing sheet piles, sheet plates, reinforced concrete, and large rock across the face of both the inlet and outlet" (pg. 2-21) as illustrated by the adjacent graphic from the public workshop presentation.



As currently proposed, the bypass tunnel closure concept raises some potential concerns:

1. The stability and reliability of the 2:1 engineered fill slopes covering the closures during a 1% probability event (100-yr. storm).
2. The structural integrity of the sheet pile/sheet plate/reinforced concrete pipe closure under flood and soil loading.

Most tunnel closures involve construction of a concrete plug at least two (2) times the length of the tunnel's diameter. The sheet pipe/soil backfill closure does not appear to be a structurally positive plan.

2

C. These measures are part of the Mitigation Plan.

D. As described in the Draft EIS/EIR, page 2-21, the bypass tunnel closure design will allow for reopening the tunnel in the event that Auburn Dam is reauthorized. As part of the 1997 Value Planning Study, alternative ways for preventing boaters and swimmers from entering the tunnel, or being impinged on screens, were evaluated with and without restoring the river channel. It was concluded that there is no safe way of accomplishing this without directing the water around the tunnel. The Proposed Project represents a design that protects boaters and swimmers while providing a "temporary" closure of the tunnel. Filling the tunnel, or installing a concrete plug would accomplish the safety objectives, but would make it more difficult to reopen the tunnel at a later date, if needed.

The lead agencies recognize concerns regarding the permanency and specifications of the tunnel closure. The tunnel closure, as designed, entails placing sheet piles at the tunnel inlet and outlet. The sheet piles would be covered with shotcrete (Gunite) and covered with a stable engineered fill. This method of closing the existing tunnel will be permanent (i.e., will not require replacement) but would allow re-opening of the tunnel in the event that a diversion tunnel is needed in the future. Completely filling the existing tunnel with grout or earth would preclude future access (except via excavation), and would require approximately 84,000 cubic yards of material. Although the tunnel will not be filled in completely as designed, there would be no danger of caving in because the tunnel passes through rock and is lined with structural grade concrete.

Concerns over water permeating the engineered fill and sheet piles at the tunnel inlet or outlet have been noted. While water entering the tunnel is not likely to occur under current design specifications, the design could be augmented by using an impermeable membrane incorporated between two layers of Gunite, in place of the single layer of Gunite. A reinforced concrete wall could also be constructed against the sheet piles.

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3. The necessity of the engineered backfill cover over the bypass tunnel closure.
4. The piping failure of the backfill into the tunnel through the sheet pipe in a large event.
5. The eventual corrosion failure of the steel sheet piles and reinforcing members.

Visual Resources:

Chapter 2, Section 2.2.2 makes several references concerning the "look" of the project or how it should fit into the landscape as noted below:

1. Diversion/Intake Structures (pg. 2-20):
   - "The structures would be constructed from a combination of boulders, grouted rock (possible including cofferdam remnant materials), and possibly faux rock (concrete or other substance molded to look like natural rock formation)."
2. River Channel Restoration (pg. 2-21):
   - "Restoration of dewatered channel to appear and function like a natural river environment" with attached caveat,
   - "Further enhancement of fish and wildlife habitat would occur over time as the channel and the surrounding environment respond to the returned river flows."
3. Water Supply Diversion (pg. 2-21):
   - "The bypass tunnel closure would prevent access to the tunnel and would be designed to blend into the surrounding landscape."
4. Natural River System Functions (pg. 2-22):
   - "A key design goal for the restoration component of the Proposed Project is to imitate, to the extent possible, the appearance and form of a natural river channel, including the banks and floodplain benches."
   - "…design to accommodate anticipated natural processes and be visually and functionally compatible with the reaches up and downstream of the project site."

E

However, the Visual Resources discussion, Section 3.9, appears to focus on the facilities (pump station and other structures) associated with the project and their visual impact, not the entire project which includes extensive site re-grading and the restoration of natural flows through the river channel. The section does not address how the project will fit into the landscape nor offer recommendations relative to the integration of the project into the natural landscape, an important component of a visual quality/scenic resource impact (aesthetics) assessment.

The Visual Resource section identified two receptor groups as "valuing the scenic quality of their views integrally with their use of the area" (pg. 3-232), adjacent residents and recreationists. The recreationist group centered on those using the trail system adjacent to and/or traversing the project site, hikers, bikers, and horseback riders. The recreationist group should have been expanded to those who limit their activities to the river channel including casual hikers exploring the canyon floor and river banks, fishing enthusiasts, and the future boaters navigating the restored river channel. Their

E. Overall, the Proposed Project, through restoration of the North Fork American River to the dewatered channel and creation of a naturally functioning river system would improve the existing visual resource conditions at the project site.

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perspective of the project site will be far more focused on adjacent landforms and the devastation associated with the Auburn Dam work and cofferdam breach.

E Paragraph 3.9.2.3 states "There are no formal, specific regulations or criteria for analyzing visual resource impacts." There are at least two (2) recognized processes/procedures for assessing impacts on visual quality and scenic resources. Both of the processes are participatory by nature involving input from local communities, user groups, community leaders, and experts in the field visual impact assessment. The U.S. Forest Service has developed a very elaborate process for identifying, analyzing, categorizing, and managing the scenic resources and visual quality of National Forests. The process has been in place since the early seventies with the most recent version, "Landscape Aesthetics, A Handbook for Scenery Management" (Agricultural Handbook 701) being published December 1995. The Federal Highway Administration published a process for assessing visual impacts in 1981 entitled "Visual Impact Assessments for Highway Projects". All State DOTs receiving federal funding on highway improvement projects, where visual impacts have been identified as a potential environmental concern, use the process. While developed for highway improvement projects, FHWA's process is universal allowing its application on most any type of construction project.

The Visual Resource section fulfills the basic intent of the NEPA/CEQA process. An overall finding of "less than significant" visual quality/scenic resource impact is probably appropriate due to the extent of existing site disturbances. However, the discussion misses an opportunity to recommend how the more significant facets of the project, the finished appearance of the site mass grading and river restoration work, should fit into the natural landscape.

F NEPA directs federal agencies "to restore and enhance the human environment" to the fullest extent possible. The partial restoration of the river channel and canyon is a significant beneficial impact of this alternative. However, perfectly engineered 2:1 slopes are neither visually appealing nor "designed to blend with the surrounding landscape." A few recommendations focused on how to blend the site grading into the natural landscape would be appropriate.

Recommendations:

1. Implement slope stability Recommendation #2 as proposed in the Geology and Soils section (pg. 3-286). Recommendation 2 will:
   - greatly improve the changes for a successful re-vegetation program for the disturbed project site,
   - enhance the post-construction storm water pollution prevention plan by reducing the total disturbed area into a series of smaller, more manageable zones,
   - facilitate the monitoring and maintenance of the permanent BMP's, such as detention basins and sediment traps, by providing access routes via the terracing, and
   - provide a better fit of the project into the regional landscape.

F. Please refer to Master Response 3.1.5, Project Area River Restoration.

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Comments on the Proposed Alternative: Mid-Channel Diversion

Department of Water Resources — Division of Planning and Local Assistance

F

2. Expand Recommendation #2 to include the following:
   - Include contour furrowing and/or slope roughening to reduce surface water velocities flowing down the face of slopes and increase water percolation rates,
   - Contour grade slopes at varying horizontal to vertical (h:v) ratios to better blend manufactured slopes into the natural terrain, and
   - Utilize channel linings or temporary structures in drainage channels to slow runoff velocities.

3. Implement biotechnical soil stabilization principals into the slope stabilization aspects of the project. The basic concept behind biotechnical soil stabilization is the integration of live vegetation with structural-mechanical methods (rip-rap, retaining structures, etc.) to reduce and/or prevent slope failure and erosion. Biotechnical soil stabilization methods may include vegetated rip-rap, brushlayering, willow wattles, pole planting, and live siltation to name a few. The vegetative aspect will enhance the structural-mechanical elements of the slope stabilization plan by increasing the strength and holding capacity of the structure while improving its aesthetics and better integrating it into the natural landscape.

4. Underground all new power-lines to comply with Placer County's Policy 1.K.5 (pg. 3-236). The project is located in a State recreation area where visual quality impacts can have a higher priority than in more developed areas. The introduction of visually intrusive manmade elements such as power poles and overhead wires into a natural setting should be avoided wherever possible. While the project site is highly disturbed now, the potential exists for restoring the area to some semblance of its original natural condition. The park's user groups and adjacent residents overlooking the project site may consider the power poles and overhead wires visually unacceptable.

5. Incorporate "context sensitive design" principals into the design of the pump station enclosure. A guiding principal of "context sensitive design" is to design the project to be in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area. As currently proposed, the sheet-metal pump station enclosure "painted a neutral/earthtone color" will be out of context with a park setting. A building design which reflects the cultural heritage and historical significant of Auburn would be more appropriate. If sensitively designed to fit the context of the park setting, screening the building may not be necessary or may be less extensive.

6. Rock netting, if used, should be color-coated to match the rock surfaces it is being secured to.

7. Stain/treat all newly exposed rock surfaces including rip-rap with "Permeon" of equal material to reduce glare generated by exposed rock surfaces and blend the rock into the surrounding landscape.

5

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F

8. Contour grade the remaining portion of the cofferdam to reduce its unnatural visual prominence in the landscape.

9. To the extent possible, backfill void spaces in rock fills and top-dress slope surfaces with alluvium material excavated from the river channel. A successful revegetation and erosion/sediment control plan will require a planting medium for the establishment of plant material.

10. In lieu of the proposed sheet pile/rock backfill bypass tunnel closure, consider plugging the tunnel with concrete and treating the surface with a sculpted rock texture emulating the adjacent exposed rock formation per attached photo-simulation. The concrete plug would insure a positive closure for the tunnel while allowing for its removal should the Auburn Dam be reauthorized. The faux rock treatment would conceal the plug to all but the very trained eye and would enhance the visual quality of the area.

L-250

1 November 2001

Box 2160
Nevada City, California 95959

I wish to comment on the issue of Placer County Water Authority and their claims of the necessity of closing down the Auburn to Cool trail in light of their attempt at river restoration.

I feel the Authority should most definitely be responsible for the construction of a bridge and should include that cost in their plans of this river restoration project. Whatever the cost, it is certainly the Authority's responsibility since it will keep the trail open as a multi-use trail which it currently is and should remain as one.

A The area is heavily utilized by many recreationists of all disciplines; hikers, joggers, bicyclists and of course, equestrians. None of those groups can afford to loose any trails in this area, or anywhere for that matter. While river restoration is of the utmost importance as well, the Authority can accomplish their goal of restoration as well as maintaining the integrity of the area for recreational pursuits.

Closing this area is definitely not an option as other nearby trails will become overburdened and crowded and are, in some locations, treacherous as well.

The wisest option to ultimately restore the river and maintain it's health as well as keeping the trails open is for a bridge to be constructed, which the PCWA should include in their plans. Additionally, the Authority should include trails along the roads they intend to asphalt so connecting trails are not lost through this project.

Thank you for your consideration.....

Nancy Neuman

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-251

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kathryn White
ADDRESS:	372 Riverview Dr
CITY/STATE/ZIP:	Auburn Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	-Retired-

COMMENTS:

A I am not in favor of more traffic on old section of Riverview Dr. the traffic would be heavy on our street. A short cut for cars to the the river.
We have all the school traffic & water company now.
We have no sidewalks, a lot of hikers, dogs on leashes, mothers with baby buggies, Tame Deer crossing the street. (Dangerous)
We have next neighbours with small children now.
We also have a lot of walkers on our street.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ *Please check here if you would like to be on the project mailing list.*

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-252

RECEIVED NOV 0 9 2001

Placer County Water Agency
P.O. Box 6570
Auburn, Ca. 95604
Attn: General Managers Office

Dear Sir or Madam;

I am writing to you regarding the Auburn to Cool Trail via Coffer Dam. I am asking you to accept a plan which will keep this old and much used trail open.

A

This trail is a part of a much larger system of trails that is used by many people for many activities. What may benefit the rafters will seriously hurt the Equestrians, hikers, joggers, bicyclists, runners and outdoor enthusiests. Please don't close this trail. Keeping it open is just the right thing to do for all.

Thank you,

Gayle Atkins

Gayle Atkins
P.O. Box 1405
Georgetown, Ca. 95634
(530)333-0147

TO	DATE	INFO.	ACTION
GNL. MGR.	11-13		
DIRECTORS			
ATTORNEY			
BRD. CLERK			
PLANNING ADM.			
DEPT. HEADS			
MGT. TEAM			
CUST. SERV. DIR.			
FIELD SERV. DIR.			
FINANCE DIR.			
H.R. DIR.			
PWR. SYS. MGR.			
STG. AFF. DIR.			
TECH. SERV. DIR.			
Brent Smith	11-13		

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-253

HARRY B. WYETH
KAREN A. WYETH
20862 E. Spring Ranches Rd.
Grass Valley, CA 95949

(530) 346-6081

November 17, 2001

American River Pump Station Project
Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave.
Sacramento, CA 95825

RE: **Auburn-Cool Trail Closure**

Dear Ladies/Gentlemen:

A

We are horseback riders and runners who are opposed to the proposed closure of the trail from Auburn to Cool which would occur under the plan to eliminate the cofferdam on the American River. While elimination of the dam is a worthwhile project, elimination of the only means of crossing the river in this area would have serious consequences for trail users. The only other means of crossing the American River is via No Hands Bridge, about five kilometers upstream. The trail on both sides of the river at the bridge is steep and narrow in many places, particularly on the south side, and is not in good condition. This trail defiantly cannot handle the increased foot, bicycle, and horse traffic which would result from closure of the Auburn-Cool trail.

The trail on the Cool side of the river climbing up from No Hands Bridge is also very close to Highway 49, which makes the trail very noisy and frightening to sensitive horses. Almost continuously, there are large trucks roaring by uphill or using engine brakes going downhill on the highway, immediately adjacent to the trail. The trial in this area is also extremely eroded and cut down into the soil, which restricts maneuverability. For some riders, therefore, using the No Hands Bridge trail to get to Cool is actually a dangerous ride.

Closure of the cofferdam trail, therefore, will significantly reduce the recreation options available by making access to Cool substantially more difficult and will eliminate many opportunities for a scenic cross-river trip in this area.

There are hundreds, if not thousands, of runners, bicycle riders, and horseback riders who are affected by this issue. These trail users frequently use the cofferdam trail and the No Hands Bridge trail to make a round trip from Auburn to Cool, and have been doing so for many years. This option should definitely be preserved.

Elimination of the cofferdam crossing is not unavoidable. A small bridge could easily be build over the river, suitable for bicycle, horse, and pedestrian traffic. We believe the additional cost of a bridge is justified and should be incorporated into the total cost of this project.

Very truly yours,

HARRY B. WYETH

KAREN A. WYETH

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-254

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Lois Watts
ADDRESS:	4901 High St
CITY/STATE/ZIP:	Rocklin Ca
BUSINESS AND/OR HOME PHONE/FAX:	916 624-4561
ORGANIZATION (IF APPLICABLE):	

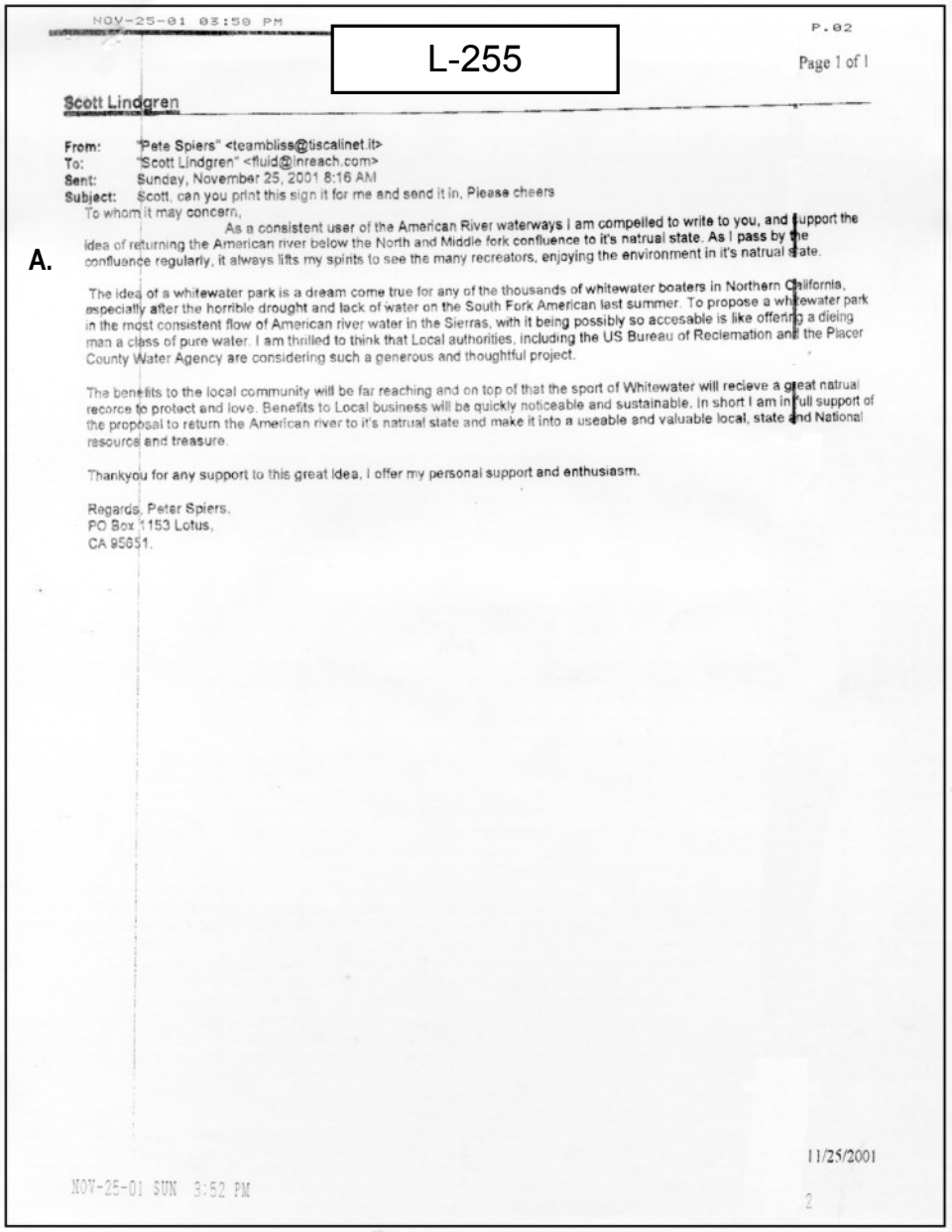
COMMENTS:

A Keep our trails open.

It would be nice if they made more trails for all of us to use and enjoy the open places.
Each day we lose more of our open space to houses etc.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



NOV-25-01 03:50 PM P.02

L-255

Page 1 of 1

Scott Lindgren

From: "Pete Spiers" <teambliss@tiscalinet.it>
To: "Scott Lindgren" <fluid@inreach.com>
Sent: Sunday, November 25, 2001 8:16 AM
Subject: Scott, can you print this sign it for me and send it in, Please cheers

To whom it may concern,

A. As a consistent user of the American River waterways I am compelled to write to you, and support the idea of returning the American river below the North and Middle fork confluence to it's natrual state. As I pass by the confluence regularly, it always lifts my spirits to see the many recreators, enjoying the environment in it's natrual state.

The idea of a whitewater park is a dream come true for any of the thousands of whitewater boaters in Northern California, especially after the horrible drought and lack of water on the South Fork American last summer. To propose a whitewater park in the most consistent flow of American river water in the Sierras, with it being possibly so accesable is like offering a dieing man a class of pure water. I am thrilled to think that Local authorities, including the US Bureau of Reclemation and the Placer County Water Agency are considering such a generous and thoughtful project.

The benefits to the local community will be far reaching and on top of that the sport of Whitewater will recieve a great natrual recorce to protect and love. Benefits to Local business will be quickly noticeable and sustainable. In short I am in full support of the proposal to return the American river to it's natrual state and make it into a useable and valuable local, state and National resource and treasure.

Thankyou for any support to this great idea, I offer my personal support and enthusiasm.

Regards, Peter Spiers.
PO Box 1153 Lotus,
CA 95651.

11/25/2001

NOV-25-01 SUN 3:52 PM

2

A. Project support noted.

L-256

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Linda Straub Boisa
ADDRESS:	5736 West 2nd Street
CITY/STATE/ZIP:	Rio Linda CA 95673
BUSINESS AND/OR HOME PHONE/FAX:	916-991-7705 Linda Boisa@yahoo.com
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A If you do not include a bridge over the American River, it will terribly frustrate thousands of people! I personally use this trail alot, as do many others I know. It is a beautiful trail! Why would you want to cut recreation off here? - I think Americans are frustrated enough without more loss of our trails where we go to unwind. Please Please!! include a bridge!

Linda Boisa

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-257

GREATER AUBURN AREA FIRE SAFE COUNCIL

C/o 120 Belmont Drive
Auburn, CA 95603-5516
(530) 885-1185

November 26, 2001

American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: Draft EIS/EIR Comments on American River Pump Station Project, Auburn, CA

To Whom It May Concern:

Whereas:

1) The U. S. Federal Register lists Auburn, CA as one of the *Communities at Risk*, because of its location in a Wildland Urban Interface; and
2) The California Department of Forestry has designated Auburn, CA as a *Very High Fire Hazard Community*; and
3) Auburn, CA is the County Seat and only community in Placer County built directly adjacent to and on the rim of the American River Canyon and in a Wildland Urban Interface; and
4) This Wildland Urban Interface presents a problem not of fire protection, but of community Land Use Planning; and
5) The majority of fires in this area have been initiated by human interaction or by vehicular causes and all of the Fire Agencies advise that increased human interaction in the Wildland Urban Interface greatly increases the likelihood of wildland fires and their spread to the greater Auburn area;

Please be advised that the **Greater Auburn Area Fire Safe Council**, a member of **The Placer County Fire Safe Alliance**, requests that the Environmental Impact Statement for the proposed American River Pump Station Project thoroughly address the issues related to the fire danger this proposed project will pose to the Auburn community. Of particular interest to the Council is how the proposed project will address issues such as Shaded Fuel Breaks, Emergency Evacuation, Emergency Safety Zones, Ingress and Egress for Emergency Fire Equipment, Enforcement of Local and State Fire Laws and Ordinances, and other issues directly related to the fire dangers associated with the Project.

Respectfully submitted,

Mr. Beryl C. Smith
Interim Chairman, GAAFSC

Cc: Alice Dowdin Singh, Mayor; Howard Leal, Fire Chief; David Breninger, PCWA; Congressman John Doolittle; Otis Wollan, ARWG; Jim Michaels, DPR; Kelly Keenan, CDF; Rob Schroeder, USBR; Randy Smith, PCFD

A. Please refer to Master Response 3.1.9, Fire Management.

L-258

American River Pump Station Project 11/25/2001
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

To whom it may concern,

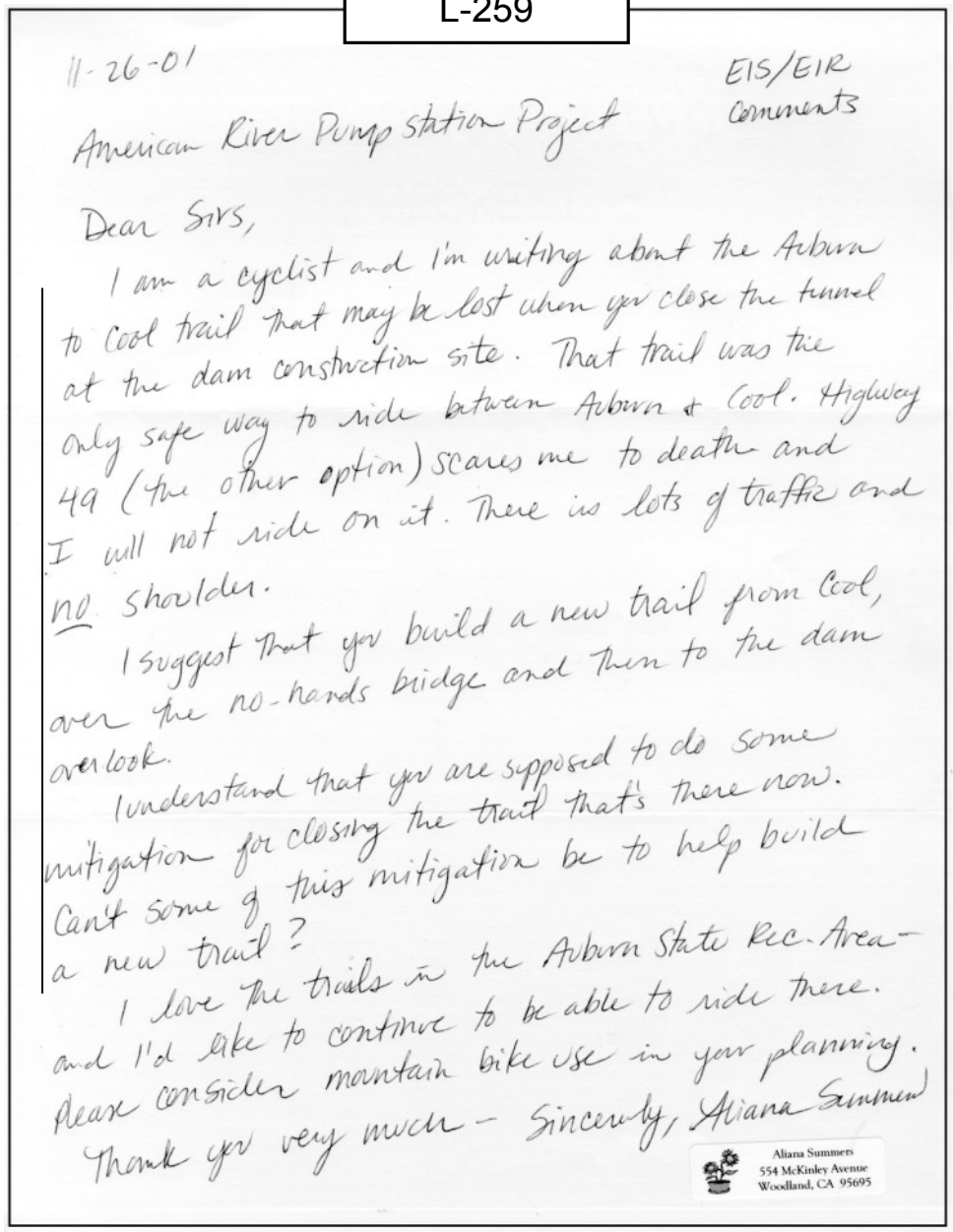
A I am an avid mountain biker and I am concerned about the loss of the Auburn to Cool trail as a result of the closing of the tunnel at the Auburn dam construction site. The Auburn to Cool trail provided the only safe route for mountain bicyclists to get between the 2 towns. The only other route requires riding on at least 2 miles of hwy. 49 that has no shoulders and high traffic speeds. I realize that the cost of a bridge would be large, therefore I believe that a reasonable low cost alternative would be a new trail that goes from the dam overlook to either hwy. 49 at the river or Mt. Quarries bridge and then up to Cool. Please consider this option and preserve safe mountain biking in the Auburn area for myself and my fellow cyclists.

Sincerely,

Dr. Paul Dayton
Davis, CA

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-259



11-26-01

EIS/EIR Comments

American River Pump station Project

Dear Sirs,

I am a cyclist and I'm writing about the Auburn to Cool trail that may be lost when you close the tunnel at the dam construction site. That trail was the only safe way to ride between Auburn & Cool. Highway 49 (the other option) scares me to death and I will not ride on it. There is lots of traffic and NO shoulder.

A

I suggest that you build a new trail from Cool, over the no-hands bridge and then to the dam overlook.

I understand that you are supposed to do some mitigation for closing the trail that's there now. Can't some of this mitigation be to help build a new trail?

I love the trails in the Auburn State Rec. Area and I'd like to continue to be able to ride there. Please consider mountain bike use in your planning.

Thank you very much - Sincerely, Aliana Summers

Aliana Summers
554 McKinley Avenue
Woodland, CA 95695

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail

L-260

11-19-01

From: Perry J. Harrington
10045 Snowy Owl Way
Auburn, CA 95603
Phn: (530) 613-5788
Fax: (530) 823-8818

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825
Fax: (916) 286-0957

To whom it may concern,

Please take notice of these comments regarding the American River Pump Station Project.

A We (the Harrington Family) are against this project as it has been proposed. We do not want this project to have access through Maidu Rd.

B Skyridge Elementary School is off of Maidu Rd. and many children walk across this road everyday to and from school. These are small children, ages 5 to 10 years. There is already excess traffic in the area of Maidu due to the school. The increased traffic due to the construction of this project and the planned state recreation area after will be dangerous to these children and create even worse traffic congestion in this neighborhood area. This project will also result in excess noise and air pollution for the residents of the neighborhoods in the vicinity of Maidu Road. It is our opinion that if this project goes

C through the access should be through the already established route to the Auburn Dam Overlook near the Skate Park. There are already at least two or more established routes to and/or through this area (Pacific and Sacramento streets). And there is already parking at the Overlook.

B We do not want heavy equipment rolling down Maidu at all, let alone for two years of construction! We feel that the EIR needs to reevaluate the impact of increased traffic on Maidu East of Burlin.

D This planned recreation area will also be a fire hazard to the residences of South Auburn. We believe there is no need for the recreation area portion of the "Restoration Project". There wasn't a recreation area there before work began on the Dam Project and we don't

B need one now. We don't want the traffic, noise, crime, transients, trash, etc. associated with access to the proposed recreation area through our neighborhood on Maidu Rd. We

A. Please refer to Master Response 3.1.10, Project Access.

B. Please refer to Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.10, Project Access.

D. Please refer to Master Response 3.1.9, Fire Management.

L-260, pg. 2

already have local hiking and biking trails and do not want a State sponsored recreation area here.

E We would like to be kept informed of upcoming events leading to approval and completion of this planned project. Please add my name to the project mailing list.

This project is unacceptable to us! We urge your support of our position and views on this proposed project. The access through Maidu Road is not acceptable. The recreation area is not necessary. This project is not safe for our children.

Sincerely,
Perry J. Harrington
And the Harrington Family
Jerry
Tiffany Harrington
Beverly Harrington

E. All comment letter authors were added to the project mailing list and received notification of the availability of the Final EIS/EIR.

L-261

Aaron Beitler
2406 SE SALMON ST
PORTLAND OR 97214
11/27

AMERICAN RIVER PUMP - STATION PROJECT
SACRAMENTO, CA

TO WHOM IT MAY CONCERN,

A I AM VERY CONCERNED ABOUT THE FATE OF THE LOWER AMERICAN RIVER. WE NEED THIS RIVER AND CANYON FOR ITS RECREATIONAL VALUE—MUCH MORE THAN WHAT THE DIVERSION TUNNEL OFFERS. THIS WILL ONLY BECOME INCREASINGLY TRUE AS CALIFORNIA AND THE WEST'S POPULATION INCREASES, AND OUR OPPORTUNITIES FOR SOLITUDE DECREASE.

B ADDITIONALLY, THE POSSIBILITY FOR CONSTRUCTING A WHITE WATER PARK, AND CREATING ADDITIONAL RUNS ON THE LOWER AMERICAN TO FOLSOM LAKE, SHOULD BE CONSIDERED. THIS WILL TAKE STRESS OFF OF EXISTING RIVER RUNS, AND GROW THE INTEREST IN LOCAL ACTIVITIES. AUBURN'S, PLACERVILLE'S, LOTUS' AND OTHER REGIONAL ECONOMIES WILL BENEFIT. KAYAKERS ARE A RELATIVELY WEALTHY AND ADVENTURESOME BUNCH - WILLING TO SUPPORT CLEAN, FRIENDLY BUSINESSES.

I REALLY HOPE YOU FULLY CONSIDER THE FUTURE OF THIS AREA FROM THE PERSPECTIVE OF TRUE MULTI-USE. DIVERTING PRECLUDES TOO MANY ACTIVITIES, IS ECONOMICALLY IRRESPONSIBLE, AND WILL EVENTUALLY BE DECIDED AGAINST ANYWAY. PLEASE EXERCISE FORESIGHT.

RESPECTFULLY YOURS,

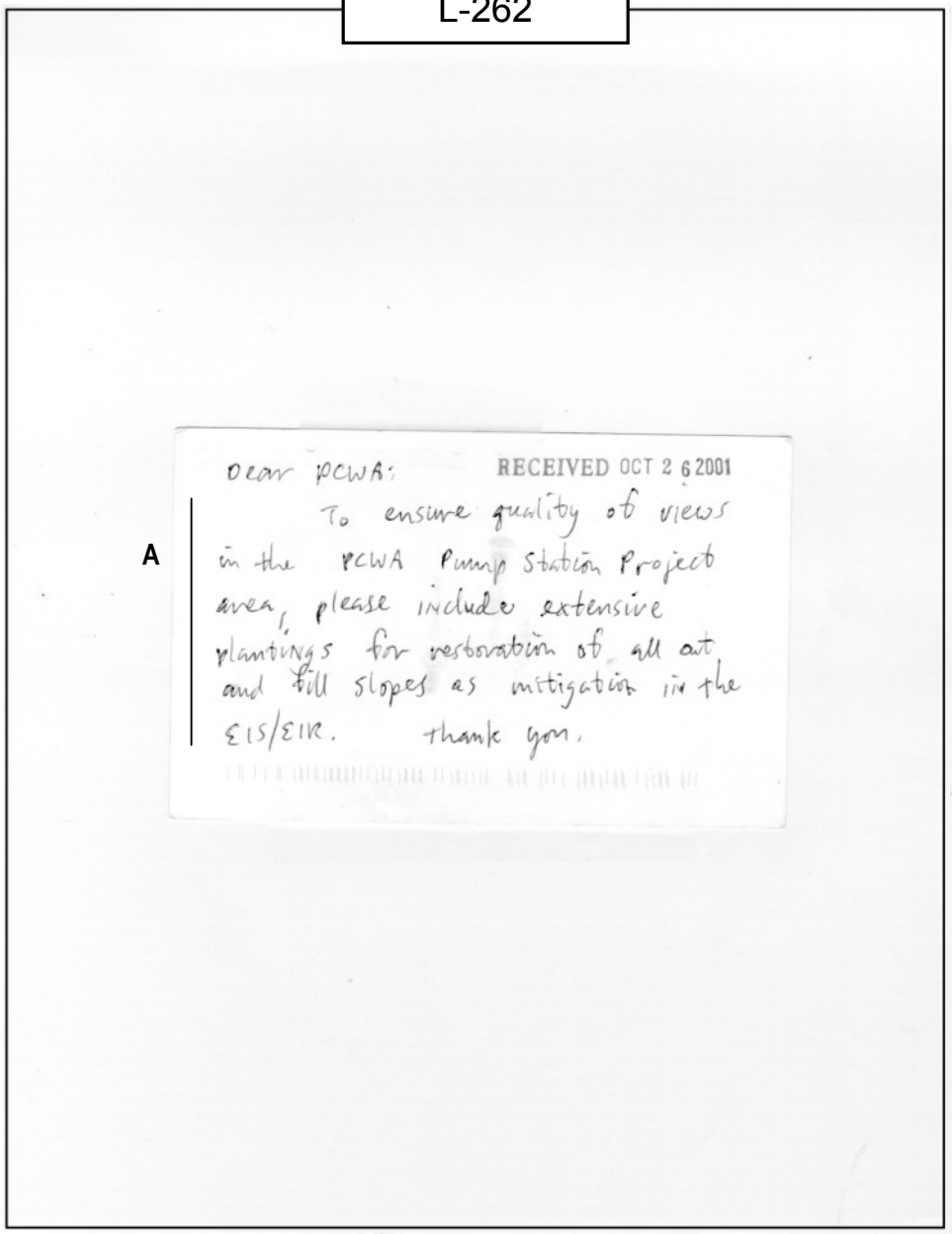
Aaron J Beitler

AARON BEITLER

A. The Draft EIS/EIR presents an evaluation of lower American River recreation (Chapter 3, Section 3.8).

B. The Proposed Project would not include development of a whitewater park on the North Fork American River. Future Auburn SRA planning activities will be undertaken by Reclamation and CDPR later this year (2002).

L-262



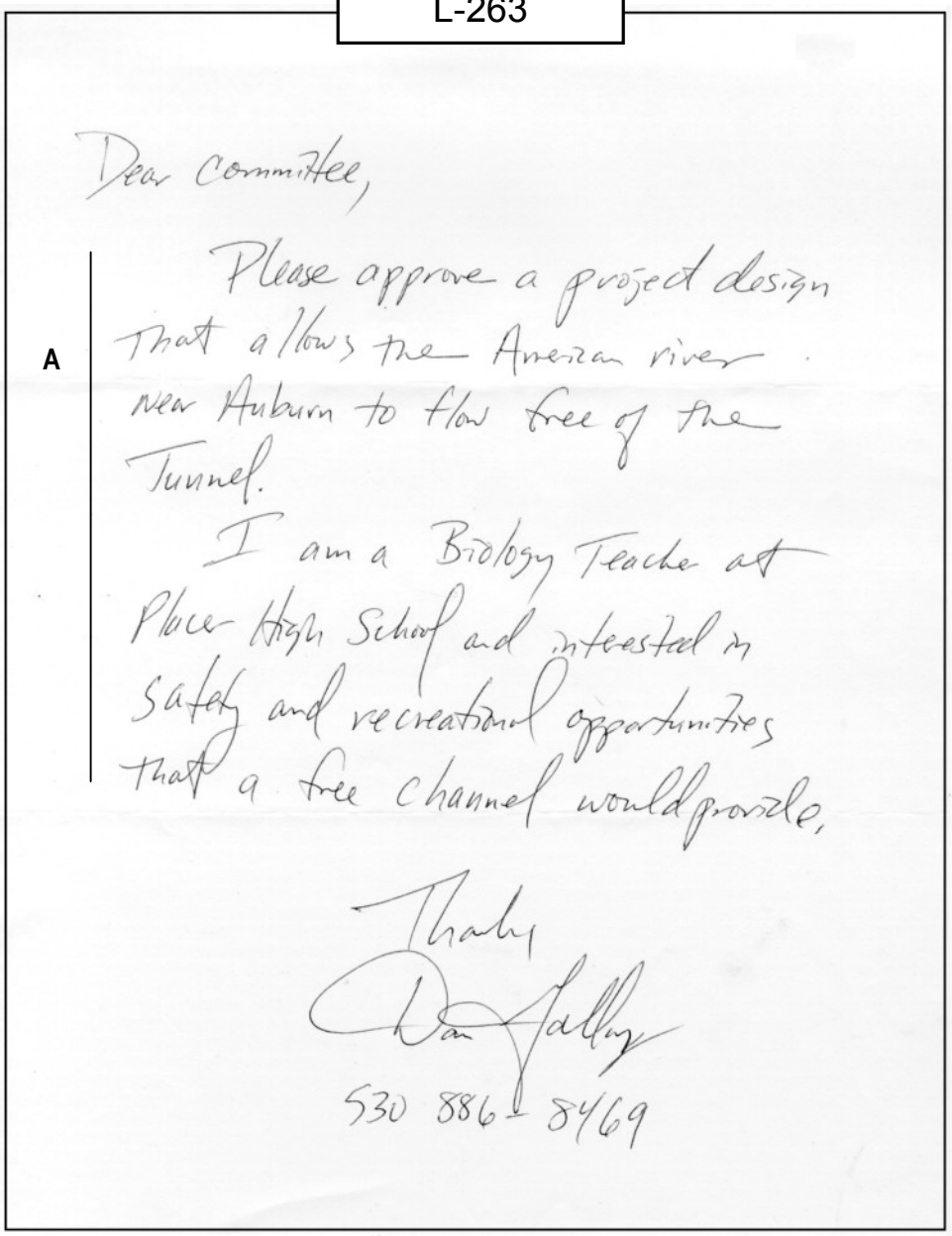
Dear PCWA: RECEIVED OCT 2 6 2001

To ensure quality of views in the PCWA Pump Station Project area, please include extensive plantings for restoration of all cut and fill slopes as mitigation in the EIS/EIR. thank you.

A

A. Please refer to Master Response 3.1.5, Project Area River Restoration.

L-263



Dear committee,

Please approve a project design that allows the American river near Auburn to flow free of the Tunnel.

I am a Biology Teache at Placer High School and interested in safety and recreational opportunities that a free channel would provide.

Thanks

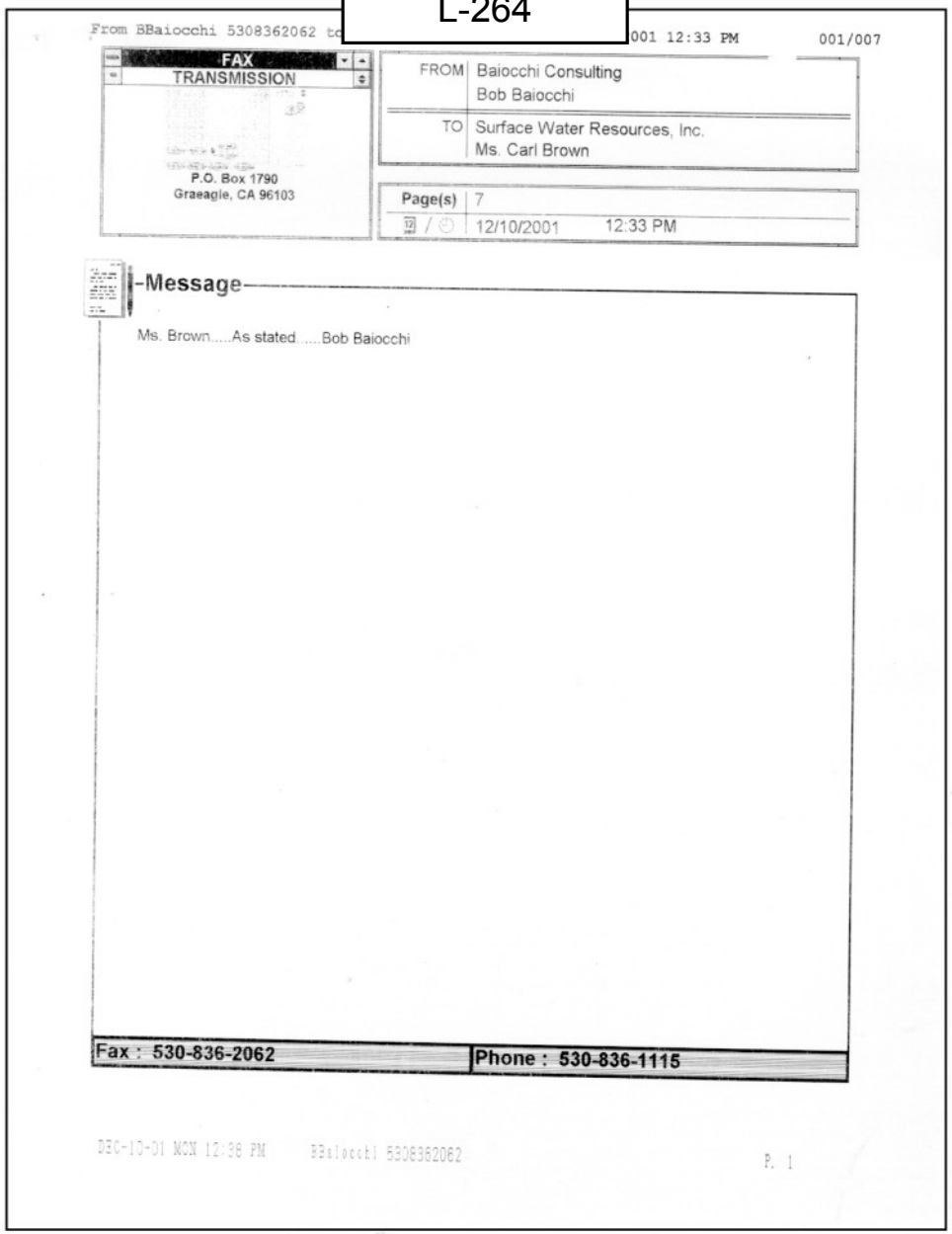
Dan Talley

530 886-8469

A

A. Project support for tunnel closure and river restoration noted.

L-264



From BBaiocchi 5308362062 to 001 12:33 PM 001/007

FAX
TRANSMISSION

P.O. Box 1790
Graeagle, CA 96103

FROM | Baiocchi Consulting
Bob Baiocchi

TO | Surface Water Resources, Inc.
Ms. Carl Brown

Page(s) | 7

12/10/2001 12:33 PM

-Message-

Ms. Brown.....As stated.....Bob Baiocchi

Fax : 530-836-2062 Phone : 530-836-1115

DEC-10-01 MON 12:36 PM BBaiocchi 5308362062 P. 1

L-264, pg. 2

Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825
Attn: Carol Brown

December 10, 2001

Re: American River Pump Station Project; Draft Joint Environmental Impact Report and Draft Environmental Impact Statement; Comments by Bob Baiocchi

Via Fax from Bob Baiocchi to Carol Brown of SWI at 916-286-0957

This is in response to the joint draft EIR and draft EIS regarding the proposed American River Pump Station Project by the U.S. Bureau of Reclamation and the Placer County Water Agency.

The following are the comments of Bob Baiocchi regarding the draft EIR/EIS document:

Auburn Ravine

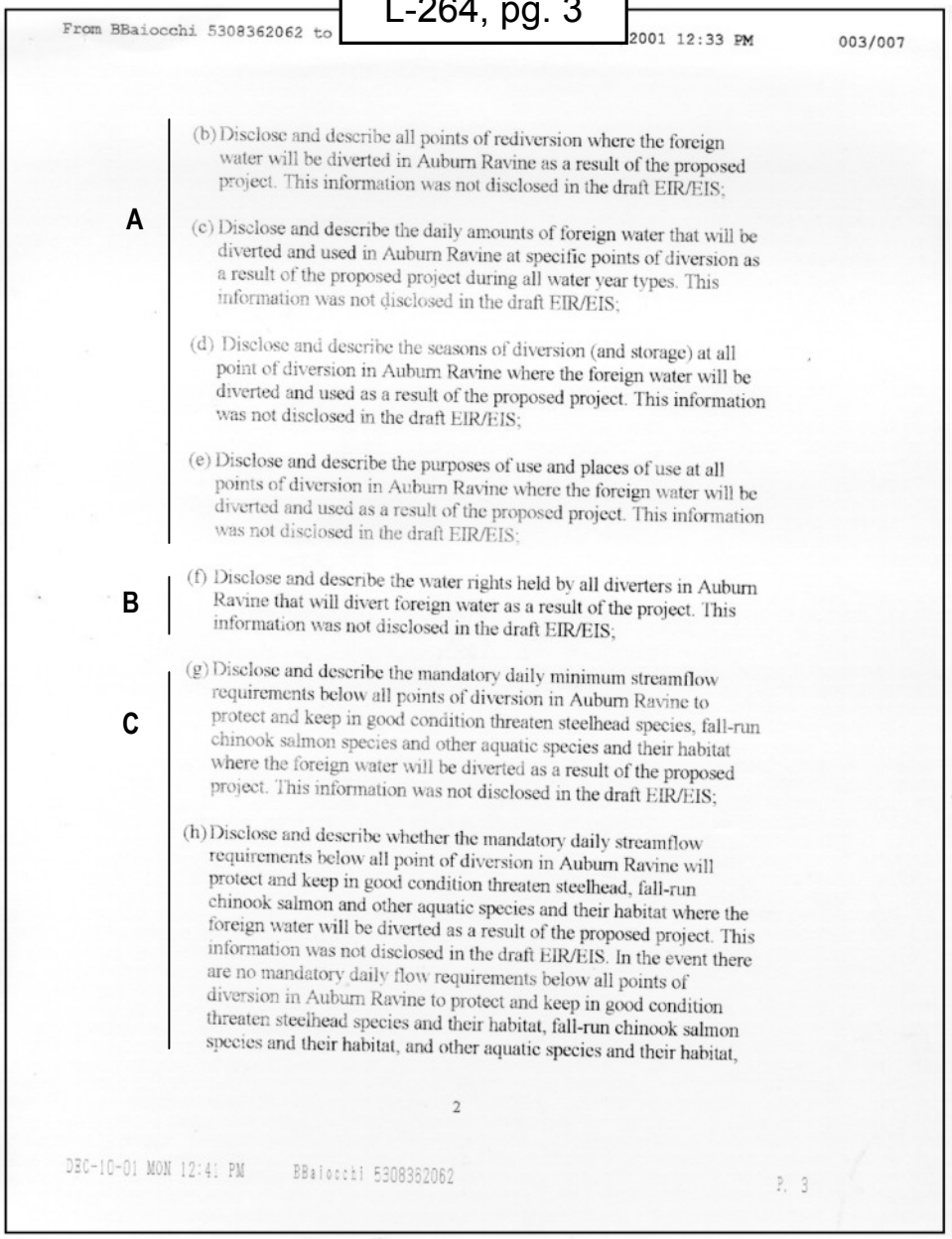
Water diversions from the American River watershed into Auburn Ravine are part of the whole project. Auburn Ravine sustains threatened steelhead species (all life stages) and their habitat, fall-run chinook salmon species and their habitat (all life stages), and also other aquatic species (all species and their life stages) and their habitat.

The draft EIR/EIS failed to disclose and descript water diversions into Auburn Ravine and other pertinent information as a result of the proposed project. The draft EIR/EIS must be amended to properly disclose and descript how diversions of water from the American River watershed into Auburn Ravine will be made as a result of the proposed project. The Draft EIR/EIS must disclose the following information and data:

A (a) Disclose and describe the daily and annual amounts of foreign water that will be diverted into Auburn Ravine as a result of the proposed project in all water year types. This information was not disclosed in the draft EIR/EIS;

A. Please refer to Master Response 3.1.13, Auburn Ravine.

L-264, pg. 3



From BBaiocchi 5308362062 to [illegible] 2001 12:33 PM 003/007

A

(b) Disclose and describe all points of rediversion where the foreign water will be diverted in Auburn Ravine as a result of the proposed project. This information was not disclosed in the draft EIR/EIS;

(c) Disclose and describe the daily amounts of foreign water that will be diverted and used in Auburn Ravine at specific points of diversion as a result of the proposed project during all water year types. This information was not disclosed in the draft EIR/EIS;

(d) Disclose and describe the seasons of diversion (and storage) at all point of diversion in Auburn Ravine where the foreign water will be diverted and used as a result of the proposed project. This information was not disclosed in the draft EIR/EIS;

(e) Disclose and describe the purposes of use and places of use at all points of diversion in Auburn Ravine where the foreign water will be diverted and used as a result of the proposed project. This information was not disclosed in the draft EIR/EIS;

B

(f) Disclose and describe the water rights held by all diverters in Auburn Ravine that will divert foreign water as a result of the project. This information was not disclosed in the draft EIR/EIS;

C

(g) Disclose and describe the mandatory daily minimum streamflow requirements below all points of diversion in Auburn Ravine to protect and keep in good condition threaten steelhead species, fall-run chinook salmon species and other aquatic species and their habitat where the foreign water will be diverted as a result of the proposed project. This information was not disclosed in the draft EIR/EIS;

(h) Disclose and describe whether the mandatory daily streamflow requirements below all point of diversion in Auburn Ravine will protect and keep in good condition threaten steelhead, fall-run chinook salmon and other aquatic species and their habitat where the foreign water will be diverted as a result of the proposed project. This information was not disclosed in the draft EIR/EIS. In the event there are no mandatory daily flow requirements below all points of diversion in Auburn Ravine to protect and keep in good condition threaten steelhead species and their habitat, fall-run chinook salmon species and their habitat, and other aquatic species and their habitat,

2

DEC-10-01 MON 12:41 PM BBaiocchi 5308362062 P. 3

B. No additional diversions from Auburn Ravine would occur as a result of the Proposed Project. Please also refer to Master Response 3.1.13, Auburn Ravine.

C. There are currently no legally mandated minimum streamflow requirements in Auburn Ravine. Because the project, as modified, will not adversely affect Auburn Ravine, will not alter existing diversions from Auburn Ravine, and will not increase the number of existing diversions from Auburn Ravine, the EIS/EIR need not provide the requested information in order to fully account for the impacts of the proposed action. Please also refer to Master Response 3.1.13, Auburn Ravine.

L-264, pg. 4

instreamflow studies must be conducted below each point of diversion to determine said mandatory daily flow conditions before the project is approved and implemented;

C (i) Disclose and describe whether all points of diversions in Auburn Ravine are screened to prevent the entrainment and loss of threaten steelhead and chinook salmon juvenile fish and other aquatic species where the foreign water will be diverted as a result of the proposed project. This information was not disclosed in the draft EIR/EIS. Fish screen studies must be conducted at all points of diversions in Auburn Ravine to determine whether fish screens should be installed and maintained to prevent the entrainment of threatened steelhead species, fall-run chinook salmon species, and other aquatic species as a result of diverting foreign water from all diversions in Auburn Ravine as a result of the proposed project;

B (j) The draft EIR/EIS failed to disclose and describe valid water rights at all points of diversion in Auburn Ravine where foreign water will be diverted as a result of the proposed project. The draft EIR/EIS did not disclose and describe the number of riparian diverters in Auburn Ravine that will divert and use foreign water as a result of the proposed project. Riparian diverters cannot legally divert and use foreign water from a different watershed based on claim of riparian rights. Disclose and describe the number of riparian diverters who will attempt to divert and use foreign water in Auburn Ravine as a result of the proposed project. Disclose and describe the manner in which the USBR and PCWA will prevent riparian diverters from diverting and using foreign water.

(k) The draft EIR/EIS did not disclose and describe whether the USBR and PCWA have filed a petition with the State Water Resources Control Board to amend their water rights to divert foreign water into Auburn Ravine. This writer believes that the USBR and PCWA should file a petition with the State Water Resources Control Board to amend their water rights to divert foreign water into Auburn Ravine.

D (l) The draft EIR/EIS did not disclose and describe whether there are full time daily gauging devices below each point of diversion in Auburn Ravine where foreign water will be diverted and used as a result of the proposed project. Full-time gauging devices are very important for

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-264, pg. 5

compliance purposes so that diverters only divert the amount of water that they have rights to, and also to monitor daily streamflow conditions (and also mandatory daily flow requirements) to protect steelhead species and their habitat; fall-run chinook salmon and their habitat; and other aquatic species and their habitat. The draft EIR/EIS must be amended to include full-time gauging devices below all points of diversion in Auburn Ravine to insure that diverters only divert the amounts of water they are entitled to, and also to monitor daily flow conditions that protect steelhead species and their habitat; fall-run chinook salmon and their habitat; and other aquatic species and their habitat.

I am requesting that all of the information and data that was cited in the above comments are disclosed, described, and evaluated by Surface Water Resources, Inc in the CEQA and NEPA document.

D

Protection Measures - Monitoring

The draft EIR/EIS did not disclose and describe the mitigation measures that will protect and keep in good condition threatened steelhead species and their habitat (all life stages), chinook salmon species and their habitat (all life stages) and other aquatic species and their habitat (all life stages) as a result of diverting foreign water into Auburn Ravine as a result of the proposed project. Amend the draft EIR/EIS to include protection measures for: threatened steelhead species and their habitat; fall-run chinook salmon species and their habitat; other aquatic species and their habitat.

The draft EIR/EIS did not disclose and describe the monitoring measures that will monitor the protection of threatened steelhead species and their habitat (all life stages), chinook salmon species and their habitat (all life stages) and other aquatic species and their habitat (all life stages) as a result of diverting foreign water into Auburn Ravine as a result of the proposed project. Amend the draft EIR/EIS to include monitoring measures for: threatened steelhead species and their habitat; fall-run chinook salmon species and their habitat; other aquatic species and their habitat.

The draft EIR/EIS is deficient without protection and monitoring measures that will protect and keep in good condition threatened steelhead species and their habitat (all life stages), chinook salmon species and their habitat (all life stages) and other aquatic species and their habitat (all life stages) as a

L-264, pg. 6

result of diverting foreign water into Auburn Ravine as a result of the proposed project.

Middle Fork Project

E

The Middle Fork Project is licensed with the Federal Energy Regulatory Commission. The Middle Fork Project is part of the whole project. The draft EIR/EIS did not disclose and describe the operational changes at the Middle Fork Project dams, reservoirs, and diversions. The draft EIR/EIS must be amended to include all operational changes at all dams, diversions, and diversion within the Middle Fork Project area. Also, the draft EIR/EIS must include the mandatory daily streamflow requirements to protect wild trout and other aquatic resources below all dams and diversions at the Middle Fork Project as a result of the proposed project.

Consultation with at least one federal agency indicates that the mandatory daily streamflow requirements at the Middle Fork Project dams and diversions are very poor. Consequently the draft EIR/EIS should disclose and describe the conditions of the fishery and other aquatic species resulting from the proposed project based on the results of studies.

The draft EIR/EIR must also disclose whether changes at the Middle Fork Project for the proposed project must be approved by the Federal Energy Regulatory Commission, by amendment to license.

Supplemental Draft EIR/EIS

F

The draft EIR/EIS failed to provide full disclosure to the public as shown and stated above in my comments. The USBR and PCWA must prepare a new supplemental EIR/EIR that provides full public disclosure to the public regarding the direct, indirect, and cumulative effects to the human environment of Auburn Ravine as a result of the proposed project.

Please note my mailing address. Please forward copies of the final EIR/EIS documents to me, including the new supplemental EIR/EIS documents. Thank you for the opportunity to provide comments to you.

E. Please refer to Master Response 3.1.8, Ralston Afterbay.

F. All comment letter authors were added to the project mailing list and received notification of the availability of the Final EIS/EIR.

L-264, pg. 7

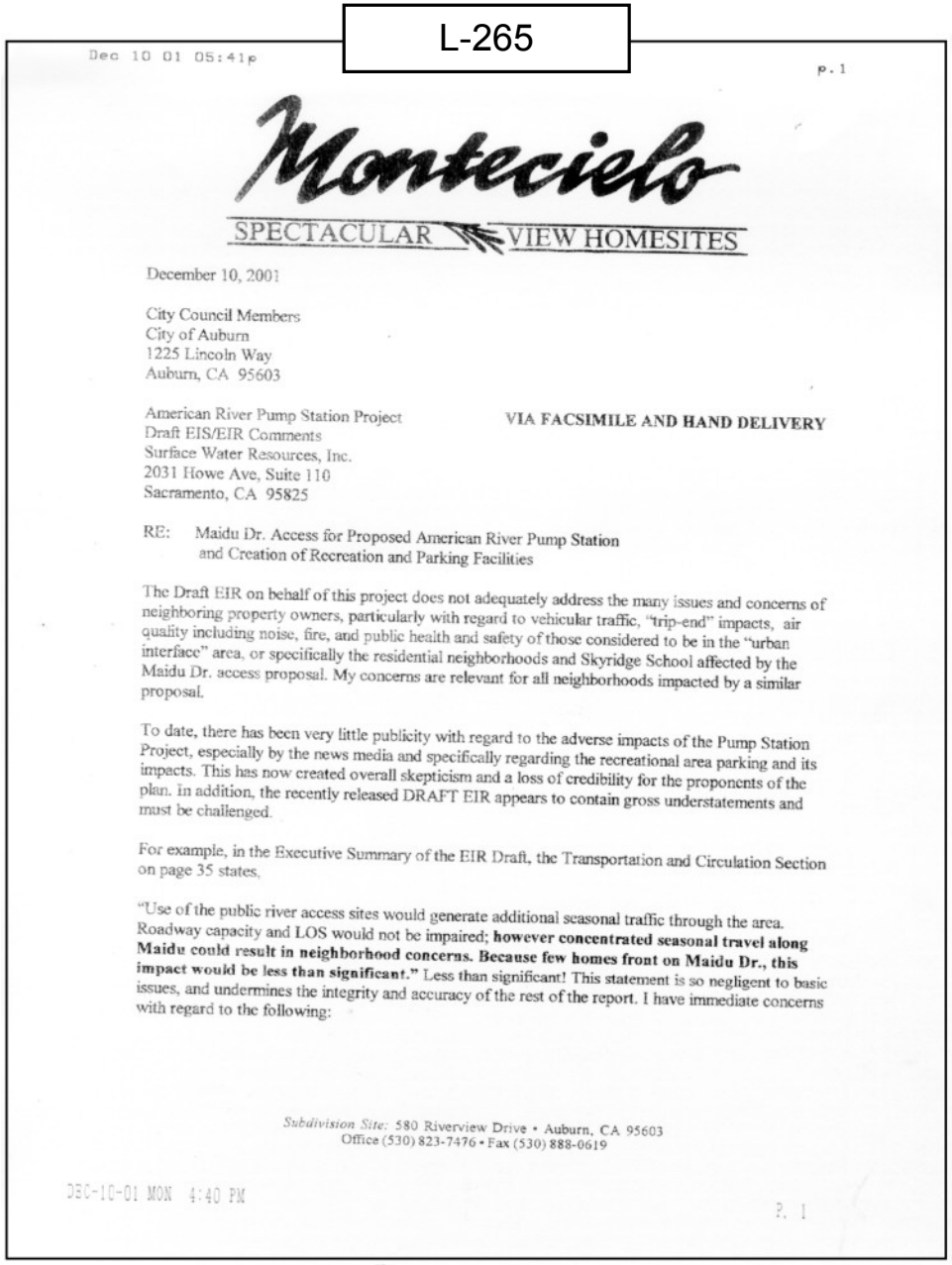
Respectfully Submitted

Signed by Bob Baiocchi

Bob Baiocchi, Consultant
P.O. Box 1790; Graeagle, CA 96103
Bus Tel: 530-836-1115
Fax: 530-836-2062
E-Mail: baiocchi@psln.com

cc: Interested Parties

L-265



Dec 10 01 05:41p p.1

Montecielo

SPECTACULAR VIEW HOMESITES

December 10, 2001

City Council Members
City of Auburn
1225 Lincoln Way
Auburn, CA 95603

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA 95825

VIA FACSIMILE AND HAND DELIVERY

RE: Maidu Dr. Access for Proposed American River Pump Station
and Creation of Recreation and Parking Facilities

The Draft EIR on behalf of this project does not adequately address the many issues and concerns of neighboring property owners, particularly with regard to vehicular traffic, "trip-end" impacts, air quality including noise, fire, and public health and safety of those considered to be in the "urban interface" area, or specifically the residential neighborhoods and Skyridge School affected by the Maidu Dr. access proposal. My concerns are relevant for all neighborhoods impacted by a similar proposal.

To date, there has been very little publicity with regard to the adverse impacts of the Pump Station Project, especially by the news media and specifically regarding the recreational area parking and its impacts. This has now created overall skepticism and a loss of credibility for the proponents of the plan. In addition, the recently released DRAFT EIR appears to contain gross understatements and must be challenged.

For example, in the Executive Summary of the EIR Draft, the Transportation and Circulation Section on page 35 states,

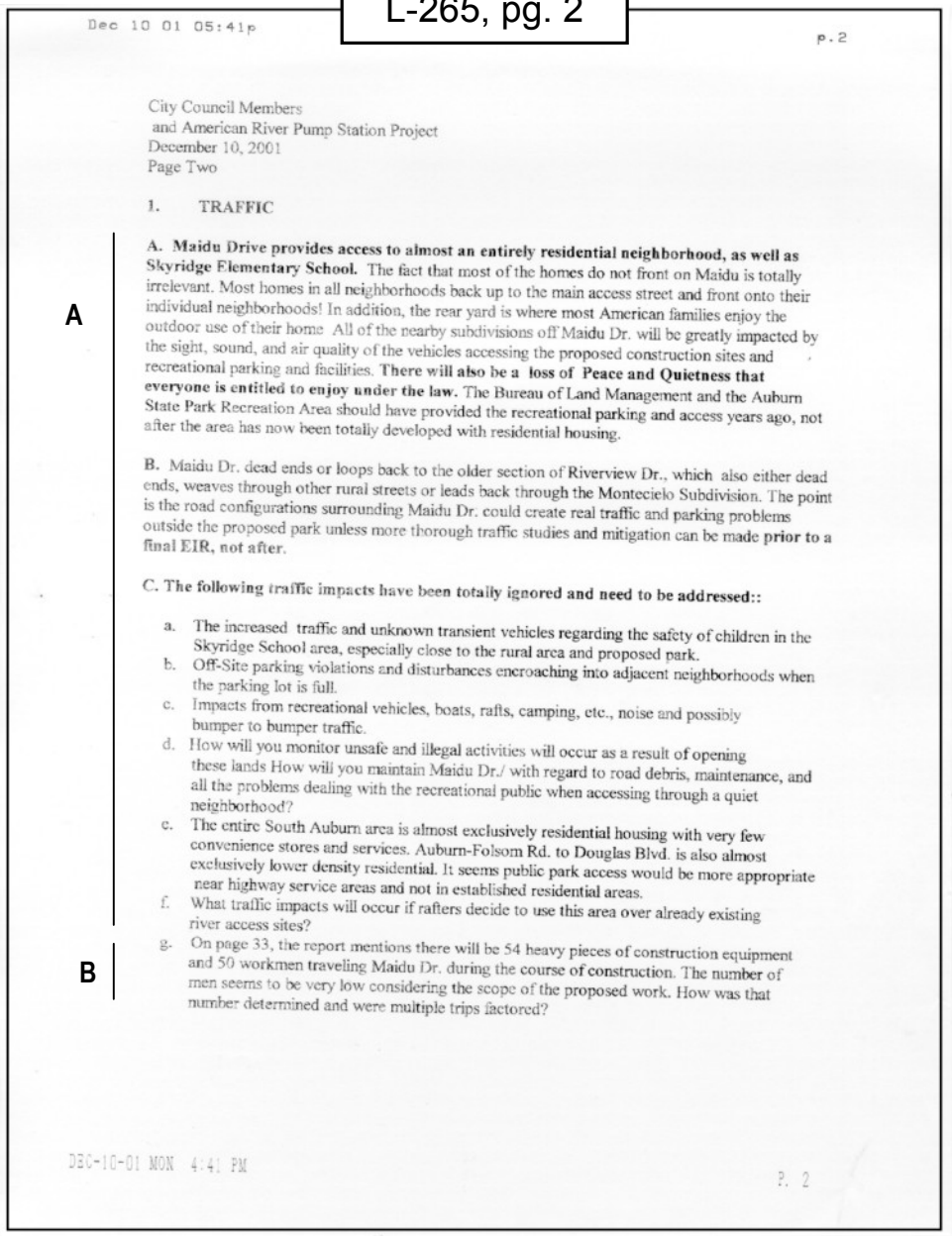
"Use of the public river access sites would generate additional seasonal traffic through the area. Roadway capacity and LOS would not be impaired; **however concentrated seasonal travel along Maidu could result in neighborhood concerns. Because few homes front on Maidu Dr., this impact would be less than significant."** Less than significant! This statement is so negligent to basic issues, and undermines the integrity and accuracy of the rest of the report. I have immediate concerns with regard to the following:

Subdivision Site: 580 Riverview Drive • Auburn, CA 95603
Office (530) 823-7476 • Fax (530) 888-0619

DEC-10-01 MON 4:40 PM P. 1

Specific comments addressed on following pages.

L-265, pg. 2



Dec 10 01 05:41p p.2

City Council Members
and American River Pump Station Project
December 10, 2001
Page Two

1. TRAFFIC

A

A. Maidu Drive provides access to almost an entirely residential neighborhood, as well as Skyridge Elementary School. The fact that most of the homes do not front on Maidu is totally irrelevant. Most homes in all neighborhoods back up to the main access street and front onto their individual neighborhoods! In addition, the rear yard is where most American families enjoy the outdoor use of their home All of the nearby subdivisions off Maidu Dr. will be greatly impacted by the sight, sound, and air quality of the vehicles accessing the proposed construction sites and recreational parking and facilities. **There will also be a loss of Peace and Quietness that everyone is entitled to enjoy under the law.** The Bureau of Land Management and the Auburn State Park Recreation Area should have provided the recreational parking and access years ago, not after the area has now been totally developed with residential housing.

B. Maidu Dr. dead ends or loops back to the older section of Riverview Dr., which also either dead ends, weaves through other rural streets or leads back through the Montecielo Subdivision. The point is the road configurations surrounding Maidu Dr. could create real traffic and parking problems outside the proposed park unless more thorough traffic studies and mitigation can be made **prior** to a final EIR, not after.

C. The following traffic impacts have been totally ignored and need to be addressed::

a. The increased traffic and unknown transient vehicles regarding the safety of children in the Skyridge School area, especially close to the rural area and proposed park.
b. Off-Site parking violations and disturbances encroaching into adjacent neighborhoods when the parking lot is full.
c. Impacts from recreational vehicles, boats, rafts, camping, etc., noise and possibly bumper to bumper traffic.
d. How will you monitor unsafe and illegal activities will occur as a result of opening these lands How will you maintain Maidu Dr./ with regard to road debris, maintenance, and all the problems dealing with the recreational public when accessing through a quiet neighborhood?
e. The entire South Auburn area is almost exclusively residential housing with very few convenience stores and services. Auburn-Folsom Rd. to Douglas Blvd. is also almost exclusively lower density residential. It seems public park access would be more appropriate near highway service areas and not in established residential areas.
f. What traffic impacts will occur if rafters decide to use this area over already existing river access sites?

B

g. On page 33, the report mentions there will be 54 heavy pieces of construction equipment and 50 workmen traveling Maidu Dr. during the course of construction. The number of men seems to be very low considering the scope of the proposed work. How was that number determined and were multiple trips factored?

DEC-10-01 MON 4:41 PM P. 2

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Response L-95.I.

L-265, pg. 3

City of Auburn Council Members
and American River Pump Station Project
December 10, 2001

C C. h. What other existing river access sites were reviewed as less impacting than Maidu Dr. as alternate routes? What were the specific reasons they were not used?

i. Why would anyone want to destroy the rural character of one of the finest areas in all of Auburn and one that has driven the higher end residential housing market in Auburn?

D 2. AIR QUALITY. On pages 35 & 36 the report refers to significant emissions during the construction phase with **inconclusive ability to reduce or control the emissions.** The increase of vehicular traffic and emissions are not adequately addressed or mitigated in the report. The suggested Monitoring and documentation procedures as a remedy do not eliminate the problem. The report does not deal with the air quality for traffic and the recreational parking area.

E 3. NOISE. Noise by increased traffic activities is not adequately addressed or mitigated in the report.

F 4. ALTERNATIVES OF THE PLAN. The other options in the EIR were not discussed in the meeting and merit more discussion. There also seems to be discrepancy between the Federal and State opinions regarding closing the tunnel. This needs further clarification.

The above items only begin to address some of the key issues affecting the neighborhood and which need further study and input before the EIR can accurately represent the impacts of this proposal.

G In an effort to stay focused on the solid legitimate impacting issues, I think it would be beneficial for representatives of Placer Water Agency and Bureau of Land Management to work closely with the City of Auburn Staff, i.e., City Manager, Dept. of Public Works and Planning Dept., togetherwith the neighborhoods surrounding the proposed project in an effort to **mitigate the serious concerns and** impacts this project realistically will impose prior to completing the EIR.

Thank you for the opportunity to express my opinions. Since I will be unable to attend the City Council meeting on December 10, 2001, I kindly request this letter be read into the minutes.

Sincerely,

John Di Manto

John Di Manto
Montecielo Property Owner

cc: Mayor Jodie Hale
City Council Member Alice Dowdin Singh
City Council Member Cheryl Maki
City Council Member O.C. Taylor
City Council Member Kathy K. Sands
Paul Ogden, City Manager
Tom Fossum, Director of Public Works
Wil Wong, Community Development Director
Fire Chief John Bailey
Chief of Police, Mike Morello

C. Please refer to Master Response 3.1.10, Project Access.

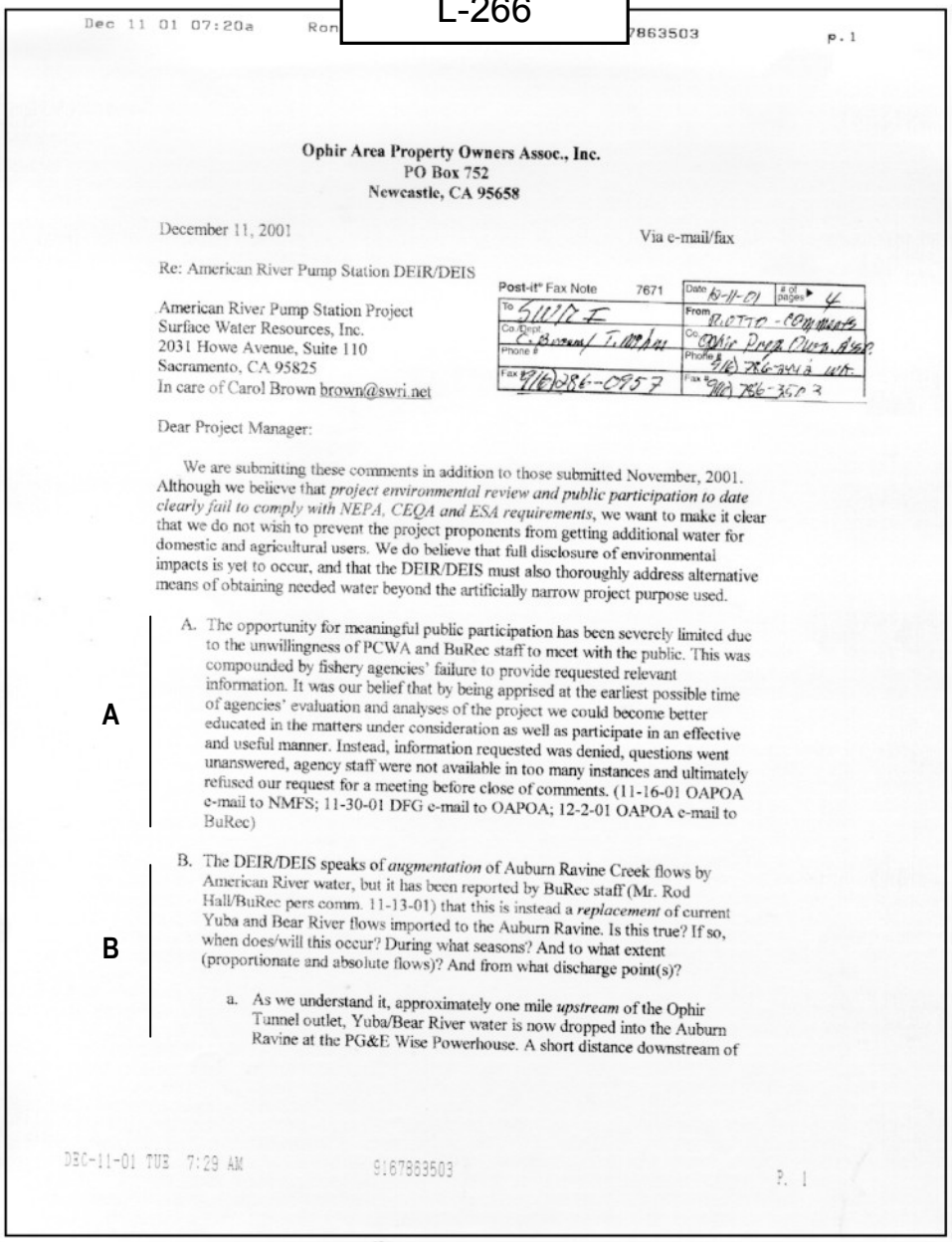
D. The air quality evaluation was prepared following Placer County and El Dorado County air pollution control district guidelines and requirements. Please also refer to Response L-3.C.

E. Please refer to Master Response 3.1.6, Public River Access Features.

F. Public stakeholder meetings held since release of the Draft EIS/EIR have intentionally focused on the Proposed Project. The alternatives are fully evaluated in the Draft EIS/EIR.

G. The lead agencies and CDPR representatives have held several additional meetings and further consultations with local agencies, stakeholders and residents to further define project-related issues and clarify operational impacts and mitigation measures. Please refer to Master Response 3.1.6, Public River Access Features.

L-266



Dec 11 01 07:20a Ron 7863503 p.1

Ophir Area Property Owners Assoc., Inc.
PO Box 752
Newcastle, CA 95658

December 11, 2001

Via e-mail/fax

Re: American River Pump Station DEIR/DEIS

Post-it® Fax Note 7671 | Date 12-11-01 | # of pages 4
To Susie E | From Rietta - Comments
Co./Dept. C. Brown/ T. Adams | Co. Ophir Prop. Own. Assoc.
Phone # | Phone # 916 726-3441 & wk.
Fax # 916 986-0957 | Fax # 916 726-3502

American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825
In care of Carol Brown brown@swri.net

Dear Project Manager:

We are submitting these comments in addition to those submitted November, 2001. Although we believe that *project environmental review and public participation to date clearly fail to comply with NEPA, CEQA and ESA requirements*, we want to make it clear that we do not wish to prevent the project proponents from getting additional water for domestic and agricultural users. We do believe that full disclosure of environmental impacts is yet to occur, and that the DEIR/DEIS must also thoroughly address alternative means of obtaining needed water beyond the artificially narrow project purpose used.

A. The opportunity for meaningful public participation has been severely limited due to the unwillingness of PCWA and BuRec staff to meet with the public. This was compounded by fishery agencies' failure to provide requested relevant information. It was our belief that by being apprised at the earliest possible time of agencies' evaluation and analyses of the project we could become better educated in the matters under consideration as well as participate in an effective and useful manner. Instead, information requested was denied, questions went unanswered, agency staff were not available in too many instances and ultimately refused our request for a meeting before close of comments. (11-16-01 OAPOA e-mail to NMFS; 11-30-01 DFG e-mail to OAPOA; 12-2-01 OAPOA e-mail to BuRec)

B. The DEIR/DEIS speaks of *augmentation* of Auburn Ravine Creek flows by American River water, but it has been reported by BuRec staff (Mr. Rod Hall/BuRec pers comm. 11-13-01) that this is instead a *replacement* of current Yuba and Bear River flows imported to the Auburn Ravine. Is this true? If so, when does/will this occur? During what seasons? And to what extent (proportionate and absolute flows)? And from what discharge point(s)?

   a. As we understand it, approximately one mile *upstream* of the Ophir Tunnel outlet, Yuba/Bear River water is now dropped into the Auburn Ravine at the PG&E Wise Powerhouse. A short distance downstream of

DEC-11-01 TUE 7:29 AM 9167863503 P. 1

A. Please refer to Response L-95.A.

B. Please refer to Master Response 3.1.13, Auburn Ravine. Additionally, it is noted that NEPA and CEQA procedures do not require the lead agencies to conduct field investigations for the evaluation of environmental impacts of a proposed project or action. However, PCWA voluntarily opted to develop a flow and water temperature monitoring program for Auburn Ravine. The details of these monitoring programs can be found in the Mitigation Plan (Appendix D of the Final EIS/EIR).

L-266, pg. 2

PG&E's facility, City of Auburn Wastewater effluent is also discharged into the stream.

b. If American River water discharged from the downstream Ophir Tunnel outlet is to replace upstream Yuba/Bear River water, what are the impacts to the stream and aquatic community *between* the two discharge points? As the Auburn Wastewater effluent discharge is close to the upstream PG&E outfall, how will this impact the effluent dominated stream in this area, especially during times of minimal flow and dilution (e.g. fall, spring, and, occasionally, winter low flow periods)? How will this new discharge point impact Critical Habitat for protected steelhead above and below this point in the Auburn Ravine? What are passage impacts? What responsibilities under the ESA regarding steelhead occur if this is the case? What responsibilities occur due to a change of use or from a change of discharge point of water? What specific input (by whom and when?) has been provided by NMFS, DFG, and Regional Board staff in evaluating related potential impacts? This is far from the first time our community and agency staff have discussed this matter.

B

C. The DEIR discussion of fishery issues, upon rereading, is even more confusing, convoluted, incomplete, and difficult to accept. For example, Environmental Consequences/Impacts Analysis discusses consideration to be given to potential operation and maintenance impacts related to adult salmonid emigration (migration?) patterns resulting from changes in Auburn Ravine flows (DEIR 3-56). A literature review regarding chemical detection limits and olfactory response mechanisms of salmonids was conducted, and Auburn Ravine water composition and hatchery influences were evaluated. Later on (DEIR 3-81, 3-82), a discussion of effects on native salmonids in Auburn Ravine due to changes in water source composition occurs which is not consistent with this lay commenter's understanding of current scientific literature and consensus.

a. For example, NMFS Tech Memo-22: Status Review for Mid-Columbia River Summer Chinook Salmon (see references), discusses homing behavior of salmonids, with *olfactory cues providing the primary mechanism* for river, tributary, and possibly even riffle selection. It is further noted that it has been reported that ***homing appeared to be somewhat under genetic control***. Why does the DEIR obfuscate this matter? The assumptions, assertions, analyses, and conclusions of the DEIR/DEIS need to be substantially revised, expanded and supported with more representative references and pertinent data. This is particularly clear in the fisheries discussions.

D. Several years ago, related preliminary preparation and discussions began. Lead agency staff were made aware of concerns regarding possible Auburn Ravine aquatic community and anadromous impacts early on. (e.g. the change of

L-266, pg. 3

B (cont)

discharge point, the change of source water composition, possible homing and passage impacts, the change of flow quantity/quality/timing/duration)
The DEIR notes that: *Currently, there is little detailed information regarding (protected) steelhead specific to Auburn Ravine.* (3-55) Invaluable information could have been obtained through timely investigations of anadromous populations and behavior.

a. Why was it decided by the lead agency(-ies) to forego appropriate field studies in the Auburn Ravine—particularly when time was available to do so? Such studies could have provided solid, reliable and specific baseline data upon which to base ultimate project decisions by agency staff, the public, and decision makers. Such studies could have also been invaluable in subsequent monitoring activities.

b. If the goal of responsible conservation and recovery efforts (and of the ESA) is to restore native stocks, Why were no such Auburn Ravine (and elsewhere) studies performed, commissioned or reported by the lead agencies?

c. Is it now reasonable or prudent to proceed in the face of deliberate ignorance?

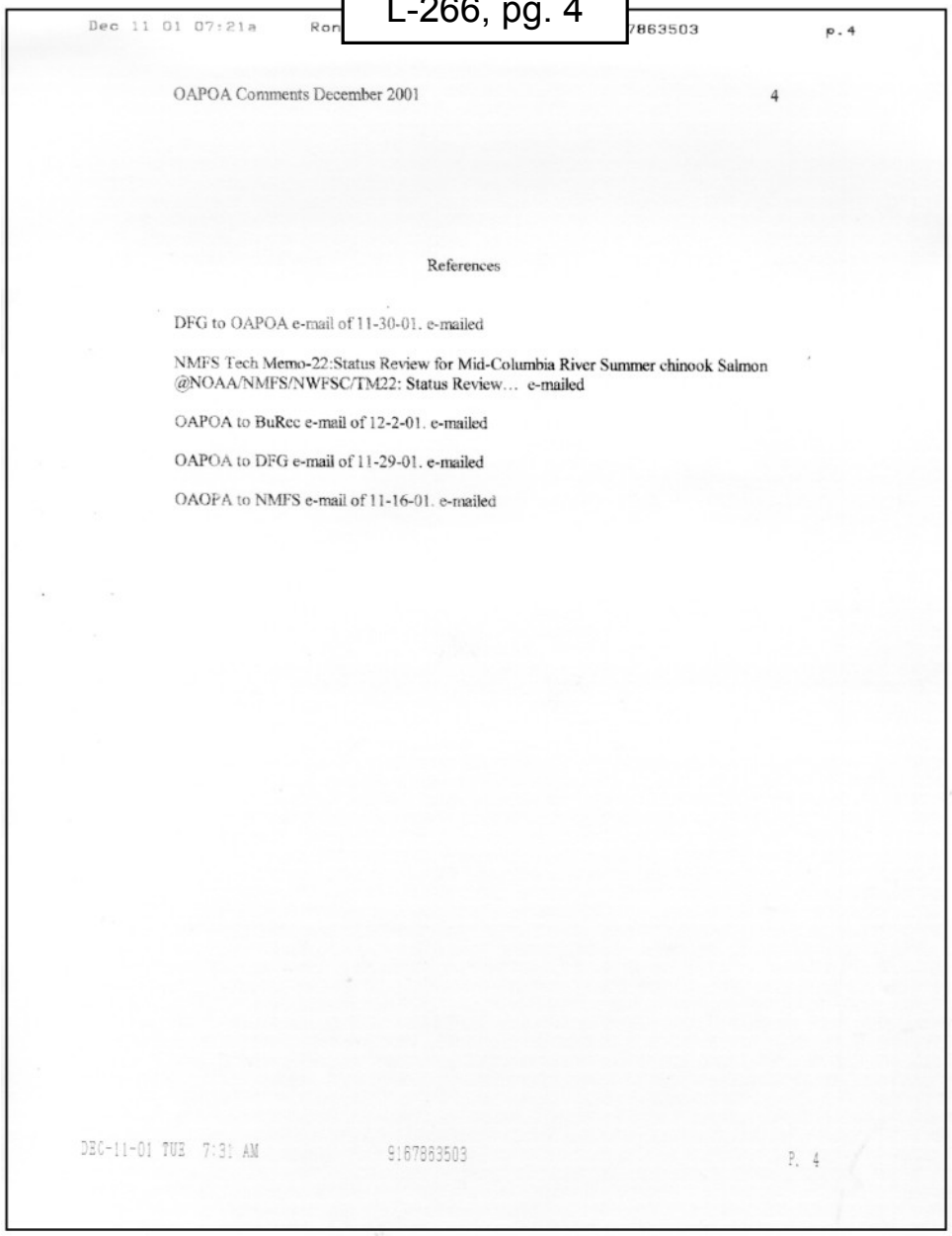
We hope to work more closely with agency staff and strongly recommend that a second DEIR/DEIS be prepared. Thank you for the opportunity to comment.

Sincerely,

Ronald Otto

Ronald Otto for the Auburn Ravine Creek Preservation Committee, Ophir Area Property Owners Association

L-266, pg. 4



Dec 11 01 07:21a Ron 7863503 p.4

OAPOA Comments December 2001 4

References

DFG to OAPOA e-mail of 11-30-01. e-mailed

NMFS Tech Memo-22:Status Review for Mid-Columbia River Summer chinook Salmon @NOAA/NMFS/NWFSC/TM22: Status Review… e-mailed

OAPOA to BuRec e-mail of 12-2-01. e-mailed

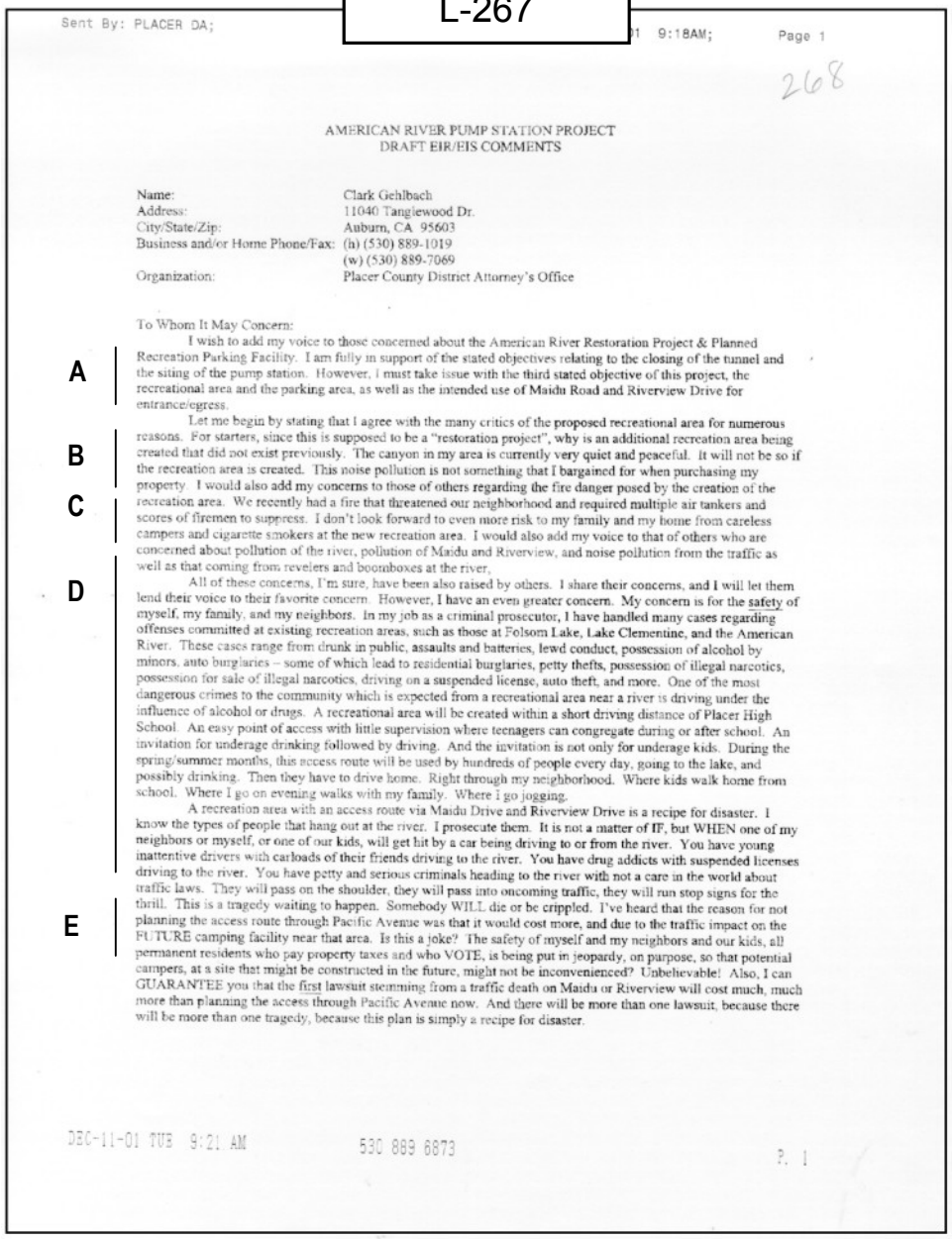
OAPOA to DFG e-mail of 11-29-01. e-mailed

OAOPA to NMFS e-mail of 11-16-01. e-mailed

DEC-11-01 TUE 7:31 AM 9167863503 P. 4

Note: The references attached to this comment letter may be viewed at lead agency offices.

L-267



Sent By: PLACER DA; 01 9:18AM; Page 1

268

AMERICAN RIVER PUMP STATION PROJECT
DRAFT EIR/EIS COMMENTS

Name: Clark Gehlbach
Address: 11040 Tanglewood Dr.
City/State/Zip: Auburn, CA 95603
Business and/or Home Phone/Fax: (h) (530) 889-1019
(w) (530) 889-7069
Organization: Placer County District Attorney's Office

To Whom It May Concern:

A I wish to add my voice to those concerned about the American River Restoration Project & Planned Recreation Parking Facility. I am fully in support of the stated objectives relating to the closing of the tunnel and the siting of the pump station. However, I must take issue with the third stated objective of this project, the recreational area and the parking area, as well as the intended use of Maidu Road and Riverview Drive for entrance/egress.

B Let me begin by stating that I agree with the many critics of the proposed recreational area for numerous reasons. For starters, since this is supposed to be a "restoration project", why is an additional recreation area being created that did not exist previously. The canyon in my area is currently very quiet and peaceful. It will not be so if the recreation area is created. This noise pollution is not something that I bargained for when purchasing my property. I would also add my concerns to those of others regarding the fire danger posed by the creation of the

C recreation area. We recently had a fire that threatened our neighborhood and required multiple air tankers and scores of firemen to suppress. I don't look forward to even more risk to my family and my home from careless campers and cigarette smokers at the new recreation area. I would also add my voice to that of others who are concerned about pollution of the river, pollution of Maidu and Riverview, and noise pollution from the traffic as well as that coming from revelers and boomboxes at the river.

D All of these concerns, I'm sure, have been also raised by others. I share their concerns, and I will let them lend their voice to their favorite concern. However, I have an even greater concern. My concern is for the safety of myself, my family, and my neighbors. In my job as a criminal prosecutor, I have handled many cases regarding offenses committed at existing recreation areas, such as those at Folsom Lake, Lake Clementine, and the American River. These cases range from drunk in public, assaults and batteries, lewd conduct, possession of alcohol by minors, auto burglaries – some of which lead to residential burglaries, petty thefts, possession of illegal narcotics, possession for sale of illegal narcotics, driving on a suspended license, auto theft, and more. One of the most dangerous crimes to the community which is expected from a recreational area near a river is driving under the influence of alcohol or drugs. A recreational area will be created within a short driving distance of Placer High School. An easy point of access with little supervision where teenagers can congregate during or after school. An invitation for underage drinking followed by driving. And the invitation is not only for underage kids. During the spring/summer months, this access route will be used by hundreds of people every day, going to the lake, and possibly drinking. Then they have to drive home. Right through my neighborhood. Where kids walk home from school. Where I go on evening walks with my family. Where I go jogging.

A recreation area with an access route via Maidu Drive and Riverview Drive is a recipe for disaster. I know the types of people that hang out at the river. I prosecute them. It is not a matter of IF, but WHEN one of my neighbors or myself, or one of our kids, will get hit by a car being driving to or from the river. You have young inattentive drivers with carloads of their friends driving to the river. You have drug addicts with suspended licenses driving to the river. You have petty and serious criminals heading to the river with not a care in the world about traffic laws. They will pass on the shoulder, they will pass into oncoming traffic, they will run stop signs for the thrill. This is a tragedy waiting to happen. Somebody WILL die or be crippled. I've heard that the reason for not

E planning the access route through Pacific Avenue was that it would cost more, and due to the traffic impact on the FUTURE camping facility near that area. Is this a joke? The safety of myself and my neighbors and our kids, all permanent residents who pay property taxes and who VOTE, is being put in jeopardy, on purpose, so that potential campers, at a site that might be constructed in the future, might not be inconvenienced? Unbelievable! Also, I can GUARANTEE you that the first lawsuit stemming from a traffic death on Maidu or Riverview will cost much, much more than planning the access through Pacific Avenue now. And there will be more than one lawsuit, because there will be more than one tragedy, because this plan is simply a recipe for disaster.

DEC-11-01 TUE 9:21 AM 530 889 6873 P. 1

A. Project support for tunnel closure and pump station noted.

B. Please refer to Master Response 3.1.13, Auburn Ravine.

C. Please refer to Master Response 3.1.9, Fire Management. CDPR would not permit open fires at the public river access sites in the project area. Additionally, camping and after hours access will not be permitted within the project area.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. Please refer to Master Response 3.1.10, Project Access and Master Response 3.1.6, Public River Access Features.

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E

Most of the people in that area are concerned about their kids crossing Maidu at Berlin St. due to the number of people CURRENTLY driving through the red light. I live on Tanglewood Drive. My kids will have to walk a few hundred yards up Maidu before crossing the street to get to school. The same for coming home from school. The danger to them will be magnified.

This does not even touch on the increased safety concerns to our houses, cars, and physical safety due to the increase in the type of traffic contemplated here. If you read any of the studies on crime, you will find that up to 90% of crimes are crimes of opportunity. They are not well planned out crimes. And they occur within a block or two of where a criminal usually frequents. I do not want increased traffic driving through my neighborhood, where criminals can spot nice cars and nice things that they would like to have. Because, as is their nature, they might decide that they would really like those things RIGHT NOW. Bringing additional traffic through these neighborhoods WILL bring additional crime. Both property crimes and crimes of violence. And all to save a few bucks in the short term.

At the Auburn City Council meeting on December 10, 2001, Mr. Jim Michaels from the Department of Parks and Recreation spoke to the Council. He stated that the dam site was approximately four miles down river from the confluence, and five and a half miles from Folsom Lake. He said that the Dept. was concerned that during high water times the lake backs up to the diversion tunnel exit, and that leaves five miles of flat water for rafters to negotiate. The access and recreation area was designed so that rafters and others won't be "trapped" in the canyon. A multi-million dollar project, with 70 proposed parking spaces to accommodate up to 210 vehicles a day was designed to "save" a potential rafter "trapped" by his/her own refusal to paddle to the end of the run? This is the best you could come up with? First, as Councilwoman Maki stated, that rafter would only make that mistake once. Second, this is the most preposterous example of a solution in search of a problem I've ever heard. The Department of Parks and Recreation is planning on putting my family and the families of my neighbors at serious risk for no viable reason.

I recommend that the Auburn City Council oppose the creation of a recreational area at the pump station site. I would also urge the Council that if the project is to be approved over it's objection, that the access to this area be via Pacific Avenue, an area that has no residential impact, and only a POTENTIAL impact on a FUTURE plan for a camping facility, where TEMPORARY visitors might one day visit.

I would also recommend that the Placer County Water Agency oppose the creation of a recreation area at the proposed pump site. PCWA has broad support for returning the river to its original course and the siting of a permanent pump station. That is where the support stops. Including this recreation area in the same proposal as the restoration of the river puts the whole project in jeopardy. In addition, PCWA should not want itself in any way associated with the other aspects of this plan due to the inevitable lawsuits on behalf of crime/accident victims and their surviving family members.

I would urge the California Department of Parks and Recreation to do a serious cost/benefit analysis of not only the project itself but also the access route. The project itself has no real defensible purpose. The "trapped" rafter scenario is poppycock. The planned 70 parking spaces itself shows this "purpose" to be a lie. You will bring pollution, noise, fire danger, and crime to an area that currently does not experience these. In addition, the selection of Maidu Road and Riverview Drive as entrance points is sheer folly. The safety and security of real people, and lots of them, would be sacrificed to save a few bucks in the short term. It will cost the state far more in dollars in the long run, and it will cost the neighborhood far more in anguish and a lost sense of security from the resulting drunk driving accidents and other crime. Don't build it. Don't put the hundreds of families that live off of Maidu and Riverview at serious risk.

Regards,

Clark E. Gehlbach

Clark E. Gehlbach
Deputy District Attorney – Placer County
11040 Tanglewood Drive
Auburn, CA 95603
(w) (530) 889-7069
(h) (530) 889-1019

L-268

JBeuttler@aol.com, 06:15 PM 12/11/01, Comments on the Draft EIS/EIR

From: JBeuttler@aol.com
Date: Tue, 11 Dec 2001 18:15:59 EST
Subject: Comments on the Draft EIS/EIR - American River Pump Station Project
To: brown@swri.net
CC: ccate@dnai.com, izmirian@earthlink.net, DeltaKeep@aol.com,
crenshaw@pa.mother.com, liWINOS@aol.com, jerrymen@innercite.com,
RFRaab@aol.com, gary_mag@yahoo.com, ophir1@quiknet.com,
lweek@dfg.ca.gov, kavberg@dfg.ca.gov
X-Mailer: AOL 6.0 for Windows US sub 10539

CALIFORNIA SPORTFISHING PROTECTION ALLIANCE
"RESTORING & CONSERVING CALIFORNIA'S FISHERY RESOURCES"
1360 NEILSON STREET / BERKELEY / CA 94702-1116 / 510-526-4049

December 11, 2001

Surface Water Resources, Inc.
Attn.: Carol Brown
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Document Sent By Emailed to: brown@swri.net on 12/11/01

Re: Our Comments on the Draft EIS/EIR for the American River Pump Station Project

The California Sportfishing Protection Alliance, representing thousands of anglers and citizens across the state, would like to make the following comments regarding the draft EIR/EIS for the American River Pump Station Project proposed by the U.S. Bureau of Reclamation and the Placer County Water Agency.

A By this communication we would like to go on record to request your agencies prepare a revised draft DEIS/DEIR in order to correct the significant deficiencies of the current document. These deficiencies have been thoughtfully addressed by the comments made by Mr. Randy Bailey of Bailey Environmental, the Northern California Council of the Federation of Fly Fishers, and the Ophir Area Property Owners Association, Inc.

In addition, before preparing such revised documents, we recommend that your agencies make arrangements for and earnestly participate in a meeting with those parties that commented on the DEIS/DEIR in order to completely understand and to appropriately address the deficiencies noted in the comments from these parties.

Please also be advised that we are incorporating the comments of the parties specified above by reference as our comments to ensure our standing in this process and the deficiencies referenced in their comments are appropriately addressed.

Sincerely,

John Beuttler
For The CSPA Board of Directors

Printed for "Carol Brown, Surface Water Resources, Inc." <br... 1

A. Please refer to Master Response 3.1.13, Auburn Ravine. Please also refer to individual responses to the following comment letters: 112, 138, 212, 266, and 281.

L-269

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

November 26, 2001

Comment Reviewers:

The following aspects of the American River Pump Station Project as described in the Executive Summary are of concern:

A
- The "Diversion Gradient Controls" are essentially absent from the report begging questions pertinent to their design, control, operation, appearance, and effects on hydrology.
- How will backwater and operation of the Diversion Gradient Control affect the Salt Creek Spoil Area, particularly the stability of materials sloughing into the river?

B
- Improvements to access could increase risk of fire – what measures might be taken to mediate this risk?

C
- In Section 3.16 of the Summary of Impacts and Environmental Protection and Mitigation Measures (Noise Impacts, p.115) an ARD Campground is mentioned, yet it is ignored in the main body of the document. An explanation is requested.

The following is a suggestion:

D
- The Lower Parking Lot should be restricted to loading/unloading and handicap access only.

The following are questions not answered in the executive summary:

E
- Has a seismic assessment been completed for the project?

F
- Will power lines to the new pump station facilities be above or below ground?

G
- Will there be any lights associated with the new pump station facilities?

H
- Will there be any revegetation efforts made after completion of construction to any or all areas affected by project completion?

Thank you for your consideration and documentation of these comments.

Mehrey Vaghti
PO Box 553
Auburn, CA 95604

Thomas Toy
PO Box 553
Auburn, CA 95604

A. Please refer to Response L-5.X.

B. Please refer to Master Response 3.1.9, Fire Management.

C. The Auburn Recreation District (ARD) Dam Overlook Campground is referred to in several sections of the Draft EIS/EIR. In Section 2.3 it is identified with regard to noise associated with the location of stationary construction equipment. Section 3.3.1.2 provides a brief description of the facility design, designated uses and management. As mentioned in Section 3.16.1.1 of the Draft EIS/EIR, recreationists at the ARD Auburn Dam Overlook Campground have been identified as sensitive receptors to noise within the study area.

D. The lead agencies, in response to public comments on the Draft EIS/EIR project design, have reduced the total number of parking spaces associated with the public river access features. The riverside parking lot would have only 3 handicap-designated spaces and a turnaround area for loading/unloading only. Please refer to Master Response 3.1.6, Public River Access Features.

E. The Draft EIS/EIR indicates that the Proposed Project facilities would be designed according to current building code requirements, including seismic specifications (Table 2-7, Section 3.13, page 2-113 and Section 3.13.2.3, page 3-385). No additional assessments are required.

F. Power supply is discussed in Section 2.2.2.1 of the Draft EIS/EIR and Figure 2-5 illustrates both the existing and proposed power line placement for the Proposed Project. The power lines would be placed above ground to utilize existing facilities.

G. One motion sensor light would be placed on the west side door entrance of the pump station. The main lighting for the pump station pad (north side) would be turned on/off via a manual switch. Normal operations would not require any night-time lighting; however, as needed, there may be occasions where PCWA personnel perform night-time maintenance or repair.

H. The Proposed Project includes revegetation of vegetated areas disturbed by construction. Please also refer to Master Response 3.1.5, Project Area River Restoration.

L-270

December 10, 2001

Louwrens K. van der Linden
1810 Vista Del Lago
Auburn, CA 95603

Re: PCWA American River Pump Station Project.

To whom it may concerns,

We are concerned about various impacts on our neighborhoods :

- **A** * Increase in traffic on Maidu
- **B** * Increased fire hazards
- **A** * Safety, security and the Increase in crime
  * Parking lots in canyon, public toilets and boating facilities.
- **C** * Wild life habitat

We hope that you will take all our concerns in consideration.

Sincerely,

Louwrens K. van der Linden

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

C. Please refer to Master Response 3.1.12, Project Area Wildlife

L-271

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Dorothy M. Shears
ADDRESS:	11071 Tanglewood Drive
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530)889-8858 FAX: (530) 887-1750
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A

> Increased traffic involving school children and neighborhood walkers and increased traffic noise.

Safety and Security from undesireables that the recreation and parking facilities will likely draw from outside of Auburn. Maidu residents have experienced peaceful living for several years. Opening the proposed section of the river to recreational use could and probably will open the door to an increase of people problems.

> Increased litter on Maidu Drive has been on the increase since the expansion of the PCWA facilities on Maidu Drive What agency will clean up these roadways.

> Is deference being giving to campers over the residents who have lived here for many years and have a real investment in property?

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-272

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	David H. Shears
ADDRESS:	11071 Tanglewood Drive
CITY/STATE/ZIP:	Auburn; CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530)889-8858 FAX (530) 887-1750
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

A ▸ Safety & Security from undesirables that the recreation and parking facilities will likely draw from outside of Auburn. Opening the proposed section of the river to recreational use could and probably will open the door to an increase of people problems.

▸ Increased litter on Maidu Drive has been noticed since the expansion of the PCWA facilities on Maidu Drive. Adding recreational parking facilities which means more traffic, will more than likely increase litter. Who will pick up the litter on Maidu Drive?

B ▸ Increased fire danger in the canyon as a result of increased human and vehicle activity in this area.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☐ ***Please check here if you would like to be on the project mailing list.***

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.9, Fire Management.

L-273

FROM : AOROtHY MICHELIS Dec. 12 2001 09:05AM P1

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA 95825
Fax: (916) 286-0957

In regards to the proposed American River Pump Station Project, I would like to be included with my neighbors in voicing our concern.

I know most of us chose this area in Skyridge because it is quiet, has little traffic--only home owners end delivery trucks, all who carefully observe our 25 mi. per hour limit.

I call this place a "walkers paradise". We don't have sidewalks but are never in danger. Also it is a dog-walkers paradise.

My street -- Riverview Drive -- a long one, opens into Maidu Drive, providing us access to I-80 via Auburn-Folsom Rd. and Indian Hill.

A If Maidu Drive becomes a recreational area for the general public and a part of the State Park System it will bring in many people from outside of Auburn, perhaps including undesirable types, thus changing the whole atmosphere of our peaceful neighborhood, which includes many older folks--long time residents-- and some young families with small children.

The proposed changes would be directly behind and on both sides of Skyridge residences -- too close. It would be a disaster.

Please reconsider.

Sincerely,
Dottie Michelis
Dottie Michelis
(a 38 year resident of
Riverview Drive.)

Tel. # (530)885-7487

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-274

December 9, 2001

Auburn City Council
1225 Lincoln Way
Auburn, CA 95603

American River Pump Station Project
Draft EIS/EIR Comments
2031 Howe Avenue - Suite 110
Sacramento, CA 95825

A

We, as residents near the proposed American River Project and planned Recreation Parking Facility, are seriously concerned with the adverse effects that this will have on the immediate neighborhoods and streets.

These areas are already impacted with heavy traffic. As an example, Riverview and Skyridge Drives are the main thoroughfares for the traffic patterns here and traffic was greatly increased by the addition to the area of the Placer County Water Agency facility and the Skyridge Elementary School. Most recently, the Auburn Recreation District was moved their operation to bureau buildings located on Mailu Drive adjacent to Riverview. The privately owned land across from these facilities (that extends southerly to the end of Riverview) is prime future development property. For sometime, the Auburn Police Department has been monitoring Riverview and Skyridge Drives with speed control units to slow traffic in this congested area.

A logical solution to this problem has been presented - by using

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-274, pg. 2

A Pacific Avenue as an access point to the closed, unused bureau road. This would tend to divert traffic away from heavily traveled streets and neighborhoods, and confine any additional traffic to recreational areas in closer proximity to the existing Railhead Park, Skate Park and Canyon Overlook area.

The proposed American River Pump Station appears to be necessary. However, many question the adding of recreation and parking facilities in the canyon area, and we have expressed our opinion on the traffic

B situation. Not fully answered in the overall project, however, is the timing of an adequate fire plan - the safety / security / cleanup provisions involved, and who will be responsible for this.

As lifetime residents of the Auburn Area, we do not oppose controlled growth, but we definitely oppose impacting existing residential areas where there are obvious, viable alternatives.

It is important for the Auburn City Council and the American River Pump Station Project to consider all concerns involved before final decisions are made.

Sincerely,

Tony A. Lemos

Tony A. Lemos

Karlon D. Lemos

Karlon D. Lemos

141 Skyridge Drive - Auburn, CA 95603

B. Please refer to Master Response 3.1.9, Fire Management.

L-275

December 11, 2001

William F. Michel
100 Gold Street
Auburn, CA 95603
916-929-2620

American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: Draft EIS/EIR Comments

Attn: Rod Hall

Thank you for extending the comment period to December 13, 2001. You have rescued me from my finely tuned sense of procrastination.

My comments below are in outline form below.

I. Design -- whitewater rapid – John Anderson

A

- high water – create benches with displaced material
- promote shore line stabilization.
- produce large standing waves.

II. Revitalize dam site

B

- re-vegetate
- re-terrace

Not part of the official EIS/EIR but considered critical (in my opinion) for project approval.

I. Bridge:

C

- equestrian
- pedestrian
- bicycle
- absolute political necessity
- possible location: upstream of tunnel present bypass tunnel inlet.
- location subject to less hydraulic action during high water (educated opinion).

A. Please refer to Master Response 3.1.5, Project Area River Restoration and Response L-5.X.

B. Please refer to Master Response 3.1.5, Project Area River Restoration.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-275, pg. 2

- Access through Robie Point
- Upgrade existing roads/historical access

D

II. Restoration of Robie Beach

III. Extraordinary Fire and Police Protection

E

- Calm the fears of the Auburn Community, particularly residents of Falcon Point and Riverview.

Thank you for your consideration of these ideas. I enthusiastically endorse the proposed project and look forward to its successful completion. It is my fondest dream to be the first whitewater paddler to run the course when it is complete.

Respectfully submitted

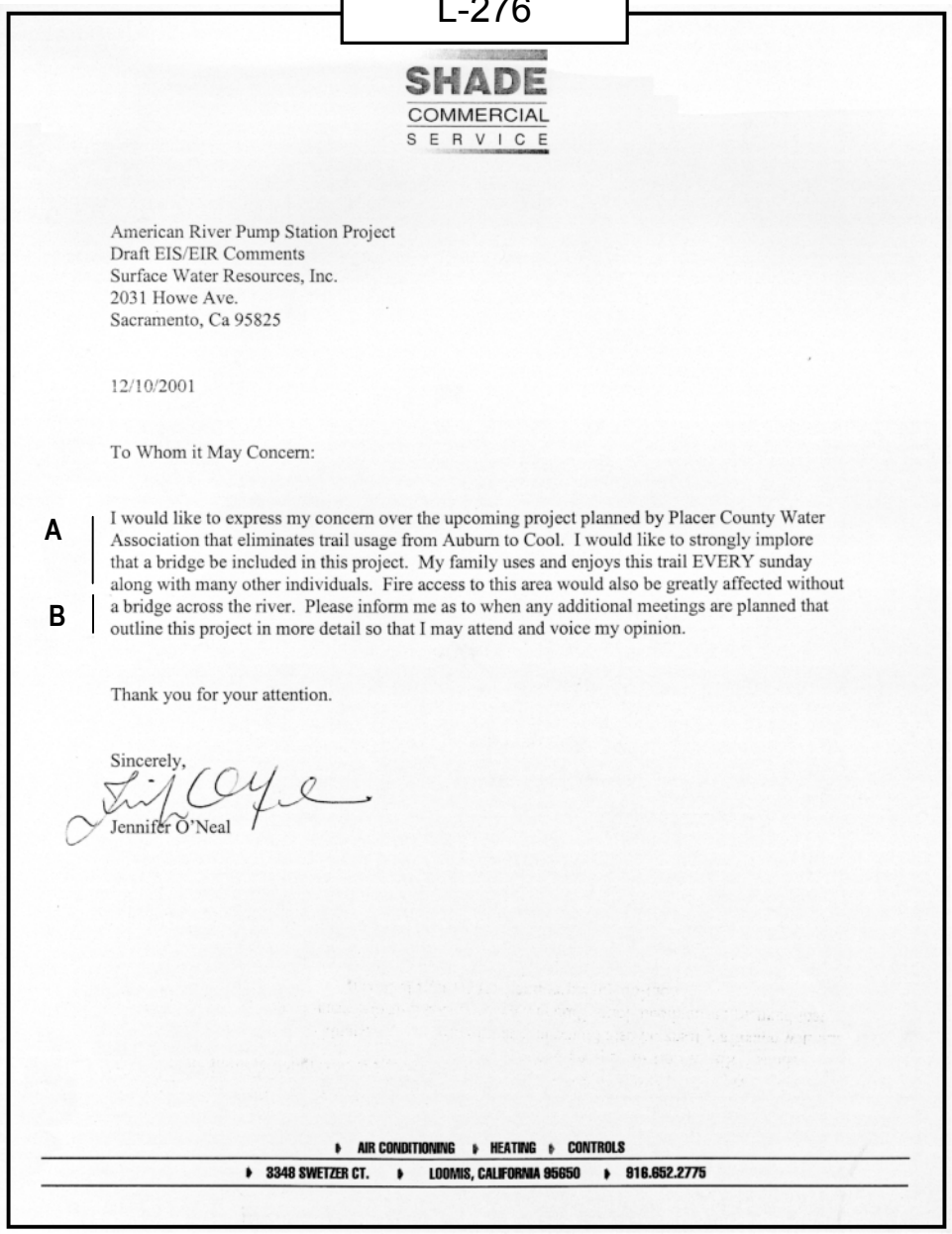
William F. Michel

William F. Michel

D. The American River Pump Station Project does not include restoration of the Robie Beach area. Development of such plans would be the responsibility of CDPR as part of their future long-term planning efforts for the Auburn SRA, not part of PCWA's water supply project planning.

E. Please refer to Master Response 3.1.9, Fire Management.

L-276



SHADE
COMMERCIAL
SERVICE

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave.
Sacramento, Ca 95825

12/10/2001

To Whom it May Concern:

A I would like to express my concern over the upcoming project planned by Placer County Water Association that eliminates trail usage from Auburn to Cool. I would like to strongly implore that a bridge be included in this project. My family uses and enjoys this trail EVERY sunday along with many other individuals. Fire access to this area would also be greatly affected without

B a bridge across the river. Please inform me as to when any additional meetings are planned that outline this project in more detail so that I may attend and voice my opinion.

Thank you for your attention.

Sincerely,

Jennifer O'Neal

AIR CONDITIONING ♦ HEATING ♦ CONTROLS
3348 SWETZER CT. ♦ LOOMIS, CALIFORNIA 95650 ♦ 916.652.2775

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.9, Fire Management.

L-277

December 12, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave, Suite 110
Sacramento, CA 95825 Fax 916-286-0957

I would like to address several issues, which I believe you should consider relative to the PCWA American River Pump Station and River Restoration Project.

A First, I believe that the pumping station should be a temporary solution to the agricultural demand for water in the region. The future of development in Placer County is dependent on an adequate supply of local water. The prospect of the Auburn Dam should remain a viable part of the ultimate solution.

B Secondly, the canyon is a nearly pristine wilderness. It would be a shame to open the canyon, as proposed, to any more people than could hike into it. The introduction of motor vehicles will destroy that environment. The effects of sight and sound pollution will disturb the natural beauty. Automobiles, trucks and buses filling parking lots and dotting access roads and their straining engines, gears and tires drive much of the native fauna away from this part of the canyon.

C We worry about the risk of wildfires. A three hundred foot firebreak of only trees and grass is proposed. That will certainly help. In drought years tree crowns can burn, and in wet years the grass grows taller. Add more people and the risk increases. Vehicular traffic will bring catalytic converters, cigarette butts, and matches, problems not associated as much with bicycles and foot traffic.

D We are also concerned about our neighborhood security. Most of us purchased our homes here because of its urban seclusion. It's a value very dear to our lifestyle. And, we believe the increased traffic will devalue that lifestyle.

In closing, let me say that if and when the pump station is built, and it should be, restore the river, and let the rafters go all the way to Rattlesnake Bar. Do not allow public vehicular access into the American River Canyon.

Sincerely,

Richard & Terry Fowler
3035 Eagle's Nest
Auburn, CA 95603
(h) 530-885-6535
(w) 916-645-8191
(e) dickf@foothill.net

E Please add me to the project mailing list.

DEC-12-01 WED 8:59 PM P. 1

A. The Proposed Project would provide water supply for both agriculture (raw water) and municipal and industrial (treated water) uses.

B. The North Fork American River Canyon in the project study area was extensively modified from its natural state by human activities, including construction activities associated with the Auburn Dam facilities. These past actions were highly disruptive to the natural characteristics of the canyon and as a result, the project area exhibits a high level of disturbance. From the river, the canyon viewshed is further disturbed by roads, lights, power lines and ridge top homes. The lands surrounding the canyon would not be considered to fall under a wilderness designation due to these highly disturbed characteristics and the proximity to surrounding communities.

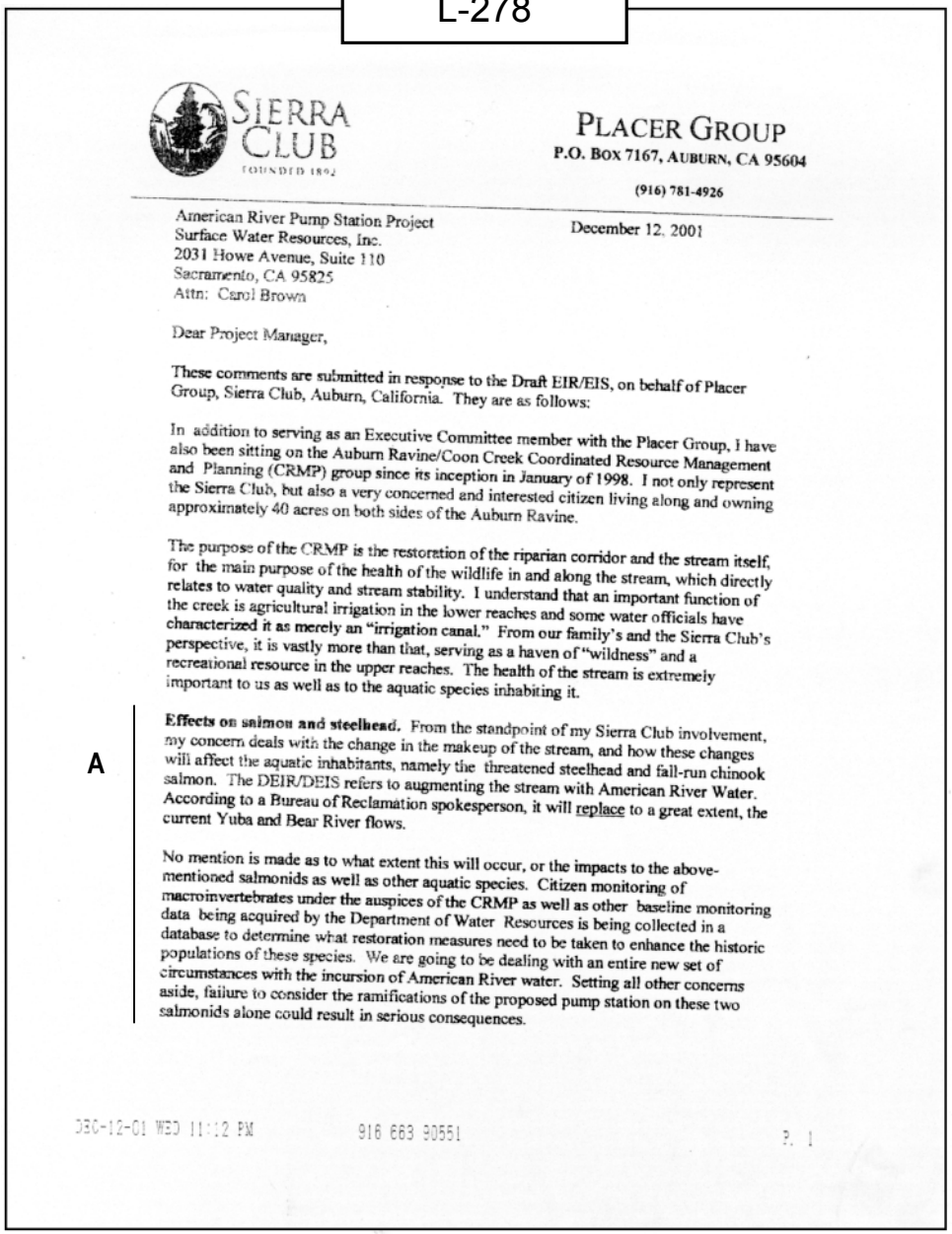
The project area's designation within the Auburn SRA already provides for and allows public access into the canyon via hiking, mountain biking, and horseback riding. Proposed Project modifications regarding parking, vehicular access restrictions and the fact that there is no proposed or permitted commercial boating will help to ensure that the area remains, at a minimum, in a condition representative of what it is at present. However, restoration of the river to its historical channel most likely would be considered to be an improvement over existing conditions. Please also refer to Master Response 3.1.12, Project Area Wildlife and Master Response 3.1.6, Public River Access Features.

C. Please refer to Master Response 3.1.9, Fire Management.

D. Please refer to Master Response 3.1.6, Public River Access Features.

E. All individuals commenting on the Draft EIS/EIR were added to the project mailing list and received notification of the availability of the Final EIS/EIR.

L-278



SIERRA CLUB
FOUNDED 1892

PLACER GROUP
P.O. BOX 7167, AUBURN, CA 95604
(916) 781-4926

American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825
Attn: Carol Brown

December 12, 2001

Dear Project Manager,

These comments are submitted in response to the Draft EIR/EIS, on behalf of Placer Group, Sierra Club, Auburn, California. They are as follows:

In addition to serving as an Executive Committee member with the Placer Group, I have also been sitting on the Auburn Ravine/Coon Creek Coordinated Resource Management and Planning (CRMP) group since its inception in January of 1998. I not only represent the Sierra Club, but also a very concerned and interested citizen living along and owning approximately 40 acres on both sides of the Auburn Ravine.

The purpose of the CRMP is the restoration of the riparian corridor and the stream itself, for the main purpose of the health of the wildlife in and along the stream, which directly relates to water quality and stream stability. I understand that an important function of the creek is agricultural irrigation in the lower reaches and some water officials have characterized it as merely an "irrigation canal." From our family's and the Sierra Club's perspective, it is vastly more than that, serving as a haven of "wildness" and a recreational resource in the upper reaches. The health of the stream is extremely important to us as well as to the aquatic species inhabiting it.

A **Effects on salmon and steelhead.** From the standpoint of my Sierra Club involvement, my concern deals with the change in the makeup of the stream, and how these changes will affect the aquatic inhabitants, namely the threatened steelhead and fall-run chinook salmon. The DEIR/DEIS refers to augmenting the stream with American River Water. According to a Bureau of Reclamation spokesperson, it will replace to a great extent, the current Yuba and Bear River flows.

No mention is made as to what extent this will occur, or the impacts to the above-mentioned salmonids as well as other aquatic species. Citizen monitoring of macroinvertebrates under the auspices of the CRMP as well as other baseline monitoring data being acquired by the Department of Water Resources is being collected in a database to determine what restoration measures need to be taken to enhance the historic populations of these species. We are going to be dealing with an entire new set of circumstances with the incursion of American River water. Setting all other concerns aside, failure to consider the ramifications of the proposed pump station on these two salmonids alone could result in serious consequences.

DEC-12-01 WED 11:12 PM 916 663 90551 P. 1

A. Please refer to Master Response 3.1.13, Auburn Ravine.

L-278, pg. 2

It is my understanding from the biological information I have garnered, that olfactory sensoring is the main homing mechanism used by these fish, and if the correct ingredients, such as water temperature and other stimuli are not present to direct them to their proper stream, they may not make it up to spawn. Studies and experience have shown that introduction of hatchery fish may or may not survive and thrive in unfamiliar waters, or at least may not return if genetic makeup is completely different from the native inhabitants of a particular stream.

So with improper and incomplete studies of the stream in its current state, the introduction of an entirely new set of conditions could create havoc in the salmonid populations, which we are currently attempting to enhance and restore in Auburn Ravine. There is really no excuse for comments such as "Currently, there is little detailed information regarding (protected) steelhead specific to Auburn Ravine." (3-55) Why not? Don't you folks have an obligation to determine the status of a protected species currently and historically known to be in this stream before significant impacts are forthcoming from the introduction of an entirely new set of conditions? A

There is no indication in the document that minimun flows will be assured, once the pump station is constructed. In fact, the minimum attention given to the entire stretch of Auburn Ravine and its wildlife populations, is most distressing. It's consideration as a mere conveyer of water for agricultural purposes gives a distorted and altogether incorrect and dishonest picture. The numbers of diversions and whether or not these will be screened was also not addressed. B

Effluent from Auburn Wastewater Treatment Plant. The issue of effluent into Auburn Ravine is a continuing problem as Auburn Ravine is listed as an "effluent-dominated water body." It is my understanding that the point of introduction of the American River water is below the plant, and therefore the dilution of an uncertain amount to the plant by upstream water could pose a significant problem in water quality entering the stream. This could impact the aquatic species as well as human users of the stream for recreational purposes. It could also have an impact on the vegetation in and along the stream.

Altogether, a great deal of learned and scientific comment has been submitted to discredit this document and the lack of information necessary to proceed with the proposed pump station. I have read a great deal of that input and wholly concur in their findings. Please add the Sierra Club to the list of those of us who feel that this document is woefully inadequate for such a major undertaking and the resulting impacts to the environment which need to be identified and addressed.

Respectfully submitted,

Gail Mackenroth

Gail Mackenroth
Executive Committee

B. Please refer to Master Response 3.1.13, Auburn Ravine.

L-279

DEC 13 2001 9:57AM HP

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION

COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION

PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Roland & Avril Lovell
ADDRESS:	4145 Eagles Nest Way
CITY/STATE/ZIP:	Auburn, CA 95603
BUSINESS AND/OR HOME PHONE/FAX:	(530) 885-9222
ORGANIZATION (IF APPLICABLE):	

COMMENTS:

See attached.

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO: DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.

☒ ***Please check here if you would like to be on the project mailing list.***

DEC-13-01 THU 10:01 AM P. 1

L-279, pg. 2

DEC 13 2001 9:57AM HP p.2

December 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

We own a home in Falcon Point which backs up to Maidu Drive.

A We are in support of the first two parts of the American River Pump Station Project IF funds are available. In light of the current financial situation at both the state and federal level because of the war, we feel that this is a nice to have, not a need to have. It is our understanding that only part of the funds have been appropriated. If the vehicular access component is required to get the additional funding or if it would result in a tax increase, we oppose the entire project.

B We are opposed to the vehicular access component of the project. An individual involved with prosecuting crimes from recreational areas spoke to the criminal element that is drawn to such areas; people taking drugs, drinking heavily, vandalism and vagrancy. We are also concerned with fire safety and the safety of school children and other pedestrians who walk along or cross Maidu Drive. If the will of the residents in this area is ignored and this part of the project is included, it would seem that the state and county could be at high risk of law suits. We advise that if the decision is made to go ahead with the vehicular access component that, prior to any action, a plan be designed and adopted for crime, fire and pedestrian safety, including traffic lights, speed bumps etc. and that funds be appropriated for adequate equipment, supplies and personnel to fully implement such plans.

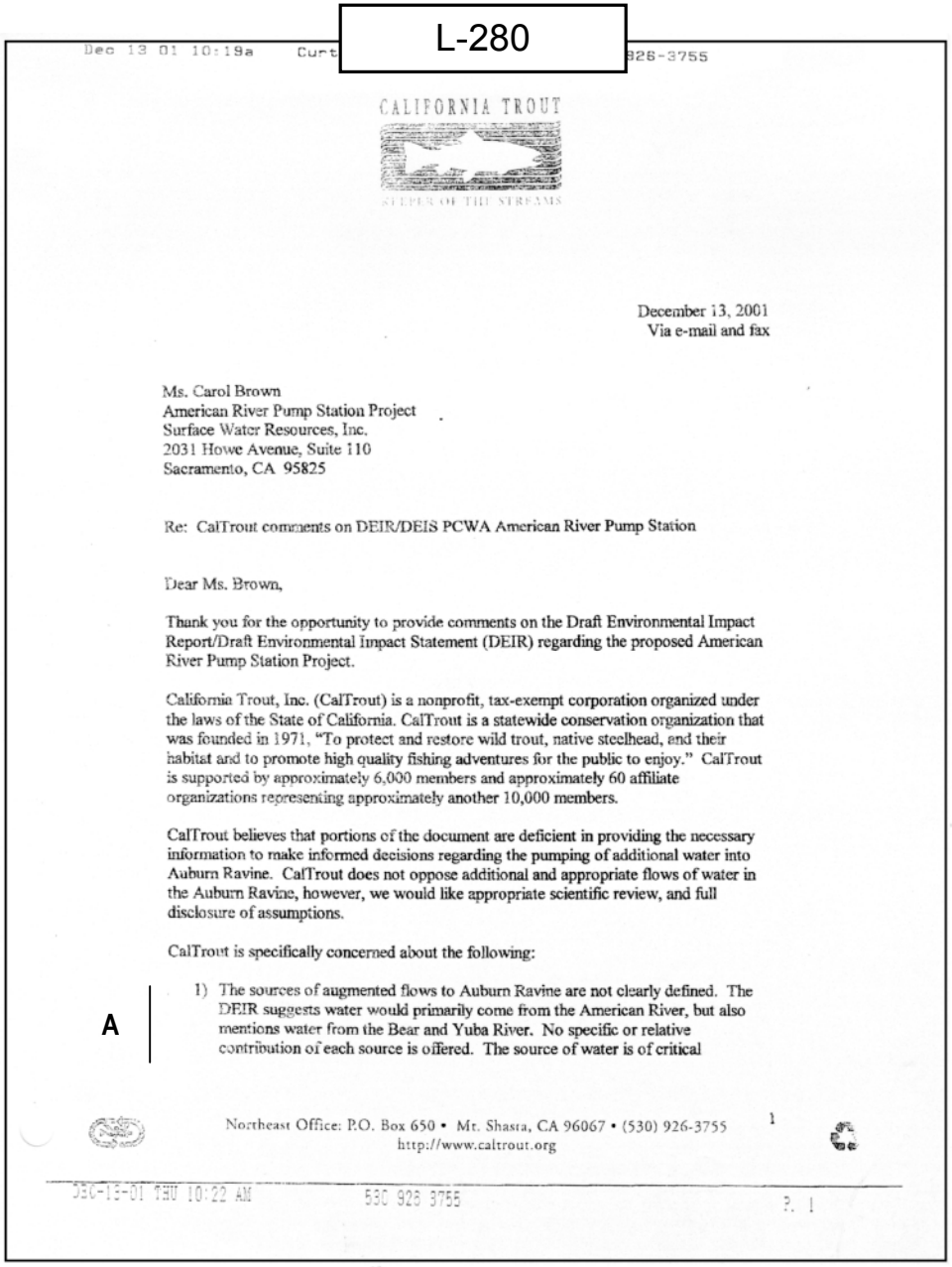
Avril & Rollie Lovell

DEC-13-01 THU 10:02 AM P. 2

A. Project support for the pump station and tunnel closure noted.

B. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.9, Fire Management.

L-280



Dec 13 01 10:19a Curt 926-3755

CALIFORNIA TROUT

KEEPER OF THE STREAMS

December 13, 2001
Via e-mail and fax

Ms. Carol Brown
American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Re: CalTrout comments on DEIR/DEIS PCWA American River Pump Station

Dear Ms. Brown,

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR) regarding the proposed American River Pump Station Project.

California Trout, Inc. (CalTrout) is a nonprofit, tax-exempt corporation organized under the laws of the State of California. CalTrout is a statewide conservation organization that was founded in 1971, "To protect and restore wild trout, native steelhead, and their habitat and to promote high quality fishing adventures for the public to enjoy." CalTrout is supported by approximately 6,000 members and approximately 60 affiliate organizations representing approximately another 10,000 members.

CalTrout believes that portions of the document are deficient in providing the necessary information to make informed decisions regarding the pumping of additional water into Auburn Ravine. CalTrout does not oppose additional and appropriate flows of water in the Auburn Ravine, however, we would like appropriate scientific review, and full disclosure of assumptions.

CalTrout is specifically concerned about the following:

A 1) The sources of augmented flows to Auburn Ravine are not clearly defined. The DEIR suggests water would primarily come from the American River, but also mentions water from the Bear and Yuba River. No specific or relative contribution of each source is offered. The source of water is of critical

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530-13-01 THU 10:22 AM 530 926 3755 P. 1

A. Please refer to Master Response 3.1.13, Auburn Ravine.

L-280, pg. 2

A

importance for issues such as water quality and homing disruptions to anadromous salmon and steelhead in Auburn Ravine and other nearby spawning streams.

2) Steelhead and chinook salmon have been observed in Auburn Ravine for decades. Of specific concern to CalTrout is the influence that large amounts of out of basin water will have on the imprinting and homing of outmigrating juvenile steelhead and salmon and returning adults. Steelhead and salmon primarily use olfactory senses for homing to natal streams, based on chemical cues within the watershed (Hasler 1966)[1] or from chemical cues from conspecific fish (Courtenay et al. 1996)[2]. Substantial amounts of water from out of basin could disrupt spawning and migration in Auburn Ravine, or attract fish from other basins such as the American and Yuba Rivers. This attraction may be to the detriment of the source basin and could confuse genetics within the host basin. CalTrout recommends a complete analysis of the effects out of basin water will have on the homing and migration patterns of steelhead and salmon in Auburn Ravine and nearby drainages. Although all steelhead within the Sacramento/San Joaquin drainage are considered by NMFS to be an Evolutionary Significant Unit, local adaptations to specific streams may play an important role in the health of any ESU.
3) The DEIR assumes that increasing flows in Auburn Ravine will necessarily improve conditions and the overall health on native anadromous fish. This may or may not be the case. The DEIR is deficient in not providing necessary information to adequately determine this or by not providing other alternatives. The possibility of displacing the limited amount of natural reproduction of wild fish with newly attracted hatchery fish should be analyzed. Additional concerns center on how naturally reproducing steelhead and salmon will respond to significant changes in the source water and the timing, frequency, magnitude, duration, and timing of streamflows.
4) A proper adaptive management program should be established to evaluate implemented actions and make necessary adjustments to better achieve desired results. Successful adaptive management needs to be predicated on clearly established goals and decision criteria that will allow for accountability and evaluation of how goals are being met[3].

[1] Hasler, A.D. 1966. Underwater guideposts: Homing of salmon. The University of Wisconsin Press, Madison.
[2] Courtenay, S.C., T.P. Quinn, H.M.C. Dupuis, C. Groot, and P.A. Larkin. 1996. Factors affecting the recognition of population-specific odours by juvenile coho salmon. Journal of Fish Biology 50(5): 1042-1060.
[3] State of California resource agencies operating under CEQA guidelines are legally required to identify biological performance objectives in terms which are enforceable. (see CEQA §15126.4 (D) (2) "Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments"). Thus in terms of providing out of basin flows to stream reaches suggest that any agency permit condition, agreement, or other legally-binding instruments will require the identification of the fish which are to be protected in measurable terms.

L-280, pg. 3

B

CalTrout is concerned that project environmental review and public participation to date clearly fail to comply with CEQA and NEPA requirements. The opportunity for meaningful public participation has been severely limited due lack of a public notice in the local newspaper and the unwillingness of PCWA and BuRec staff to meet with the public. We believe full disclosure of environmental impacts has yet to occur, and that the DEIR/DEIS must also thoroughly address alternative means of obtaining needed water beyond the artificially narrow project purpose.

If you have any questions regarding the above comments please contact Curtis Knight at 530/926-3755 or by email at caknight@jps.net.

Sincerely,

Curtis Knight
Area Manager
California Trout, Inc.

3

B. Please refer to Response L-95.A.

L-280, pg. 4

Curtis Knight, 10:30 AM 12/13/01, CalTrout comments on American

Dear Ms. Brown,

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2) Steelhead and chinook salmon have been observed in Auburn Ravine for decades. Of specific concern to CalTrout is the influence that large amounts of out of basin water will have on the imprinting and homing of outmigrating juvenile steelhead and salmon and returning adults. Steelhead and salmon primarily use olfactory senses for homing to natal streams, based on chemical cues within the watershed (Hasler 1966)[1] or from chemical cues from conspecific fish (Courtenay et al. 1996)[2]. Substantial amounts of water from out of basin could disrupt spawning and migration in Auburn Ravine, or attract fish from other basins such as the American and Yuba Rivers. This attraction may be to the detriment of the source basin and could confuse genetics within the host basin. CalTrout recommends a complete analysis of the effects out of basin water will have on the homing and migration patterns of steelhead and salmon in Auburn Ravine and nearby drainages. Although all steelhead within the Sacramento/San Joaquin drainage are considered by NMFS to be an Evolutionary Significant Unit, local adaptations to specific streams may play an important role in the health of any ESU.

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Printed for "Carol Brown, Surface Water Resources, Inc." <br... 2

Repeat letter sent via email.

L-280, pg. 5

Curtis Knight, 10:30 AM 12/13/01, CalTrout comments on American

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If you have any questions regarding the above comments please contact Curtis Knight at 530/926-3755 or by email at caknight@jps.net.

Sincerely,

Curtis Knight

Area Manager

California Trout, Inc.

[1] Hasler, A.D. 1966. Underwater guideposts: Homing of salmon. The University of Wisconsin Press, Madison.

[1] Courtenay, S.C., T.P. Quinn, H.M.C. Dupuis, C. Groot, and P.A. Larkin. 1996. Factors affecting the recognition of population-specific odours by juvenile coho salmon. Journal of Fish Biology 50(5): 1042-1060.

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Curtis Knight

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L-280, pg. 6

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[1] Hasler, A.D. 1966. Underwater guideposts: Homing of salmon. The University of Wisconsin Press, Madison.

[2] Courtenay, S.C., T.P. Quinn, H.M.C. Dupuis, C. Groot, and P.A. Larkin. 1996. Factors affecting the recognition of population-specific odours by juvenile coho salmon. Journal of Fish Biology 50(5): 1042-1060.

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Auburn Ravine DEIR.doc

L-281

BAILEY ENVIRONMENTAL

Aquatic Resource Consulting

December 6, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, California 95825

SUBJECT: Comments on the PCWA and Bureau of Reclamation DEIS/DEIR for the Proposed American River Pumping Station for PCWA.

I have reviewed the subject DEIS/DEIR and offer the following comments:

General

The planning process used to date violates the requirements of both CEQA and NEPA. Several factors and Bureau of Reclamation (Bureau) and Placer County Water Agency (PCWA) actions have combined to create these defects in the planning process. ***Stakeholders who participated in the early scoping process and landowners who participated in the scoping process and whose property would be directly affected by the proposed project were not notified of the October 11, 2001 public meeting or the availability of the DEIS/DEIR until approximately November 1, 2001; and were unable to obtain a single copy of the DEIS/DEIR until November 10, 2001, just three days before the close of comment period.***

While the Bureau and PCWA extended the comment period until December 13, 2001, this action was insufficient to meet the requirements of CEQA and NEPA for the following reasons:

A

1. In an 11/13/01 phone conversation with Rod Hall, Bureau Project Manager, a directly affected landowner learned that the proposed water import from the American River to Auburn Ravine was "replacement water" (replacing existing Yuba/Bear rivers water) and that this fact and its exact definition, operational, and environmental impacts had not been disclosed in the DEIS/DEIR. While it is impossible for the public to guess what "replacement water" really is and how it might affect the environment or project operations, what is certain is that the public has not had the opportunity to have this concept defined and see the operational and environmental consequences of this parameter evaluated under the provisions of CEQA and NEPA. Attempts by several landowners/stakeholders/environmental groups to meet with PCWA and the Bureau to discuss this issue, ask a number of technical and procedural questions, and provide additional information prior to the December 13, 2001 close of comments was denied by PCWA staff and Mr. Rod Hall of the Bureau. Given the

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A. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 2

fact that some of these directly affected landowners were not permitted to participate in the public meeting (because they did not know about the October 11, 2001 meeting due to an error by the Bureau and PCWA), the subsequent disclosure of what may be a significant omission in the DEIS/DEIR regarding "replacement water", and denial of a meeting with directly affected landowners and stakeholders, it is clear that the public participation provisions of CEQA and NEPA have been violated.

B

2. No Notice of Availability or Public Meeting Notice was published in the newspaper the "Lincoln News Messenger" which is the local paper of general circulation in the Auburn Ravine watershed. This information is based on confirmation from News Messenger staff on December 6, 2001 who reviewed all papers from September 1 - October 4, 2001. This fact demonstrates that members of the public, who own land adjacent to Auburn Ravine and derive their drinking water supply from PCWA ,were not even notified of the October 11, 2001 public meeting or the availability of the DEIS/DEIR, except through placement in the Lincoln library.

3. Refusal, by Mr. Rod Hall of the Bureau, on 11/30/01, to hold a meeting requested by the California Department of Fish and Game on behalf of the disenfranchised landowners and environmental groups clearly demonstrates that the Bureau is not interested in complying with NEPA or in listening to what directly affected landowners and environmental organizations have to say about this fatally flawed DEIS/DEIR. Mr. Hall is reported to have made statements essentially saying that *this project has a lot of momentum, we're on a tight time schedule*, and the corker, *we have looked at your concerns* [assumably referring to the incomplete and hastily assembled comments submitted by some directly affected landowners who tried to meet the original November 13, 2001 due date, even though they had received the DEIS/DEIR only three days earlier; It is also important to note, that the extension on the comment period to 12/13/01 was granted after the 11/13 closing date] *and don't think anything new of concern is there*. At this point, Mr. Hall reportedly refused to arrange a meeting to discuss the "replacement water" issue, answer clarifying questions from directly affected landowners and downstream stakeholders, and receive public input on a variety of issues and topics that the DEIS/DEIR had neglected to consider. Mr. Hall's actions clearly denied the public access to the full NEPA process, even though the public's less than full participation in the NEPA process was prevented by a series of Bureau errors and mistakes.

4. PCWA violated the provisions of CEQA by failing to insure directly affected landowners and the general public in the environmentally affected area was adequately notified of the October 11, 2001 public meeting and their failure to meet with disenfranchised landowners who were attempting to have potentially significant topics (e.g., "replacement water") explained so that insightful and intelligent comments could be made during the comment period. These

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B. Please refer to Response L-95.A.

L-281, pg. 3

stakeholders were denied the ability to participate in the development of an EIR, as required under the provisions of CEQA.

The document as written is nothing more than a thinly veiled attempt to justify a pump station in the American River canyon to supply water to PCWA. I found many of the analyses totally lacking in scientific merit, fundamentally flawed, and unable to biologically and scientifically support the conclusions reached. While NEPA requires documentation of the potential environmental impacts, CEQA requires a full consideration of alternatives that will meet the project's objectives. The Bureau/PCWA have attempted to limit consideration of the project by narrowly defining one of the project's primary objective to providing water to PCWA from the Middle Fork Project. In fact, the objective should be to provide PCWA with the desired quantity of water in the least environmentally damaging way. Failure to actively consider the alternative of land conservation easements (which would meet CALFED objectives) which would allow water to be transferred among several entities and thus eliminate the need for additional diversions from the American River, eliminate construction related impacts, and forego the massive pumping costs in the future is a clear violation of the intent of CEQA. The document should be rewritten to incorporate a thorough analysis of this additional alternative. In addition, the fisheries and aquatic resources section in general should be completely redone to eliminate the indefensible and fatally flawed analyses. New analyses, using biologically relevant data and time steps should be incorporated into the second DEIS/DEIR.

C

Specific Comments

The Concept of "Replacement Water": Subsequent to the release of the document, Ron Otto, Ophir Area Property Owners Association, in an 11/13/01 conversation with the Bureau's Rod Hall, learned that the water to be pumped was, apparently in part, "replacement water" and this fact was not mentioned in the DEIS/DEIR. With no further details, it is impossible to ascertain the potential impacts this replacement water might have on Auburn Ravine and the City of Lincoln's Wastewater Treatment and Reclamation Facility (WWTRF). However, if the major source of the City of Lincoln's water supply is changed from Yuba/Bear river water to American River water, then the following factors need to be addressed:

D

- Does the change in the water supply source change the basic chemical constituent base on which the current design of the WWTRF is based?
- Does this change have major implications (positive or negative) on design criteria or treatment processes?
- Does this change require additional CEQA documentation by the City since all CEQA documentation is based on current chemical constituents? An argument could be made that the changed circumstances, which the City knew about, should have been included in the original WWTRF's EIR.
- Does the importation of American River water change the water temperature regime in Auburn Ravine/WWTRF and does that change reduce/enhance the City's ability to meet discharge water temperature criteria?
- Does the importation of American River water change the water flow regime in Auburn Ravine upstream and/or downstream of the Ophir Tunnel outlet? If it

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C. Please refer to Response L-112.B.

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 4

does, then what are the impacts on critical habitat for steelhead trout, the City of Auburn's NPDES permit requirements, and the City of Lincoln's NPDES permit and mitigation requirements under CESA/ESA?

The DEIS/DEIR currently does not address any of these factors. The document should be rewritten to provide a fair and scientifically defensible environmental assessment of these topics. Modeling should be completed on biologically appropriate time steps. All assumptions, data, data analyses, and conclusions must be presented in the document and supported by scientifically credible and professionally defensible documentation.

E **Page 2-7, Table 2-1:** The selection of alternatives fails to meet the requirement of CEQA since the project objective of supplying water to PCWA only from the American River is too narrowly defined and should be expanded to providing a given amount of water to PCWA from alternative sources. The project objectives should be rewritten to include the broader objective and eliminate the obviously biased and illegal narrowly defined objectives in the document.

Page 2-127, Table 2-8: Under the heading of Other Water Supply Considerations, Land fallowing or land retirement is dismissed with a totally false, and fundamentally flawed excuse. The reasons for elimination are totally false and could not be supported by anything less than a totally biased analysis. This biased analysis is clearly a violation of both NEPA and CEQA requirements regarding alternatives consideration. Also, providing bogus or misleading statements in a public document is both wrong and illegal. The DEIS/DEIR should be rewritten with a fair and balanced assessment of alternative ways of providing the desired level of water to PCWA, while minimizing the impacts to the environment, as required under CEQA. The document should be rewritten to include all of the assumptions, data, and analyses used to reach the conclusions documented in Table 2-8.

F **Page 2-128, Table 2-9:** This table indicates that a Corps of Engineers 404 permit under a nationwide program might be necessary. Reading the project description and the requirement for a Nationwide 3 permit, leads me to believe that this conclusion may not be supported by the facts. I suggest that the Nationwide 3 requirements be reviewed and the table adjusted if needed.

G **Page 3-23, Modeling Assumptions, Period of Record:** Although the period of record is the standard used in many modeling assumptions, this period of record is not adequate or current enough to support the conclusions. The period of record should be extended to include the last decade of flow and operations, and then the results of the models evaluated. Having the most recent data in the period of record being more than 10 years old and ignoring 12% of the available record is totally unprofessional and does not allow the reader or decision maker to have confidence in the modeling outputs. The modeling analyses should be redone using the complete period of record and at the biologically appropriate time step (detailed later in this document).

D **Page 3-40, last paragraph discussing shortages and Auburn Ravine:** This paragraph states that a groundwater overdraft condition exists in Wester Placer County. This statement is not true. PCWA has continually assured public groups that groundwater supplies in Western Placer County are not being overdrafted, except in the very southwestern corner of the County and that overdraft is coming from well use in Sacramento County. This paragraph draws the conclusion that groundwater is not a long term viable alternative. This conclusion is not based on fact, and

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E. Please refer to Response L-112.B.

F. Please refer to Response L-112.G.

G. Please refer to Response L-112.H.

L-281, pg. 5

D

highlights the bias in the entire document toward a pumping plant in the American River canyon. While the best alternative may well indeed be a pumping plant in the canyon, the documentation to support such a conclusion should be based on objective, credible analysis. The current document does neither. The document should be rewritten and supported with objective and credible objectives, analyses, impact assessment, and conclusions.

Page 3-50 and the Fish Resources Section in General: This section of the document suffers from several fundamental flaws:

1. The analysis of water temperature, using monthly time steps, has no scientific or biological credibility. Water temperatures are a critical factor in all of the flow and water source/temperature analyses. However, use of a one month time step, using calculated water temperature releases is unjustifiable. Fish do not experience a monthly average water temperature and exposure of fish or eggs to lethal temperatures for even a few hours may have a significant effect on survival. For example, exposing incubating salmonid eggs to water temperatures above 56 F for one day increases mortality. This sort of perturbation would never show up in a monthly time step model, but you certainly would have lower survival because of project impacts. I suggest that all of the water temperature analyses be redone using real data, and a shorter time step in the modeling. Trying to make the analyses look quantitative, only serves to mislead the reader and the ultimate decision maker. Impacts should be based on assessment of real conditions, not some modeling exercises that is only suitable for comparative planning purposes. In addition, the geographic scope of the modeling should be expanded to include water temperature impacts on Auburn Ravine. These modeling analyses should include those portions of Auburn Ravine upstream of the Ophir Tunnel confluence which could be affected by this unknown "replacement water" operational scenario as well as the area downstream of the Ophir Tunnel discharge point. Changes in the stream's water temperature or water temperature pattern could have major impacts on the City of Lincoln's Wastewater Treatment and Reclamation Facility (WWTRF) design and/or National Pollution Discharge Elimination System (NPDES) permit and the City's ongoing listed species consultations with state and federal agencies. Someone with credible scientific credentials should look at the water temperature situation much more carefully, and fully document this in the final EIS.

2. The discussion of Auburn Ravine on pages 3-52to 3-56 in general, demonstrates an incomplete understanding of the current situation, a cursory understanding of salmonid ecology and genetics, and a total lack of knowledge regarding the impacts of diverting additional water into Auburn Ravine on fish behavior. This section is so purposefully slanted to avoid the perception of any problems or issues being associated with the long term, year around diversions by the proposed project that it is fatally flawed. The document should be rewritten by someone with appropriate scientific credentials that could objectively assess the situation and reach supportable conclusions. This section of the document clearly is not objective and selectively presents information that is intended to purposefully mislead the reader and decision maker. This section clearly violates the legal mandates of NEPA and CEQA.

5

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 6

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3. In the impact assessment for salmonids in general, the document states that water temperatures of 60, 65, and 68 F all have some important threshold effect on salmonids at various periods in their life history. The rationale for selection of these three temperature yardsticks is presented only as anecdotal information and not supported by credible scientific documentation. It is interesting to note, that the 60 F water temperature assessment standard used for spawning and incubation is not supported by the Regional Water Quality Control Board or the California Department of Fish and Game. Entities applying for discharge permits are being held to a lower standard over many months of the year. The document's representation that these are the appropriate standards for impact assessments is not supported by fact. The water temperature impact assessment should be redone using real data and the appropriately documented criteria.

Page 3-52, Discussion on Auburn Ravine's natural flows: This section is unique in the report in that it discusses the natural flows in Auburn Ravine and quite cleverly leaves the reader with the impression that Auburn Ravine is not important as an anadromous fish stream. Why is this the only stream in which natural flows are an issue? During the drought of the late 1920's and early 1930's, the Sacramento River was dry in some places, but that type of information is not presented for other streams. An environmental document should describe the existing conditions in the stream and not attempt to bias the reader's thinking by inserting irrelevant information. Also, if the document preparers had examined the administrative record for the Lincoln Treatment Plant, they would have found that the NID Highway 65 gaging station only seasonally records flows up to 396 cfs and many of the flow readings below this level are estimates and known to be inaccurate by thousands of cubic feet per second. This fact is documented in the administrative record for Lincoln's EIR. This EIS should be rewritten using credible, factual information on Auburn Ravine flows.

Pages 3-54,3-56, 3-81-82 and others as appropriate - Discussion of the issue of additional straying into Auburn Ravine: The entire representation, impact assessment methodology, assumptions, and conclusions regarding the potential for additional straying of salmonids and splittail into Auburn Ravine are totally biased, lacking in scientific objectivity, based on scientifically unsupportable assumptions, have conclusions not supported by fact or credible scientific documentation, and a classic example of selectively presenting pseudo-science to support an a priori conclusion. Specific examples include:

A. The DEIS/DEIR on page 3-81 states:

"Although increased straying of American River fall-run chinook salmon and steelhead into Auburn Ravine has been raised as an issue associated with increased release of American River flows into the ravine, the frequency of straying cannot be determined at this time. However, it should be noted that olfactory response is not the only factor that determines homing behavior in anadromous salmonids. In addition to odor imprinting during the juvenile lifestages, heredity plans an important part in homing behavior. Anadromous salmonids reared and released at locations different from those of their ancestral natal stream exhibit weaker homing responses than locally adapted fish (Bams 1976). These fish may return to their ancestral natal streams, even if they have never been exposed to its waters (McIsaac and Quinn 1988) due to innate preferences for

6

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 7

particular physical characteristics of the environment such as temperature, flow, or substrate composition (Quinn 1993 *in* Pascual et al. 1995). Heredity predilection may ameliorate the possibility of increased straying as a direct result of changing the proportion of American River water discharged into Auburn Ravine."

The paragraph quoted above is substantially misleading and attempts to misuse the influences of heredity to imply to the reader and decision maker that genetic predisposition may in fact limit the amount of additional straying of American River origin fish into Auburn Ravine. First, the reference to Bams (1976) is misleading. This paper deals with pink salmon, which have a totally unique life history pattern (i.e., intertidal or near-intertidal spawning and incubation, immediate emigration to estuarine or marine waters after emergence, limited ocean migrations, and a two-year life span). Because of the life history parameters of this species, they are more prone to stray than any other Pacific salmon species and can be geographically specifically imprinted to return to non-natal water falls and beaches. I suggest the Bureau and PCWA review the many reports published by the Alaska Department of Fish and Game on this topic, since this management scenario has been part of their commercial fishery management program for nearly thirty years. No one denies that genetics has an influence on migratory behavior. Examination of all of the coded wire tag data from Central Valley chinook salmon releases clearly shows that eggs transferred from Feather River Fish Hatchery or Nimbus Fish Hatchery to other facilities to hatch and rear, have strays that return to the hatchery of origin. However, two important factors influence this situation; these fish are generally trucked to Carquinez Strait for release and the olfactory influence of their natal stream is part of the water column until the last 100 miles or so. The situation with Auburn Ravine is different than implied by the quoted paragraph. In the examples cited, fish were released at a location different from their natal area and then returned to their natal area as adults; these fish were not under the influence of their natal olfactory cues. Fish straying to Auburn Ravine would not be attempting to straying to a foreign watershed, but merely moving as far upstream in the Sacramento River as they could detect American River water and then migrating upstream to spawn. I further discussed the genetics component of migratory behavior in terminal stream areas with Dr. Jennifer Nielsen (USGS, Alaska Science Center), one of the premier salmon and steelhead geneticists in the world, and she stated and agreed with my conclusion that olfactory cues would be much more important than genetics at this time in the fish's life.

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I suggest the Bureau and PCWA review relevant literature on chinook salmon and steelhead homing strategies including:

- "During upstream migration, adult salmon primarily use their sense of smell to find their home stream." Reference: U.S. Bureau of Reclamation. 1997. Central Valley Project Improvement Act DPEIS, Technical Appendix Volume Three.
- "Salmon [salmonids in general], in general, have well-developed homing behaviour, apparently returning to their natal stream to spawn with considerable fidelity. The choice of spawning river, tributary, and even riffle appears to be guided by long-term memory of specific odours." Reference: M. C. Healey.

7

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 8

1991. Life history of chinook salmon. In: C. Groot and L. Margolis, *eds.*, Pacific Salmon Life Histories.

- Healy also discusses the differences in the level of influence of olfactory versus visual cues in selection of a home stream. While he briefly discusses the influence of genetics, he further states ". . . The implication of these results [an experiment comparing return rate of visually occluded and olfactory occluded adults] is that both olfaction and vision are important in selection of a home stream, but that olfaction is by far the more important sense." Reference: M. C. Healey. 1991. Life history of chinook salmon. In: C. Groot and L. Margolis, *eds.*, Pacific Salmon Life Histories.

- Various factors relating to hatchery/wild interactions as a factor for determining whether or not a particular stock should be listed. Also, it is important to note that the steelhead and chinook populations in Auburn Ravine could be changed from primarily Yuba/Bear river stocks to American River stocks. Reference: Status Review of Chinook Salmon from Washington, Idaho, Oregon, and California. NOAA Technical Memorandum NMFS-NWFSC-35, 1998.

- Croci (1996) cites a number of sources regarding the importance of olfactory cues in homing of salmon, while acknowledging a genetic component. Reference: Croci, S. J. 1996. A review of rearing and release strategies to improve imprinting, homing, and survival of hatchery-origin Sacramento River winter chinook salmon (*Oncorhynchus tshawytscha*). U. S. Fish and Wildlife Service Report, Northern Central Valley Fish and Wildlife Office, Red Bluff, CA.

D

- Healey and Groot (1987) summarize the relevant literature regarding chinook and sockeye salmon migration. They conclude that oceanic migrations are controlled by magnetic and sun orientation, while migration into the home stream is controlled primarily by olfaction. Reference: Healey, M. C. and C. Groot. 1987. Marine migration and orientation of ocean-type chinook and sockeye salmon. In: M. J. Dadswell and five co-editors: Common Strategies of Anadromous and Catadromous Fishes. American Fisheries Society Symposium 1.

- See Foerster (1968), for a discussion of salmonid imprinting and homing mechanisms, with a focus on sockeye salmon. Reference: Foerster, R. E., 1968. The sockeye salmon, *Oncorhynchus nerka*. Fisheries Research Board of Canada, Bulletin 162.

- Brett and MacKinnon (1954) document the acute sense of smell in Pacific salmon. Reference: Brett, J. R., and D. MacKinnon. 1954. Some aspect of olfactory perception in migrating adult coho and spring salmon. J. Fish. Res. Bd. Canada, 11(3): 310-318.

- Two other references contain a variety of papers on the biology and physiology of steelhead and salmon homing and imprinting. These references are: Proceedings of the Salmon and Trout Migratory Behavior Symposium, First International

8

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 9

Symposium, 1982. University of Washington and a second international symposium with the same title dated 1989.

B. The DEIS/DEIR on page 3-81 states:

"Even if chinook salmon and steelhead straying into Auburn Ravine is increased, no evidence is provided to demonstrate that straying would negatively affect fish communities present in Auburn Ravine. First, under natural conditions, straying is an integral part of salmonid behavior and is important for natural populations because it leads to the colonization of new habitat, avoidance of adverse local conditions, and increases in genetic heterogeneity (Pascual et al. 1995). Second, although straying information for steelhead is limited, coded wire tag studies for chinook salmon indicate that straying is very common in Central Valley streams. These results suggest that straying into Auburn Ravine would occur irrespective of the increased discharges of American River water associated with increased diversions at the seasonal pump station under the No Action/No Project Alternative. Third, genetic dilution of Auburn Ravine steelhead may not be of concern because NMFS considers both the American River and the Auburn Ravine steelhead to be within the Central Valley Evolutionary Significant Unit (ESU), and therefore, treats both populations as one. NMFS concludes (63 FR 13354: March 19, 1998) that "*. . . steelhead in the Sacramento and San Joaquin River basins (Central Valley) should be considered a single ESU until additional information becomes available.*" In addition, CDFG currently considers all steelhead/rainbow trout in Auburn Ravine to be winter-run steelhead (63 FR 13354: March 19, 1998). Also, steelhead/rainbow trout in Auburn Ravine probably do not represent a genetically uncontaminated stock because of past introductions (stocking) directly into Auburn Ravine and current introduction into connected water bodies. Chinook salmon present in Auburn Ravine also probably do not represent a genetically uncontaminated stock, because of hatchery introduction in Auburn Ravine."

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The paragraph quoted above suffers from the following problems and generally misleads the public and decision maker regarding the biological situation in Auburn Ravine:

- The paragraph states: "Even if chinook salmon and steelhead straying into Auburn Ravine is increased, no evidence is provided to demonstrate that straying would negatively affect fish communities present in Auburn Ravine."

  Comment: This statement is somewhat misleading, while it is true that no evidence is provided [by whom?] to demonstrate harm, this entire paragraph misses the point. First, it is the project proponents' responsibility to demonstrate no harm to a listed species or its critical habitat. Second, we are talking about changing the genetic origin of fish in Auburn Ravine from Yuba/Bear rivers to American River strains. Finally, no evidence is provided by the Bureau or PCWA that a neutral or beneficial effect on fish populations will occur. Under the ESA, Bureau programs must facilitate recovery of listed species. No demonstration of recovery actions are presented in this DEIS/DEIR.

9

D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 10

D

- The paragraph states: "First, under natural conditions, straying is an integral part of salmonid behavior and is important for natural populations because it leads to the colonization of new habitat, avoidance of adverse local conditions, and increases in genetic heterogeneity (Pascual et al. 1995)."

  Comment: While this statement is technically correct, it is misleading the public and decision maker. Straying does allow colonization of new habitat. However, we are not talking about colonization of new habitat in this situation. The point is irrelevant. Straying may be a result of adverse local conditions. Steelhead deal with adverse local conditions in three ways, they may move to a non-natal stream to spawn and technically become a stray, they may simply resorb their eggs and spawn at a later time, or they may die and the population is preserved by next year's spawning cohort. Steelhead and chinook salmon have developed a life history pattern to deal with short term adverse local conditions. They have evolved multiple ages at spawning as a way to deal with short term problems.

- The paragraph states: "Second, although straying information for steelhead is limited, coded wire tag studies for chinook salmon indicate that straying is very common in Central Valley streams. These results suggest that straying into Auburn Ravine would occur irrespective of the increased discharges of American River water associated with increased diversions at the seasonal pump station under the No Action/No Project Alternative."

  Comment: The statement on coded wire tag results for chinook salmon demonstrates a complete misunderstanding of the hatchery stocking practices in the Central Valley or borders on a scientifically fraudulent attempt to mislead the public and decision makers. The excessive straying seen in some Central Valley coded wire tag releases is because juvenile fish are trucked, some times hundreds of miles, to release points in the Sacramento-San Joaquin River Estuary. Most releases from Feather River Fish Hatchery, Nimbus Fish Hatchery, and Mokelumne River Fish Installation are trucked to Carquinez Strait for release. Historically, fish reared at Coleman National Fish Hatchery were also moved to downstream locations to test release strategies. Fish from the Merced River Fish Facility are routinely released at the hatchery and at downstream locations. Since Coleman stopped moving fish to downstream release locations, straying has become a much smaller problem. Also, since very few tags are recovered inland, the straying"problem" is not well documented. Again, we are talking about changing stocks from Yuba/Bear to American River. This statement about coded wire tag results is misleading and not relevant to the situation. Therefore, the conclusion that straying of American River origin stocks into Auburn Ravine would occur anyway is not supported by fact, just wishful thinking.

- The paragraph states: "Third, genetic dilution of Auburn Ravine steelhead may not be of concern because NMFS considers both the American River and the Auburn Ravine steelhead to be within the Central Valley Evolutionary Significant Unit (ESU), and therefore, treats both populations as one. NMFS concludes (63 FR 13354: March 19, 1998) that ". . . *steelhead in the Sacramento and San*

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D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 11

Joaquin River basins (Central Valley) should be considered a single ESU until additional information becomes available.""

Comment: These statements, used in context, are deliberate attempts to convince the public and decision maker, that because all Central Valley steelhead are in the same ESU, straying from one watershed into another would not be a problem. This deception is not based in science or fact. First, it is apparent that the author has no understanding of the ESU concept and its use under the provisions of the ESA. The ESU concept was developed by NMFS to address both a biological and administrative problem. When essentially all salmonid stocks on the West Coast were petitioned for listing under ESA, NMFS decided that it could not deal with individual stocks as required under ESA. Therefore, they developed the ESU concept which incorporates geographic distribution, some genetics, and an estimate of how many areas, administratively, could the status review handle simultaneously. The ESU boundaries are based on logical geographic splits and genetic considerations of what the stock status may have looked like some 14,000 years ago (Dr. Jennifer Nielsen, USGS Alaska Science Center, pers. comm.). The suggestion that because all Central Valley steelhead stocks are in a single administrative ESU and therefore a single population is absolutely ludicrous. These statements are deliberate attempts to minimize the potential impacts by misstating the science and attempting to mislead the public and decision maker.

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- The paragraph states: "Also, steelhead/rainbow trout in Auburn Ravine probably do not represent a genetically uncontaminated stock because of past introductions (stocking) directly into Auburn Ravine and current introduction into connected water bodies. Chinook salmon present in Auburn Ravine also probably do not represent a genetically uncontaminated stock, because of hatchery introduction in Auburn Ravine."

  Comment: These statements represent conclusions not supported by any fact. Introductions of hatchery origin fish have at best been sporadic and no studies have been conducted to determine if hatchery introductions have had any affect on existing stocks. Although, there is a substantial body of literature to support limited interactions between wild and hatchery reared fish. Conclusions regarding hatchery origin fish introductions and their impact on existing stocks should be supported by credible scientific analyses.

C. The DEIS/DEIR on page 3-82 states:

"Steelhead and chinook salmon straying into Auburn Ravine may help achieve the AFRP goals of doubling the natural production of anadromous salmonids by utilizing the enhanced production potential due to flow augmentation in Auburn Ravine. In fact, flow augmentation may provide an opportunity to contribute in a recovery effort for chinook salmon and/or steelhead, provided appropriate operational commitments (J. Hiscox, CDFG, pers. comm. 2000)"

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D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 12

D

Comment: There is no doubt that establishing an appropriate flow regime in Auburn Ravine, combined with appropriate fish passage and screening projects could increase the production of steelhead and fall run chinook salmon. In fact, I believe with the right flow and water temperature regime, that both Auburn Ravine and Coon Creek could support spring run chinook salmon, although they were not likely native to these watersheds. However, there are three problems associated with accomplishing the goal of increasing production. First, the DEIS/DEIR does not address the changes in water temperature regime in Auburn Ravine, because of the proposed project. It is possible that this project could make things worse from a water temperature perspective. A clear violation of the Bureau's ESA recovery mandate. Second, the DEIS/DEIR does not address the changes in water flows upstream of the Ophir Tunnel discharge point and the possible loss of fish passage over the cataract at that location because of the unknown spatial and temporal changes in flow patterns because of "replacement water". Third, given the choice of having Auburn Ravine populated with steelhead and chinook of Yuba/Bear origin versus the heavily hatchery influenced American River stocks, I would suspect that both NMFS and CDFG would choose the former scenario, not the latter. Also, since hatchery stocks are not generally subject to ESA recovery objectives, the Bureau would be hard pressed to justify meeting their recovery obligations by allowing American River stocks to replace Yuba/Bear stocks in Auburn Ravine. The document should be rewritten to include discussions of these three topics.

The DEIS/DEIR on page 3-82 states:

"In consideration of the intermittent character of natural flows in Auburn Ravine, the blended source of its permanent stream flow, the origination and strong hatchery influences affecting anadromous salmonids present in Auburn Ravine, and the existing potential for straying into Auburn Ravine, the increased delivery of American River water that would occur under the No Action/No Project Alternative would not be expected to adversely affect the salmonid fisheries. The increased deliveries that would occur under the No Action/No Project Alternative during the March through November period would create additional habitat for salmonids, and may further decrease water temperatures during the summer and early fall months. Overall, a less-than-significant impact to Auburn Ravine salmonids is expected to occur as a result of the No Action/No Project Alternative."

Comment: Overall, this summary and impact conclusion paragraph is not supported by fact, sound science, or good logic. Specific examples include:

- The paragraph states: "In consideration of the intermittent character of natural flows in Auburn Ravine, ..."

  Comment: This statement is both misleading and attempts to divert the public and decision maker's attention away from the facts regarding the flow situation in Auburn Ravine, thus influencing the decision maker to conclude that intermittent natural flows somehow make the stream less valuable and viable. This tactic is a clear violation of NEPA and CEQA. The facts of the situation are, while Auburn Ravine has historically had intermittent natural flows, this situation is no longer

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D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 13

D

relevant. Auburn Ravine has year round flow contributions from a combination of natural flows, groundwater inputs, the City of Auburn's Wastewater Treatment Plant discharge, water passed through the Wise Powerhouse, and soon a discharge from the City of Lincoln's WWTRF. In addition, the addition of housing developments and impermeable surfaces adjacent to Auburn Ravine in and near the City of Lincoln will only increase the amount of water flowing to the channel. Also, it is important to note that the riffle pool structure of Auburn Ravine upstream of approximately the City of Lincoln allows salmonid fishes ample rearing area, even under low flow conditions. Finally, the major impact to salmonid fishes because of low flow conditions occurs in that portion of the channel downstream of about Joiner Parkway in the City of Lincoln. However, this impact is relatively minor, because these low flow periods generally occur at times when adult fish are not migrating, although earlier running fall chinook could have problems in some years, because the water temperatures in this section are generally unsuitable for salmonid rearing during the summer, and because the instream habitat is generally unsuitable for juvenile salmonids. Given all of these facts, the low flows argument to support conclusions regarding impacts to salmonids is patently flawed and not supported by the evidence.

- The paragraph states: "... the blended source of its permanent stream flow, ..."

  Comment: This statement again attempts to mislead the public and decision maker. While it is true that Auburn Ravine receives a mixture of water throughout the year, two facts are important to note. First, the vast majority of flow in Auburn Ravine is derived from natural flows or the Yuba/Bear Project. Second, the temporary flows that have been imported from the American River have occurred during a time period, summer/early fall, that is not biologically important from an imprinting standpoint for juvenile salmonids or migration cues for spawning run adults. The temporal distribution of temporary flows from the American River has not overlapped with important migratory timing of salmonids. This situation would change with the proposed project and is not discussed in the DEIS/DEIR. Given these facts, the "blended source of water" argument to minimize the impact assessment is totally false.

- The paragraph states: "... the origination and strong hatchery influences affecting anadromous salmonids present in Auburn Ravine, . . . "

  Comment: This statement is not supported by any facts or studies to document the "strong hatchery" influences of anything. All we know is that occasionally someone from CDFG has stuck some fish of hatchery origin into the stream. We have no evidence to support a conclusion one way or the other. This statement is another attempt to minimize the potential impacts to listed stocks in Auburn Ravine and is not based on any science. The statement is misleading to the public and the decision maker.

- The paragraph states: ". . . and the existing potential for straying into Auburn Ravine, . . . "

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D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 14

Comment: See the comments on straying potential and the misuse of the coded wire tag recovery data outlined above. This statement is another attempt to minimize the potential impacts to listed stocks in Auburn Ravine and is not based on any science. The statement is misleading to the public and the decision maker.

- The paragraph states: "... , the increased delivery of American River water that would occur under the No Action/No Project Alternative would not be expected to adversely affect the salmonid fisheries."

  Comment: Given all of the rebuttal information provided above, this conclusion is not supported by fact or professionally credible analyses.

D

- The paragraph states: "... The increased deliveries that would occur under the No Action/No Project Alternative during the March through November period would create additional habitat for salmonids, and may further decrease water temperatures during the summer and early fall months."

  Comment: While it is possible that increased deliveries may create additional habitat, this conclusion is not supported by any facts or analyses. In addition, the "replacement" of existing water sources with American River water, depending on what that really means [remember that this concept is not discussed in the DEIS/DEIR according Bureau staff], could actually reduce habitat quality and/or quality. A condition that is inconsistent with the Bureau's recovery obligations under ESA. The conclusion that water temperature may decrease is not supported by any biologically relevant analyses in the DEIS/DEIR. The public and decision maker are again misled by a conclusion not based on fact or scientifically supportable analyses.

The entire presentation of the aquatic resources issues, documentation of the facts, and assessments of the situations should be completely redone by a credible and competent fishery biologist at the senior level. As the document now stands, this section fails to meet the requirements of NEPA and CEQA. By allowing this fatally flawed section to remain, the Bureau is obviously attempting to bias the selection of the final alternative, deliberately misrepresenting the facts, and understating the potential environmental impacts of the proposed project. In addition, a less-than-significant impact does not meet the Bureau's recovery obligations under ESA mandates.

The impact assessments for the other two alternatives (Impact 3.5.11 page 3-85 and Impact 3.5-16 on page 3-87) reach the same conclusions based on the same fatally flawed facts, analyses, and logic breakdowns as used for the No Action/No Project Alternative under Impact 3.5-5 on pages 3-81 and 3-82. The entire impact assessment should be redone using supportable facts, appropriate and biologically relevant analyses, and supported by literature germane to the situation and species involved.

Page 3-55, Splittail: While no splittail have been found in Auburn Ravine, and habitat in Auburn Ravine is probably not suitable, there is lots of suitable habitat in the Eastside Canal and Cross Canal of which Auburn Ravine is a tributary before the Cross Canal enters the Sacramento

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D. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 15

River. Splittail have been found in the Cross Canal, and fishermen report catching them there routinely. False attraction of splittail is a real issue, particularly given the fact that water would be diverted year around under the proposed project, whereas it is only diverted seasonally at the present time. Splittail are known to spawn in the lower American River and false attraction is highly likely to occur. This change in diversion pattern could be significant for splittail and salmonids in general.

H

In general, I find the fish resources section and its associated analyses to be generally lacking in biological credibility. As mentioned above, many of the modeling results are biologically on the wrong time step, thereby making impact assessment impossible to support biologically and scientifically. Use of models designed to provide a comparison between planning alternatives might sound fine for some applications, but in this case, it is totally inappropriate, since the environmental and ecological impacts are real. Given the potential impacts to listed species, we cannot afford to go forward with a biased, scientifically indefensible, and skewed justification document such as this one clearly is. The Bureau of Reclamation must broaden the project objective too on of supplying water to PCWA, regardless of the source. Until alternatives other than two variations on the location of a pumping plant in the canyon are carefully examined, the project will clearly violate the mandates of CEQA.

In summary, the Bureau and PCWA should take the following actions to bring the document into compliance with NEPA/CEQA and up to an acceptable level of scientific and professional credibility:

I

1. Withdraw the current document from public circulation and complete a major rewrite and modeling analyses to address many of the issues raised above,

2. Set up an additional, well publicized, meeting to discuss the concepts of "replacement water, discuss the revised project and conclusions reached,

3. Meet with concerned stakeholders/landowners to address their specific concerns and give the public a fair and reasonable chance to contribute to the development of a valid DEIS/DEIR as required under CEQA,

4. Complete additional analyses using the biologically appropriate time steps to evaluate the potential impacts of water temperature and flow changes on the biological resources of Auburn Ravine and the potential impacts to the City of Lincoln's WWTRF design and discharge, and

5. Fairly and adequately consider other alternatives in accordance with the legal requirements of NEPA and CEQA. The current document does not accomplish this task in a defensible manner.

It is important that the project proponents know that no one is trying to stop PCWA from obtaining additional water supplies. That is not an issue. What is at issue is whether or not alternative sources or strategies to obtain the additional water could result in a better project alternative that does not have as many environmental impacts. People understand the undue influence of Congressman Doolittle's wishes in this situation. However, it is incumbent on the

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H. Please refer to Response L-112.O.

I. Please refer to above responses and references. It is noted that the lead agencies held three public stakeholder sessions with interested parties. Additionally, PCWA modified its project operation plan to avoid potential impacts related to release of raw American River water into Auburn Ravine through a costly double-pumping procedure. The lead agencies believe that they have fully complied with all requirements of NEPA and CEQA, and that the conclusions in the EIS/EIR reflect the best scientific judgment of professional scientists with expertise in the areas addressed by the document. Please refer to Master Response 3.1.13, Auburn Ravine.

L-281, pg. 16

Bureau and PCWA to comply with the provisions of NEPA/CEQA and the ESA. I ask that the project proponents complete a fair and technically defensible DEIS/DEIR that meets the requirements of the law. Please drastically alter the "shoddy" justification document you now have foisted on the public. Make it right.

If you have any questions, please feel free to contact me at (916) 645-1235.

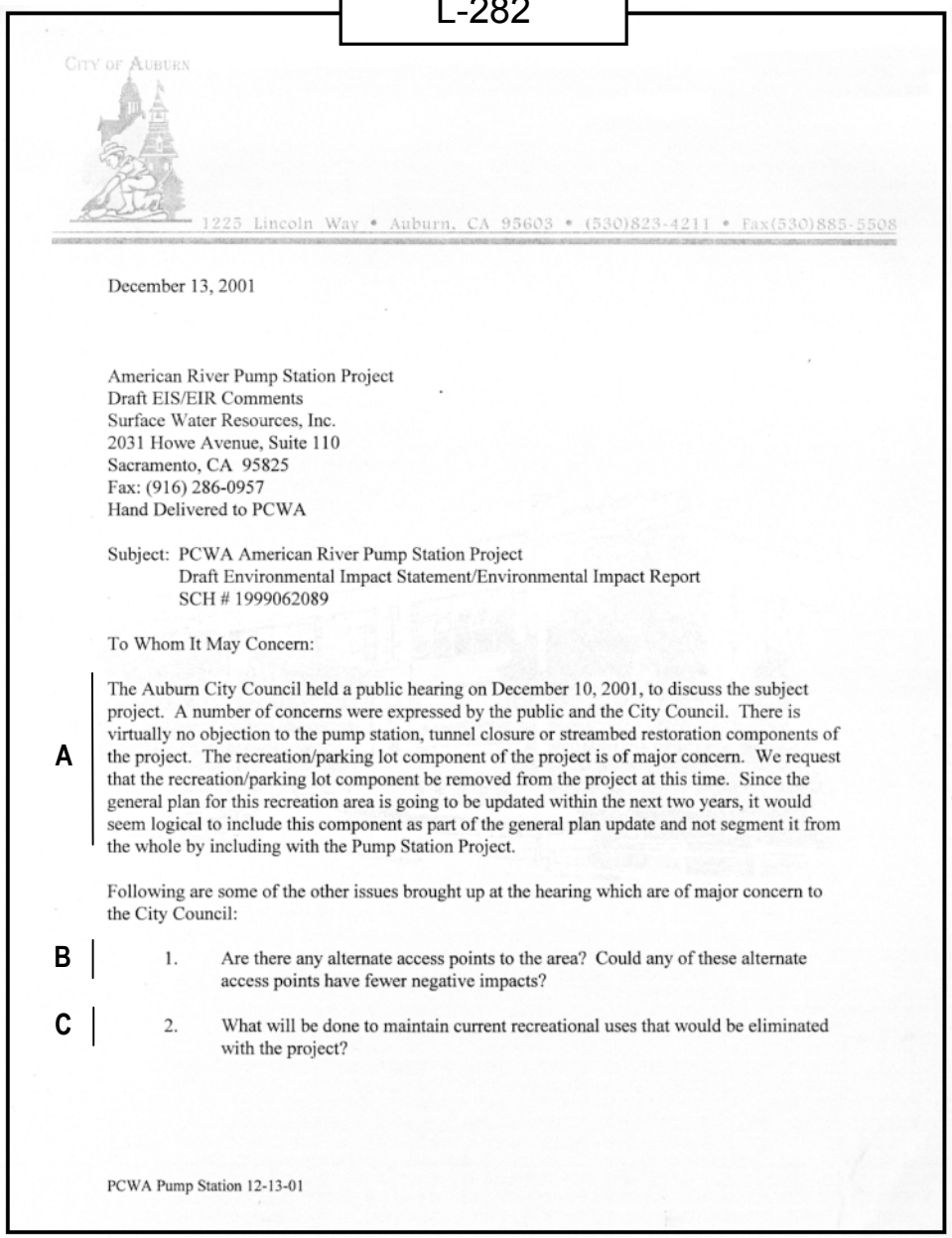
Sincerely,

Randy Bailey

Randy Bailey

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L-282



CITY OF AUBURN

1225 Lincoln Way • Auburn, CA 95603 • (530)823-4211 • Fax(530)885-5508

December 13, 2001

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825
Fax: (916) 286-0957
Hand Delivered to PCWA

Subject: PCWA American River Pump Station Project
Draft Environmental Impact Statement/Environmental Impact Report
SCH # 1999062089

To Whom It May Concern:

A The Auburn City Council held a public hearing on December 10, 2001, to discuss the subject project. A number of concerns were expressed by the public and the City Council. There is virtually no objection to the pump station, tunnel closure or streambed restoration components of the project. The recreation/parking lot component of the project is of major concern. We request that the recreation/parking lot component be removed from the project at this time. Since the general plan for this recreation area is going to be updated within the next two years, it would seem logical to include this component as part of the general plan update and not segment it from the whole by including with the Pump Station Project.

Following are some of the other issues brought up at the hearing which are of major concern to the City Council:

B 1. Are there any alternate access points to the area? Could any of these alternate access points have fewer negative impacts?

C 2. What will be done to maintain current recreational uses that would be eliminated with the project?

PCWA Pump Station 12-13-01

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.10, Project Access.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-282, pg. 2

D

3. The area abuts residential neighborhoods and is located in a high fire severity zone. Unfortunately the possibility of a fire in the canyon increases with greater accessibility. Besides fire mitigations, are there alternate locations for parking lots that would cause less of an impact on the residential neighborhoods?

E

4. Increased traffic on Maidu Drive with related safety and noise impacts on nearby residents.

5. An increase in the potential for crime and a burden on the Auburn Police Department, the nearest "first response" law enforcement jurisdiction.

The Council requests that additional study be done on these items and appropriate mitigation measures be provided.

Also please find enclosed additional comments provided to the City Council in a leaflet titled "Neighborhood Impact: American River restoration project and planned recreation parking facility."

If you have any questions please call Paul Ogden, City Manager, (530) 823-4211; ext. 192

Sincerely,

Jodie Hale

Jodie Hale
Mayor

cc: City Council
City Manager
Community Development Director
Public Works Director
David Breninger, PCWA

PCWA Pump Station 12-13-01

D. Please refer to Master Response 3.1.9, Fire Management.

E. Please refer to Master Response 3.1.6, Public River Access Features.

L-282, pg. 3

Neighborhood Impact:
American River restoration project and planned Recreation parking facility

Are you aware?

A major project is underway to restore the river channel and add RECREATION AND PARKING FACILITIES in the canyon just below our neighborhood.

- An entrance station to a new State Parks facility to the American River is planned on Maidu Drive.

Maidu Drive Neighborhood Information Session meeting November 7, 2001 came up with the key concerns from neighbors who attended the meeting:

1. If the intent of the project is to restore the river to it its historic pre-dam channel when there was no parking, **WHY IS IT NOW NECESSARY TO INCLUDE ROADS AND PARKING FOR RECREATIONAL USAGE?**
2. **INCREASED VEHICLE TRIPS BEYOND WHAT THE EIS/EIR IS PREDICTING.** The Presenters and the EIR contend that at peak recreation use there will be an increase of 210 vehicle trips in addition to the 1500-2000 vehicle trips per day that the City of Auburn Traffic Engineering study states. Many Residents felt that the Auburn Traffic Engineering study for Maidu Drive was on the low side and that ANY additional traffic is traffic we don't need. If the parking lots are full, visitors will be turned away at the manned gate on Maidu Drive. This means that vehicle will continue on and end up on Riverview Drive or turn around and return to Auburn- Folsom Road and that Maidu Drive will end up with many more vehicle trips than the current draft EIS/EIR is suggesting.
3. **SCHOOL CHILDREN SAFETY CONCERNS** for the Maidu Drive Area. Children from residences on the south side of Maidu Drive must cross Maidu to reach the Skyridge school. Increased traffic during construction, 35 to 70 additional vehicle trips, plus peak recreational increase of up to 210 vehicle trips will expose school children to unwanted and unneeded danger.
4. **INCREASED TRAFFIC NOISE** especially during pump station construction that would last about 2 years.
5. **INCREASED FIRE DANGER** to homes that border the canyon as a result of increased human and vehicle activity down in the canyon. There is no current plan in place that would protect homes as result of increased human recreational activity in the canyon. A fire plan is in the planning stages but would not be put into effect until after Pump Station construction is finished. The Residents felt that a fire plan should be activated at the beginning of construction and that elimination of proposed recreational facilities would be the best approach to fire protection for homes. There was a general feeling that the project should not move forward until fire hazard concerns are addressed.
6. **SAFTEY AND SECURITY** from undesirables that the recreation and parking facilities will likely draw from outside of Auburn. The presenters did not have any response for this issue although the Park Ranger did review situations and frequency of occurrences that could happen, vandalism being the most prominent. For the most part, the residents of the Maidu Drive neighborhoods have experienced peaceful living for several years. Opening the proposed section of the river to recreational use could and probably will open the door to an increase of people problems. The EIS/EIR does not affectedly address this situation.
7. **IS THERE ANY TECHNICAL LINK BETWEEN THE PLANNED RECEATIONAL PARKING FACILITIES AND THE CONSTRUCTION OF THE PUMP STATION?** The Presenters responded NO to this question. This means that in terms of local Maidu Drive neighborhood interest and benefits there is no reason to include recreational facilities in the project if the main purpose is to pump water from the river. In fact, it was noted by one Resident that except for water, there are no other desirable benefits for a majority of the residents of the Maidu Drive area. Many of the residents agreed with this point of view.

INCREASED LITTER ON MAIDU DRIVE has been noticed since the expansion of the PCWA facilities on Maidu Drive. Adding recreational parking facilities which means more traffic, will more than likely increase litter. What agency will pick up the litter on Maidu Drive since it is not part of the proposed ASRA recreational facility?

L-282, pg. 4

9 **RIVER POLLUTION FROM VEHICLES IN PARKING LOTS** may occur especially during the Winter and Spring seasons. This is especially true for the lower 20 space parking lot that is very close to the river.

10. **RESIDENTS ALONG RIVERVIEW DRIVE ARE CONCERNED ABOUT INCREASED TRAFFIC FROM VEHICLES** taking short cuts to reach downtown or other parts of Auburn from Maidu Drive. Riverview Drive is currently plagued by through traffic, as many as 1000 vehicle trips per day. Many vehicles are traveling much faster than the residential speed limit. The draft EIS/EIR does not acknowledge or consider the affects of the proposed recreational traffic on local residential streets especially if the parking lots are full.

11. **PROPOSED PROJECT COST:** The weak national and state economies and the September 11th Event is straining federal and state budgets. It was noted by residents that yes we probably need the water, therefore the pumps, but the additional millions of dollars for reconstructing the river channel to pre-dam condition and adding recreational facilities cannot be justified, especially at this time in history.

12. **RECREATIONAL NOISE**: Although the EIS/EIR addresses construction project noise, IT DOES NOT REALLY ADDRESS RECREATIONAL NOISE, the primary concern of many residents as voiced at the meeting. The California Department of Parks and Recreation can attest to the fact that the river confluence area at Hwy. 49 has had noise problems especially with those playing drums. This is not a situation that residents in the Maidu Drive area wanting to experience. The residents north of Maidu Drive currently experience noise from the fairgrounds and downtown Auburn area and the PCWA service location. The EIS/EIR does not address the addition of potential recreational noise problems that more than likely will occur as result of allowing additional vehicles and humans into the river canyon.

13. **RECREATIONAL AREA PARKING ACCESS VIA MAIDU DRIVE IS BEING PROPOSED**. Most of the Residents were concern and upset regarding this choice of ingress/egress. When asked about Pacific Avenue as an access point, the Presenters responded that it would be MORE COSTLY to use that route. Also, the draft EIS/EIR on page 3-293 states that "to minimize traffic-related impacts to the future camping area near American River Canyon Overlook, construction traffic would avoid use of Pacific Avenue". Residents were surprised that deference was given to campers versus those living in the Maidu Drive neighborhoods. The Presenters were unable to successfully validate the choice of Maidu Drive versus Pacific Avenue which is already in a commercial area with no residential homes. Pacific Avenue also has Railhead Park and the Skateboard Park. Access to parking facilities via Pacific Avenue would solve many traffic, litter, noise and safety concerns.

Written comments and opinions regarding this project must be faxed or hand delivered to:

American River Pump Station Project
Draft EIR /EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave., Suite 110
Sacramento, CA 95825 Or Fax to: 916-286-0957

BY THE END OF THE BUSINESS DAY TUESDAY NOVEMBER 13, 2001

Due to the Veterans Holiday, we are planning to hand deliver responses from the neighborhood to make sure they are received on Tuesday, November 13 since their will be no mail delivery 11/12.

ase drop off your response to Ron Pinnick, 565 Riverview Drive by Tuesday Noon Nov. 13, 2001 OR call and we will pick up your response – 530-889-1202 – if you reach the recorder just leave your address and then place your response by your front door. We will make pick-ups once a day. Thanks for your support – Ron & Laura Pinnick

L-283

December 13, 2001

American River Pump Station Project
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

RE: Draft EIS/EIR, American River Pump Station Project

A | Complete public recreation access should be provided along and across the North
B | Fork American River in the project area with any alternative selected. Temporary
closures for construction must be limited to immediate areas of active work. This
C | reach of river has been boated for many decades as a beginner run and for training.
Re-routing the channel is a significant impact in itself and requires mitigation of
additional access. Closure orders by the Superintendent of the American River
D | District of the California Department of Parks and Recreation are not posted and
do not keep visitors away from the former dam site. The faded sign on the Highway
49 bridge that once read "No Rafts Past This Point" suggested closure was for
commercial rafters but not for kayaks, canoes, catarafts, or inner tubes. The tunnel
E | has been floated safely by persons of all abilities in a variety of crafts, and claims of
inherent hazards are unfounded. PCWA engineers have safely rafted in diversion
D | tunnels of the Auburn Dam project. If boaters see a hazard such as flooding, they
carry their boats out of the canyon or portage around the hazard, but boaters avoid
extreme weather that causes flooding. Some boating occurs at night with lights with
F | summer releases from Oxbow Dam. The project would significantly affect the Class
II rapid at Tamaroo Bar, the most scenic, interesting and challenging rapid below
Highway 49. Mitigation options considered for this impact in the EIS/EIR should
G | include improving public access for boating take-out and put-in at the project site.
H | The EIS/EIR should include specific and complete descriptions of conditions
affecting boating at the site; the draft gives only unsubstantiated opinions or in-
I | house references not publicly available. The access plan should include parking for
at least 200 vehicles near the river, paved vehicle road, and a pedestrian bridge
J | across the river. Safety of the facilities and parking in the floodplain should be
addressed. Ownership of the river bed by the California State Lands Commission
K | and the public trust interests involved should be fully mapped and described in the
final EIS/EIR. The existing channel gradient and easy level of boating difficulty
L | should be maintained through the project area, and any anticipated changes to river
user profiles should be fully described.

Thank you very much for your consideration.

Anthony Giglierano
508 B Pine Garden Lane
Secto, CA. 95825

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction. As noted in the Draft EIS/EIR, the project area from ½ mile upstream of the bypass tunnel inlet to ½ mile downstream of the bypass tunnel outlet is officially closed to water contact recreation.

C. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

D. In an effort to protect public health and safety as described in Order #318-02-91, CDPR limits recreation use in the Auburn Dam construction area, including one-half mile upstream and one-half mile downstream from the Auburn Dam foundation. While the order does have provisions that exempt specific trail routes from closure, all other public uses are prohibited. While the present status of the sign on the Highway 49 bridge is unknown, all of the Auburn SRA posted orders are publicly displayed on a signboard outside of the Auburn Sector office on Highway 49.

E. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

F. Please refer to Master Response 3.1.7, Tamaroo Bar. The public river access features are specifically designed for the purpose of providing safe boating access at the project site.

G. Please refer to Response L-5.X.

H. Certain project-related documentation is available for public review at the lead agency offices.

I. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features.

J. CDPR anticipates that staff would patrol the vehicle access road, parking areas and turn around twice per day during the season of use. To the extent possible CDPR also would utilize volunteer staff, such as the Canyon Keepers, to help patrol and monitor the areas of vehicle access proposed as part of this project. The public access facilities would be closed at times when flooding was of concern for public safety. Please also refer to Master Response 3.1.6, Public River Access Features.

K. The California State Lands Commission has not determined their limit of jurisdiction in this section of the American River and does not require a lease at this time. There are no plans to determine this limit without a specific legislative request. In the event that jurisdiction would be determined in the future, the lead agencies would be required to obtain a navigational trust easement.

L. Please refer to Response L-5.X.

L-284

COMMENTS

ON THE

AMERICAN RIVER PUMP STATION

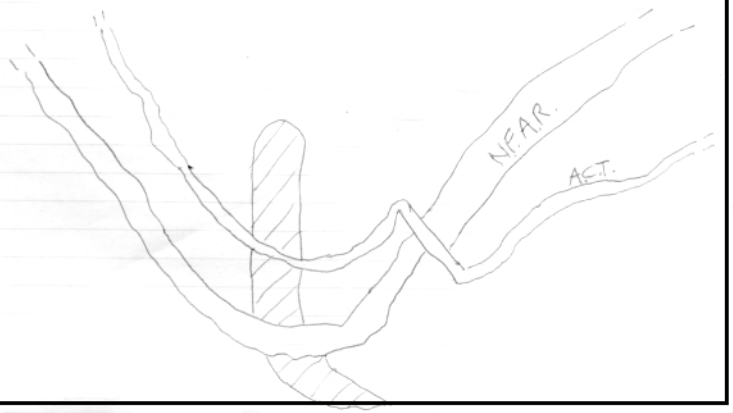
DRAFT EIS/EIR

SUBMITTED TO

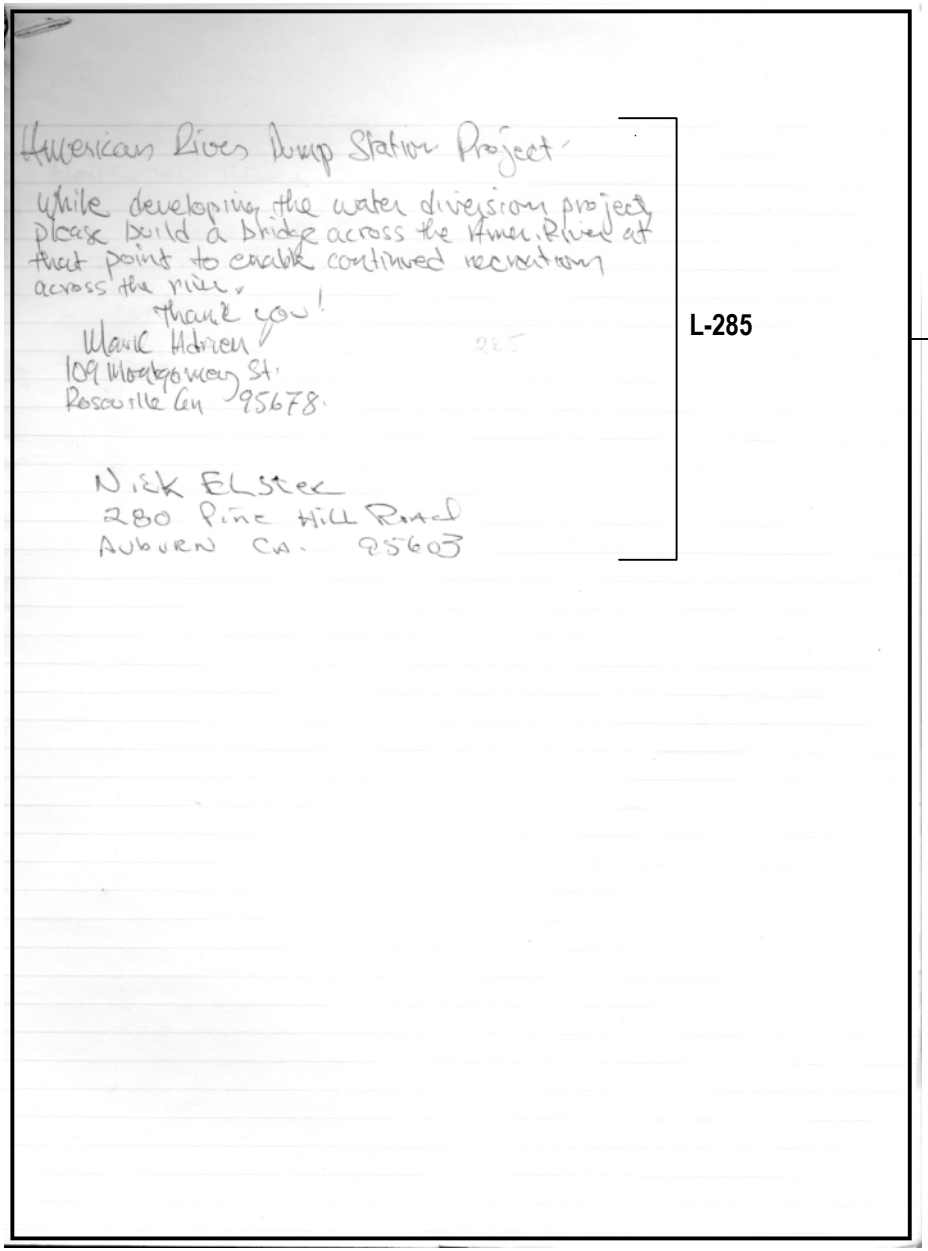
USBR AND PCWA

c/o SWRI
2031 HOWE AVE. #110
SACRAMENTO, CA 95825

DECEMBER 13, 2001



No comment was stated.



American River Pump Station Project

While developing the water diversion project please build a bridge across the Amer. River at that point to enable continued recreation across the river.

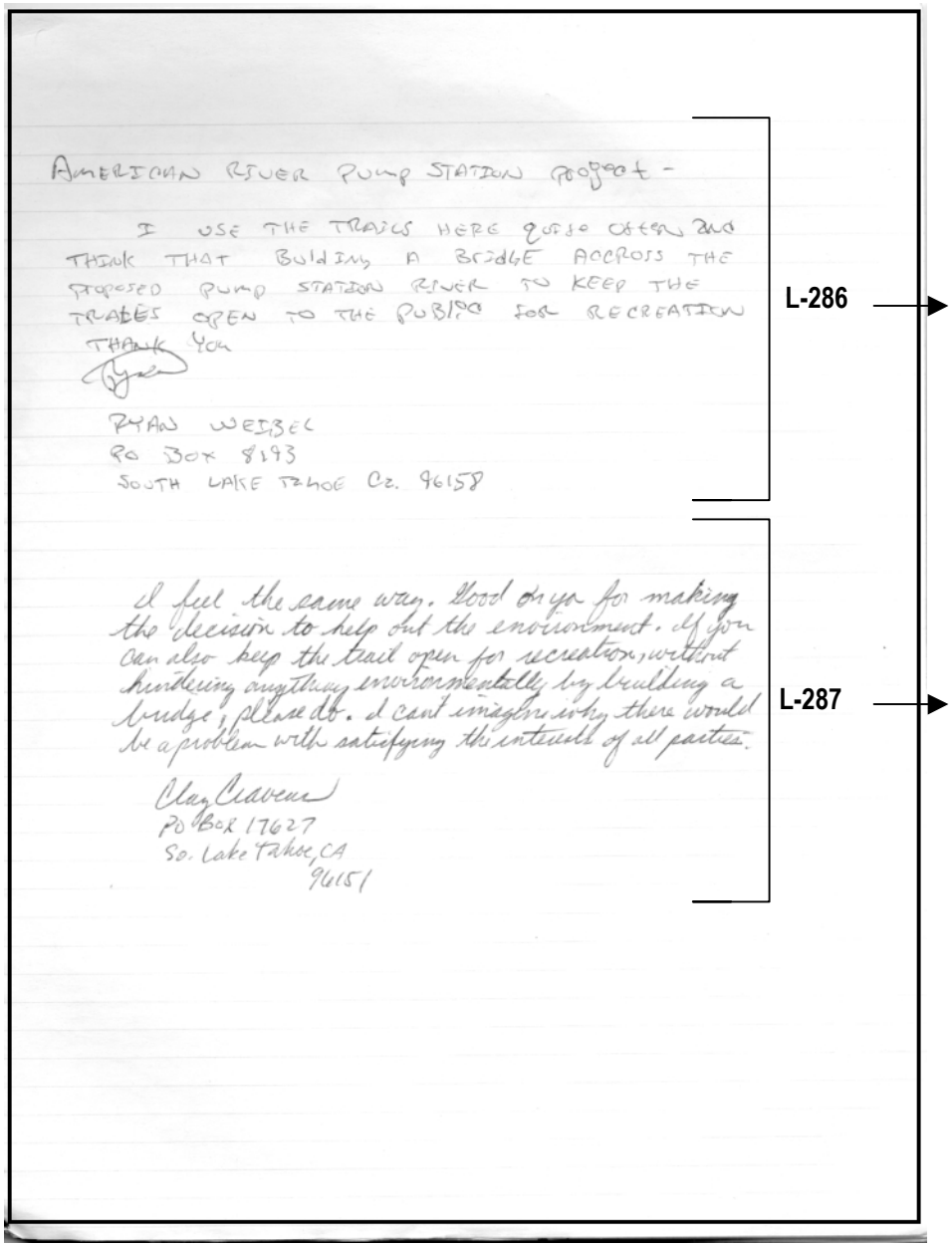
Thank you!

Marc Hibrion
109 Montgomery St.
Roseville Ca 95678

Nick Elstek
280 Pine Hill Road
Auburn CA. 95603

L-285

→ Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



AMERICAN RIVER PUMP STATION PROJECT -

I USE THE TRAILS HERE QUITE OFTEN AND THINK THAT BUILDING A BRIDGE ACCROSS THE PROPOSED PUMP STATION RIVER TO KEEP THE TRAILS OPEN TO THE PUBLIC FOR RECREATION

THANK YOU

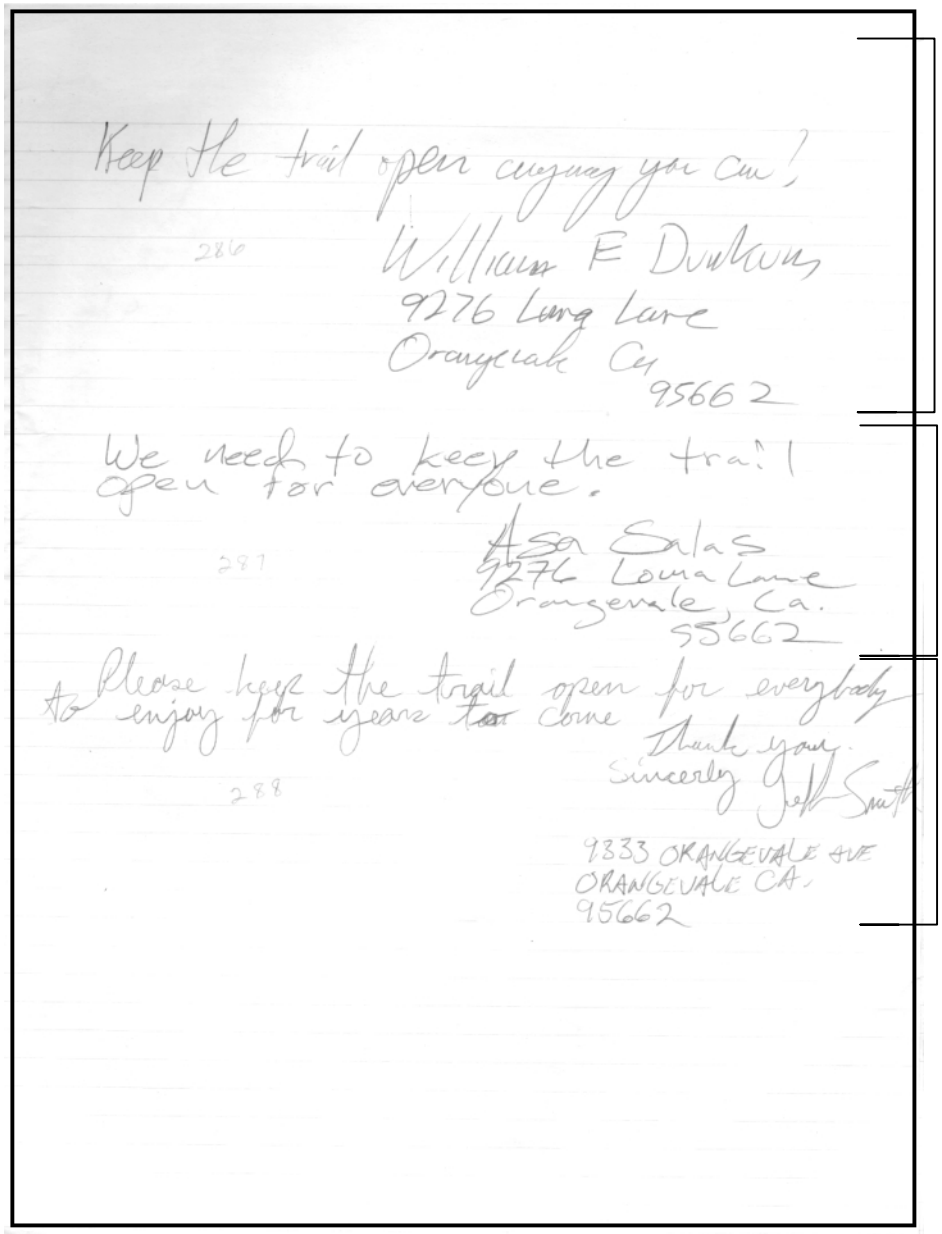
RYAN WEIBEL
PO BOX 8193
SOUTH LAKE TAHOE CA. 96158

I feel the same way. Good on ya for making the decision to help out the environment. If you can also keep the trail open for recreation, without hindering anything environmentally by building a bridge, please do. I cant imagine why there would be a problem with satisfying the intents of all parties.

Clay Cravens
PO BOX 17627
So. Lake Tahoe, CA
96151

L-286 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

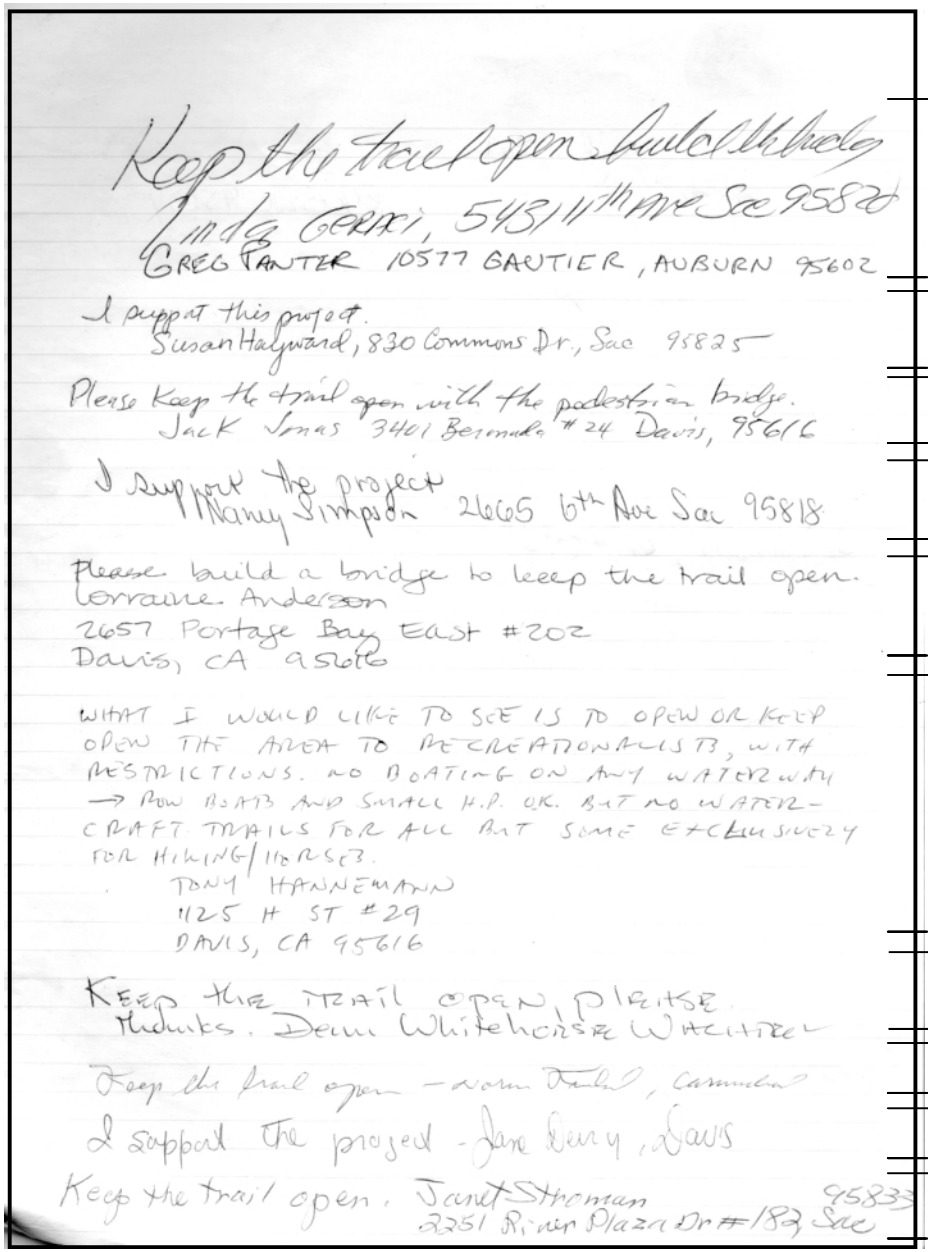
L-287 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-288 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-289 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-290 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-291 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-292 → Project support noted.

L-293 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-294 → Project support noted.

L-295 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

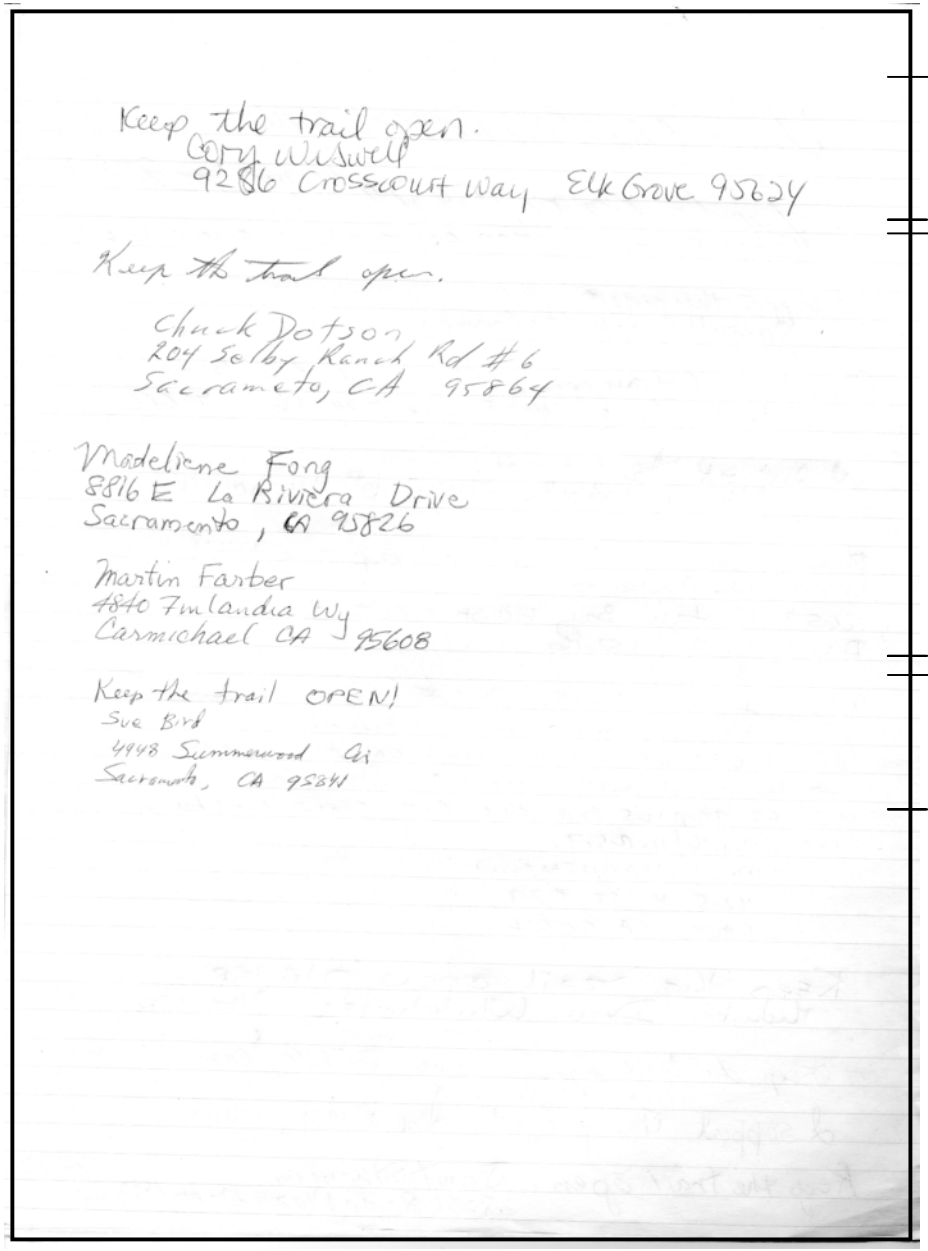
L-296 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail

L-297 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-298 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-299 → Project support noted.

L-300 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



Keep the trail open.
Gary Wiswell
9286 Crosscourt Way Elk Grove 95624

Keep the trail open.

Chuck Dotson
204 Selby Ranch Rd #6
Sacramento, CA 95864

Madeliene Fong
8816 E La Riviera Drive
Sacramento, CA 95826

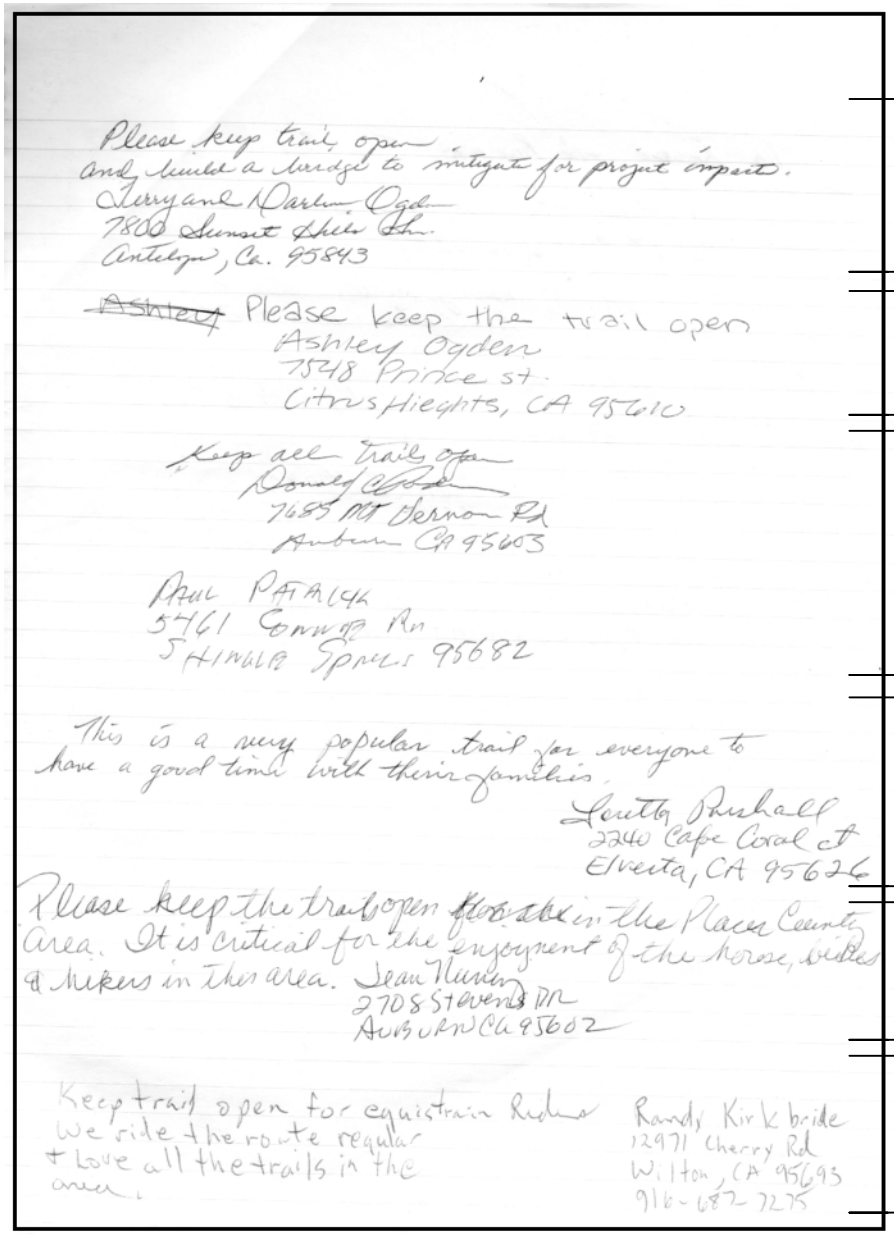
Martin Farber
4840 Finlandia Wy
Carmichael CA 95608

Keep the trail OPEN!
Sue Bird
4948 Summerwood Ct
Sacramento, CA 95841

L-301 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-302 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-303 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-304 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

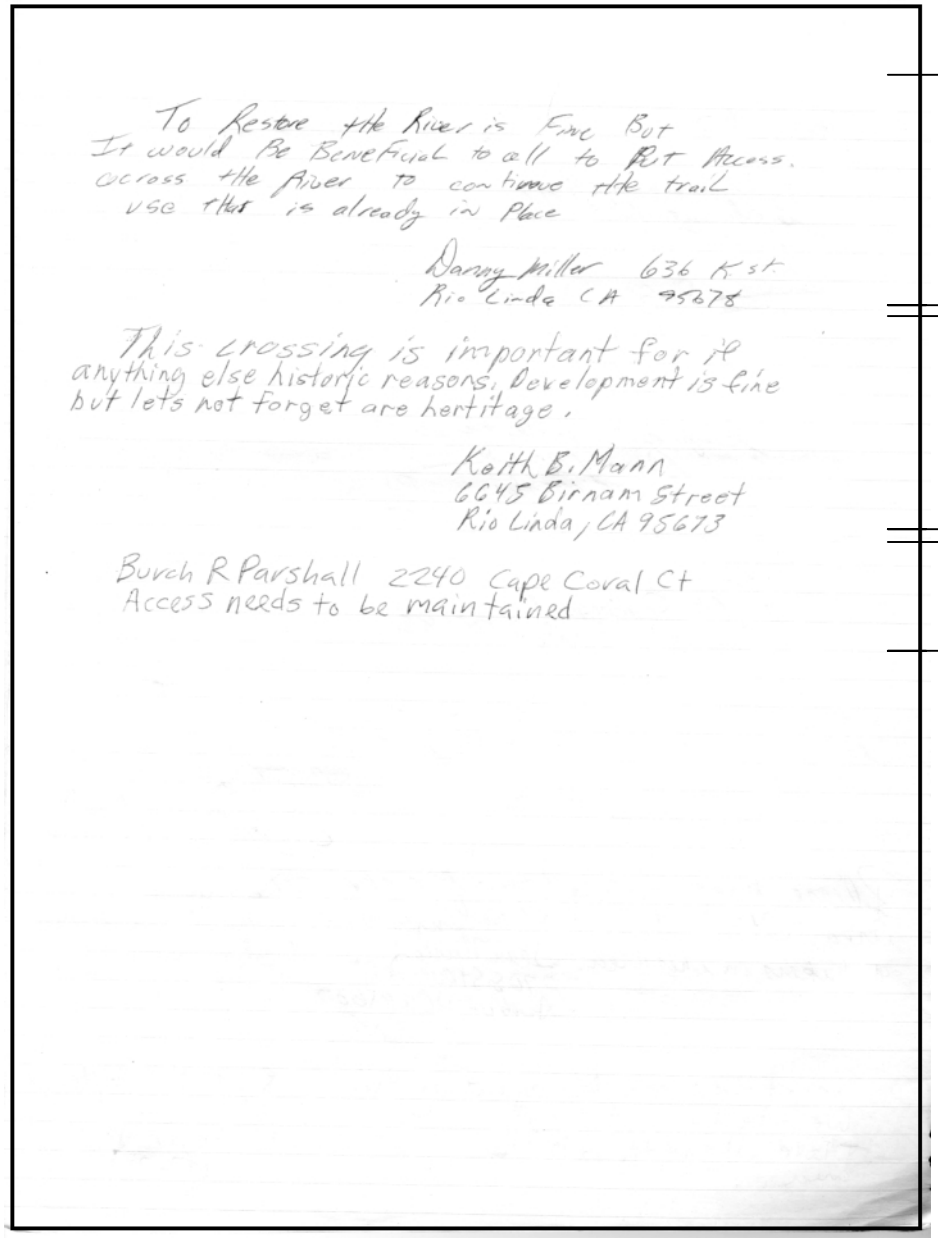
L-305 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-306 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-307 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-308 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-309 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.


To Restore the River is Fine But
It would Be Beneficial to all to Put Access.
across the River to continue the trail
use that is already in Place

Danny Miller 636 K st
Rio Linda CA 95673

This crossing is important for it
anything else historic reasons. Development is fine
but lets not forget are hertitage.

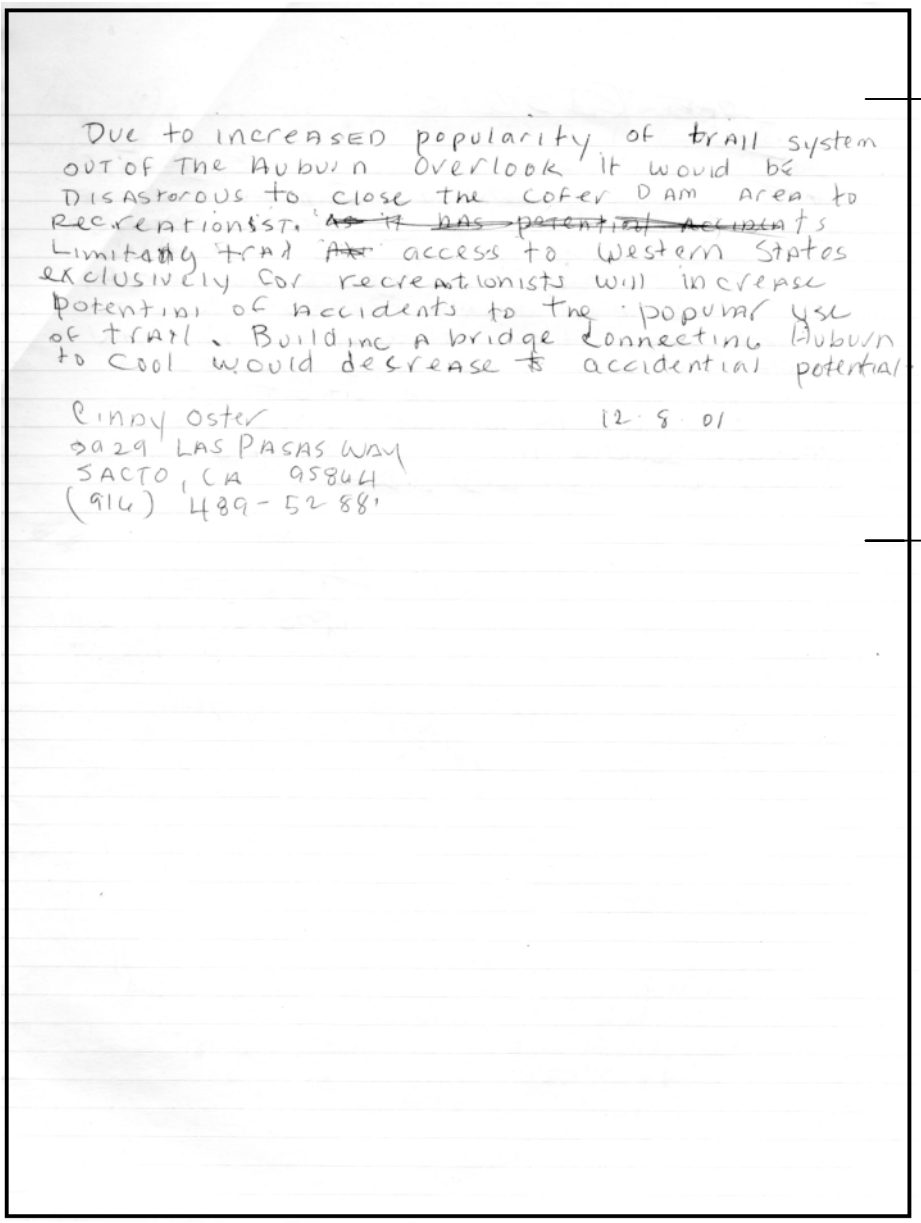
Keith B. Mann
6645 Birnam Street
Rio Linda, CA 95673

Burch R Parshall 2240 Cape Coral Ct
Access needs to be maintained

L-310 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-311 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

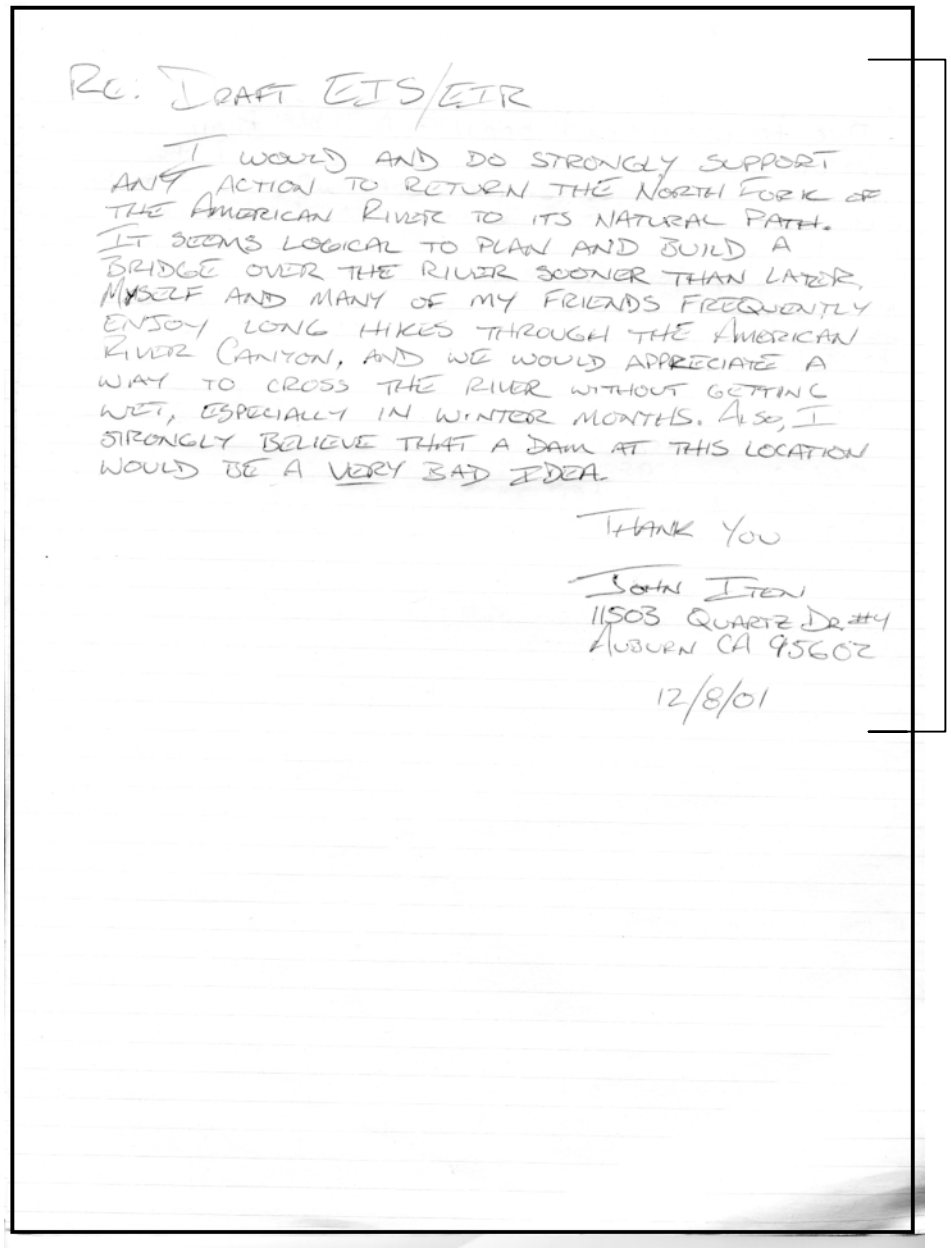
L-312 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



Due to increased popularity of trail system out of the Auburn Overlook it would be disastrous to close the Cofer Dam Area to Recreationist. ~~As it has potential accidents~~ Limiting trail ~~Ac~~ access to Western States exclusively for recreationists will increase potential of accidents to the popular use of trail. Building a bridge connecting Auburn to Cool would decrease ~~s~~ accidential potential

Cindy Oster 12-8-01
9029 Las Pasas Way
Sacto, CA 95864
(916) 489-5288

L-313 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



RE: DRAFT EIS/EIR

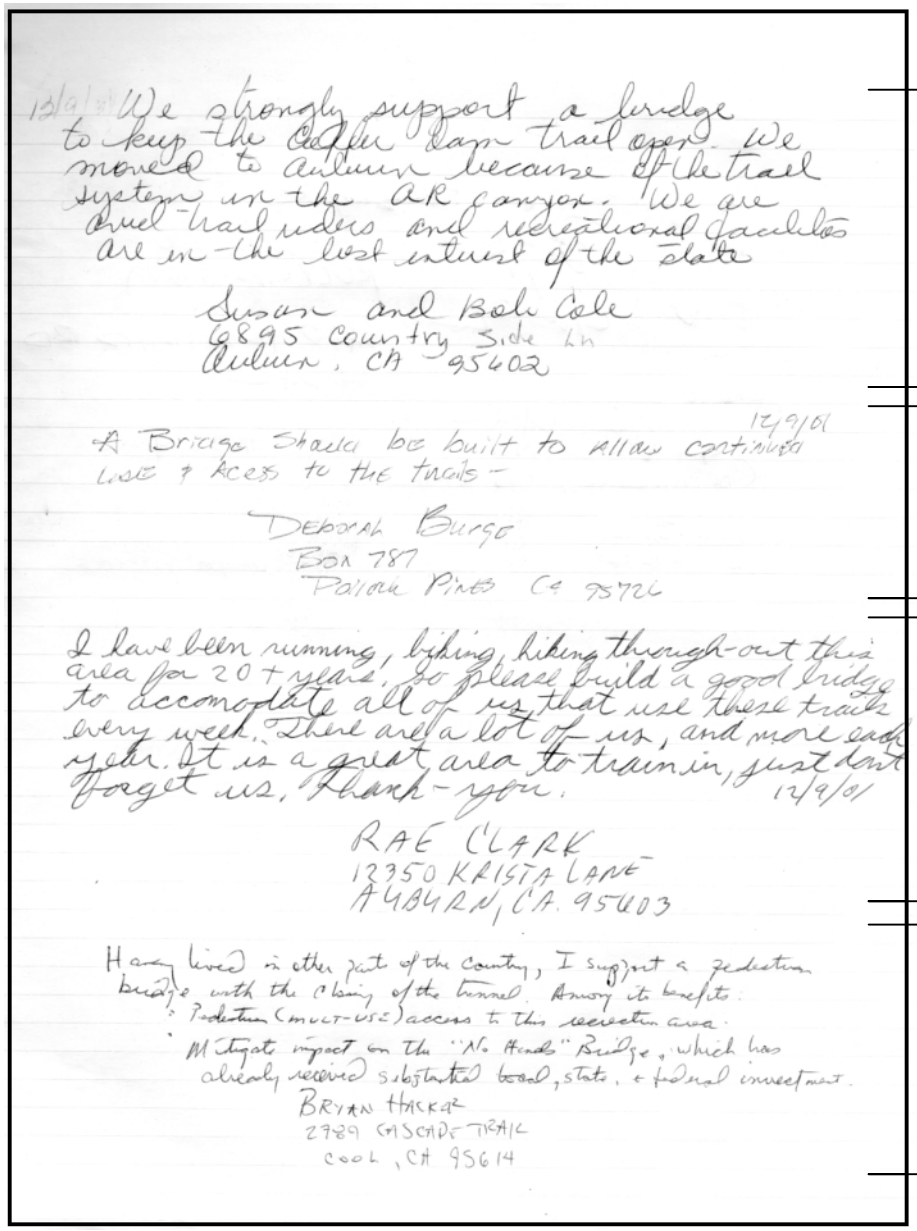
I WOULD AND DO STRONGLY SUPPORT ANY ACTION TO RETURN THE NORTH FORK OF THE AMERICAN RIVER TO ITS NATURAL PATH. IT SEEMS LOGICAL TO PLAN AND BUILD A BRIDGE OVER THE RIVER SOONER THAN LATER. MYSELF AND MANY OF MY FRIENDS FREQUENTLY ENJOY LONG HIKES THROUGH THE AMERICAN RIVER CANYON, AND WE WOULD APPRECIATE A WAY TO CROSS THE RIVER WITHOUT GETTING WET, ESPECIALLY IN WINTER MONTHS. ALSO, I STRONGLY BELIEVE THAT A DAM AT THIS LOCATION WOULD BE A VERY BAD IDEA.

THANK YOU

JOHN ITEN
11503 QUARTZ DR. #4
AUBURN CA 95602

12/8/01

L-314 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



We strongly support a bridge to keep the Codfer Dam trail open. We moved to Auburn because of the trail system in the AR Canyon. We are avid trail riders and recreational facilities are in the best interest of the state

Susan and Bob Cole
6895 Country Side Ln
Auburn, CA 95602

12/9/01
A Bridge should be built to allow continued use & access to the trails -

Deborah Burgo
Box 787
Foresthill CA 95726

I have been running, biking, hiking through-out this area for 20+ years, so please build a good bridge to accomodate all of us that use these trails every week. There are a lot of us, and more each year. It is a great area to train in, just don't forget us, Thank-you. 12/9/01

RAE CLARK
12350 KRISTA LANE
AUBURN, CA. 95603

Have lived in other part of the country, I support a pedestrian bridge with the closing of the tunnel. Among its benefits:
- Pedestrian (multi-use) access to this recreation area.
- Mitigate impact on the "No Hands" Bridge, which has already received substantial local, state, & federal investment.

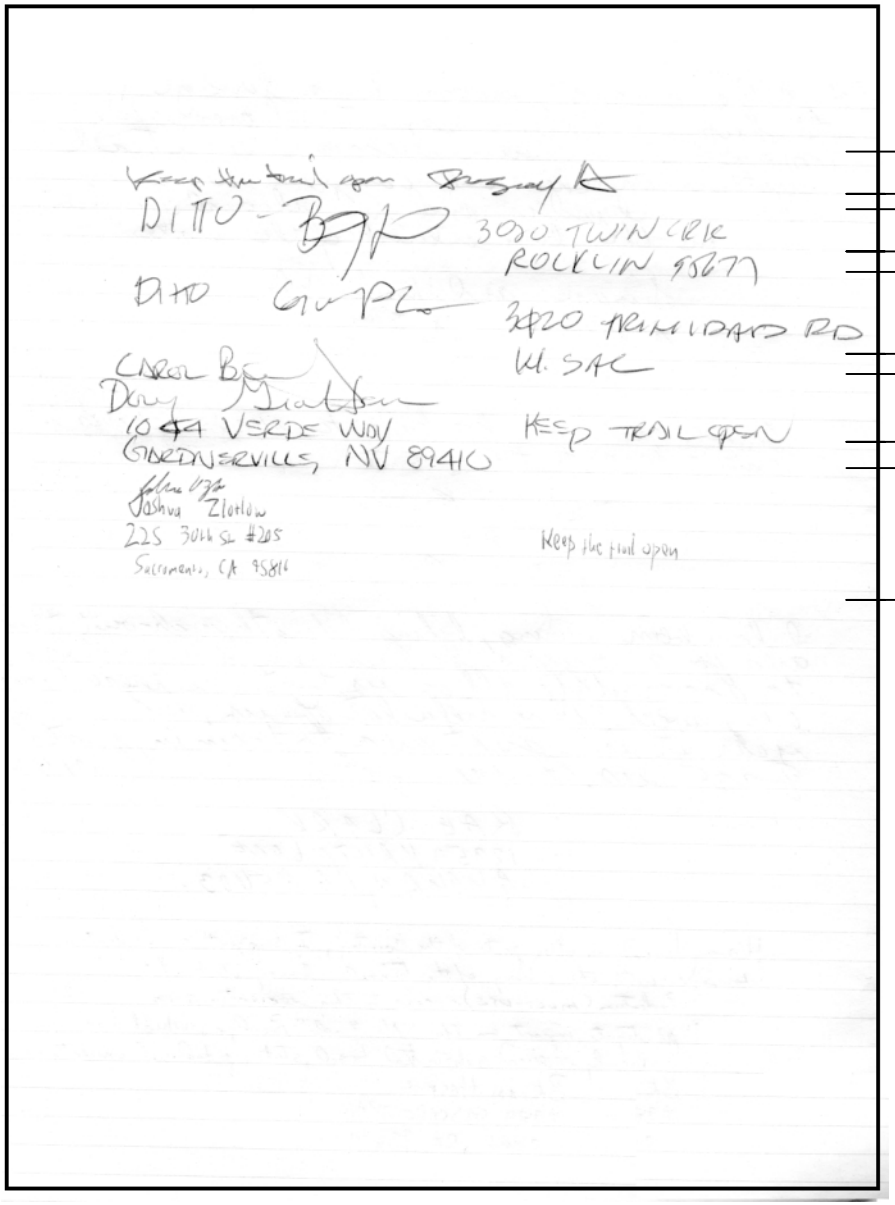
BRYAN THACKER
2989 CASCADE TRAIL
COOL, CA 95614

L-315 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-316 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-317 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-318 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



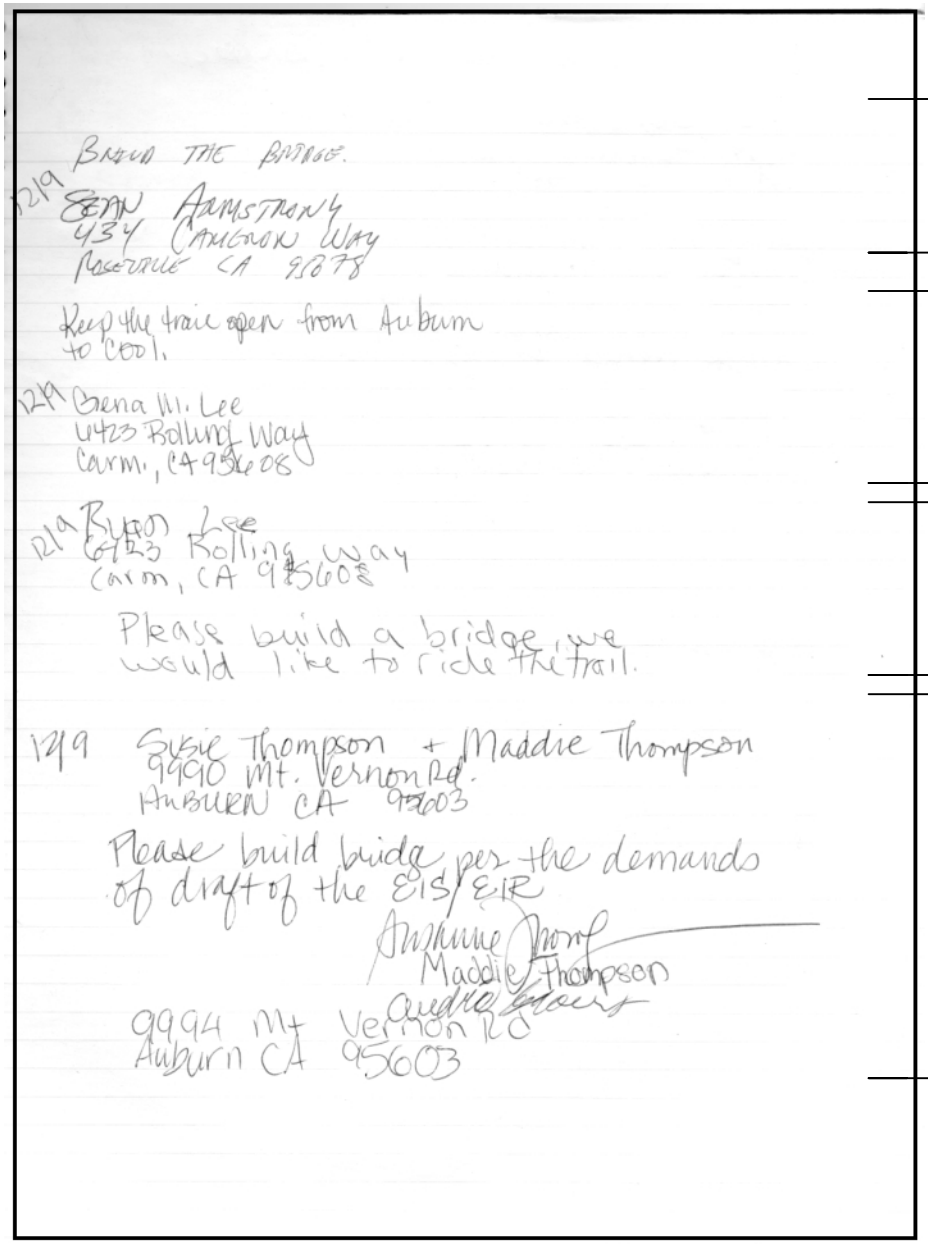
L-319 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-320 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-321 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-322 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-323 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

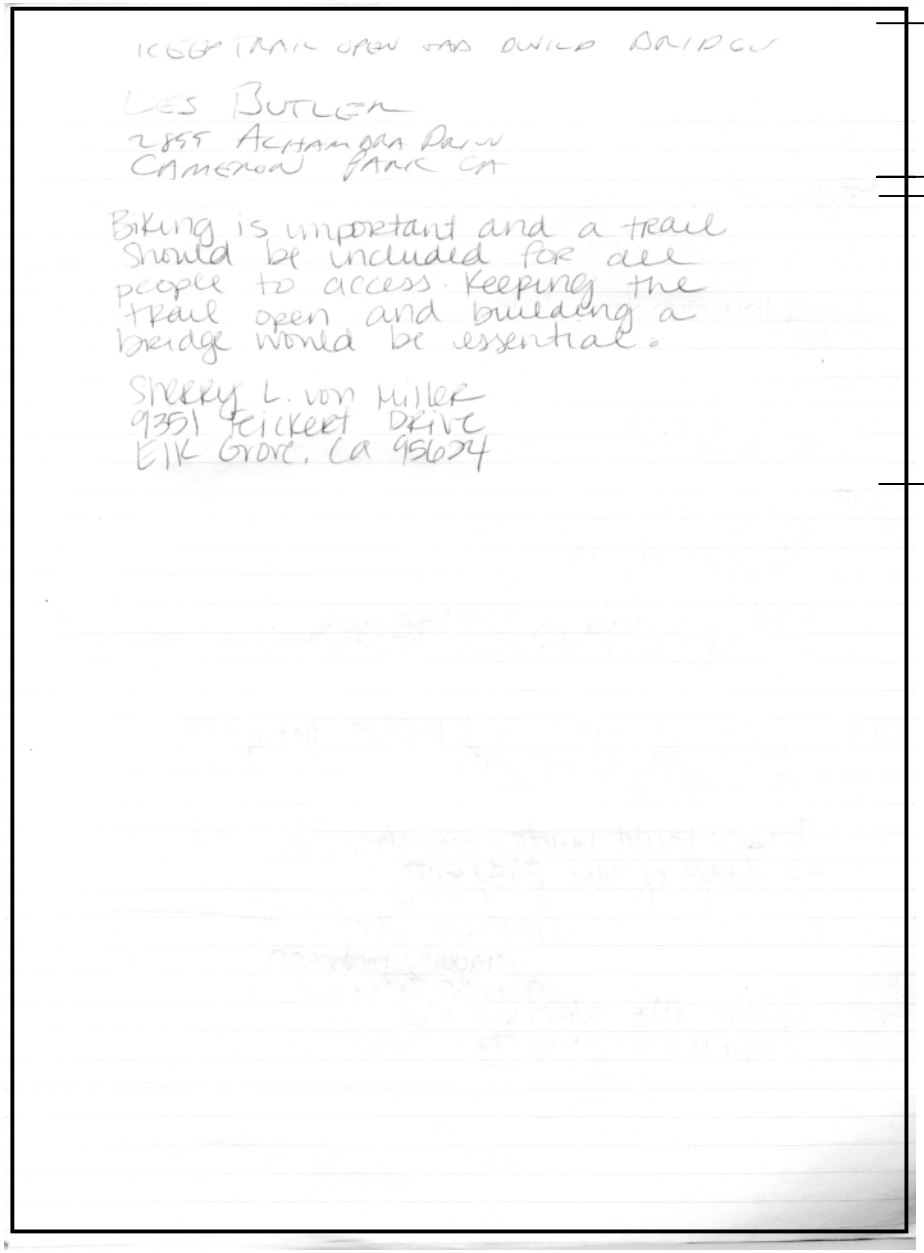


L-324 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-325 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

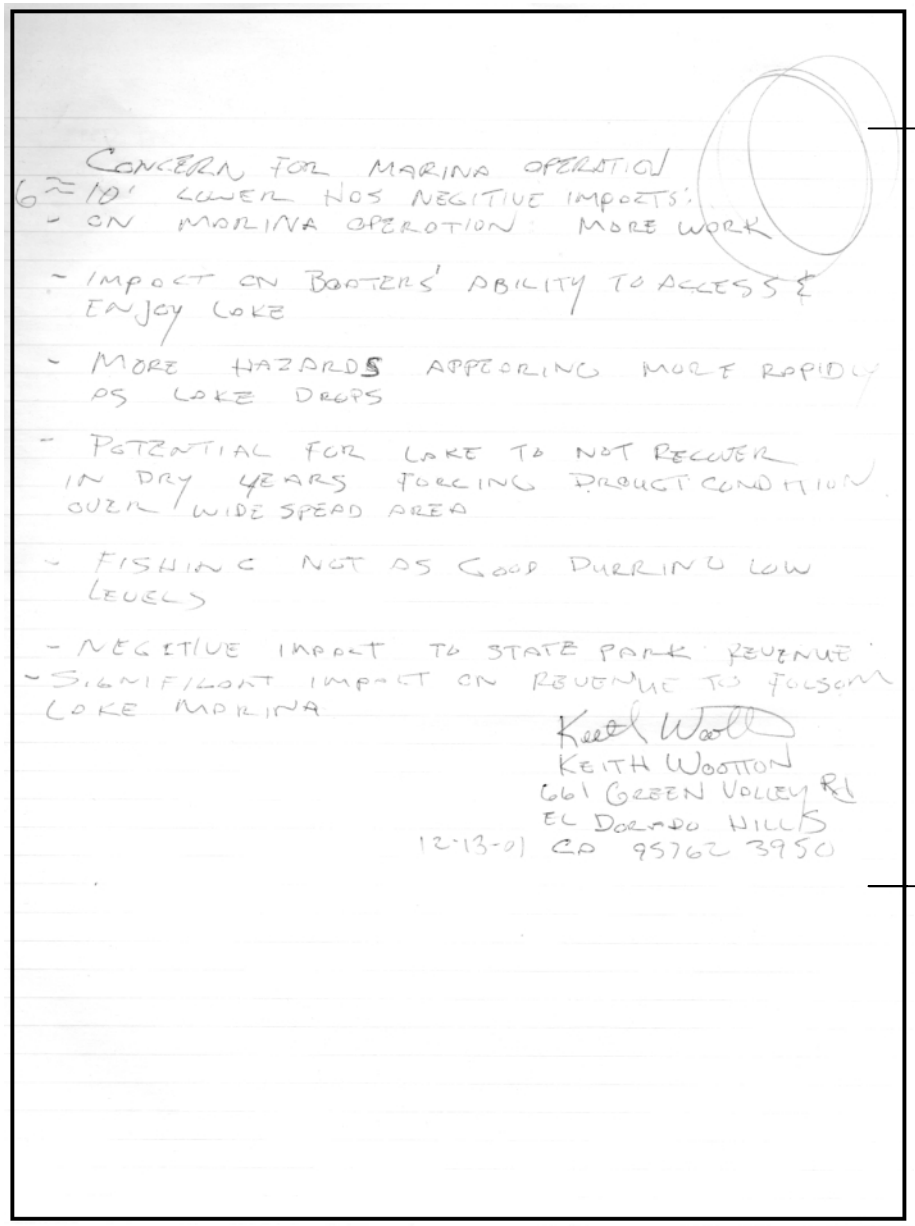
L-326 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-327 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-328 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

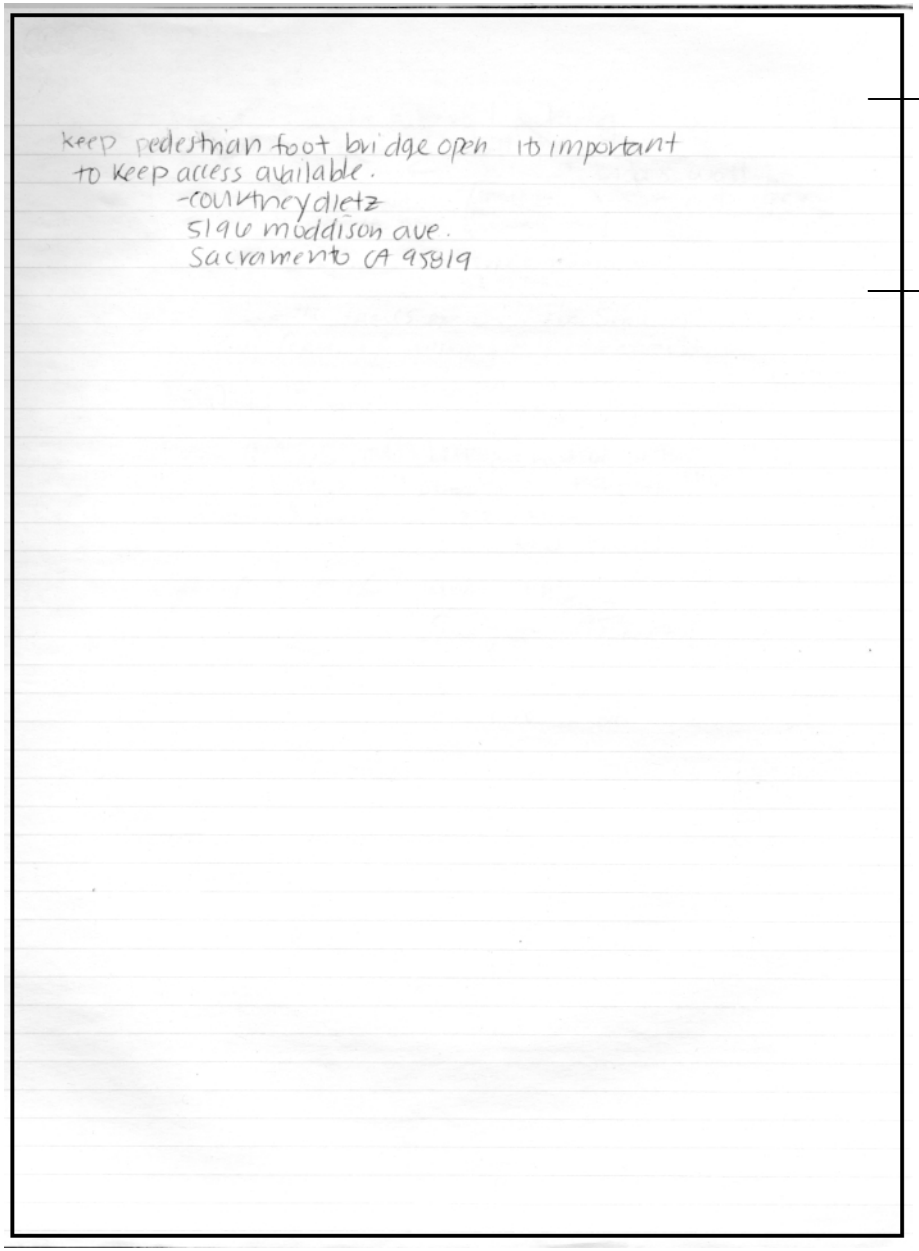
L-329 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



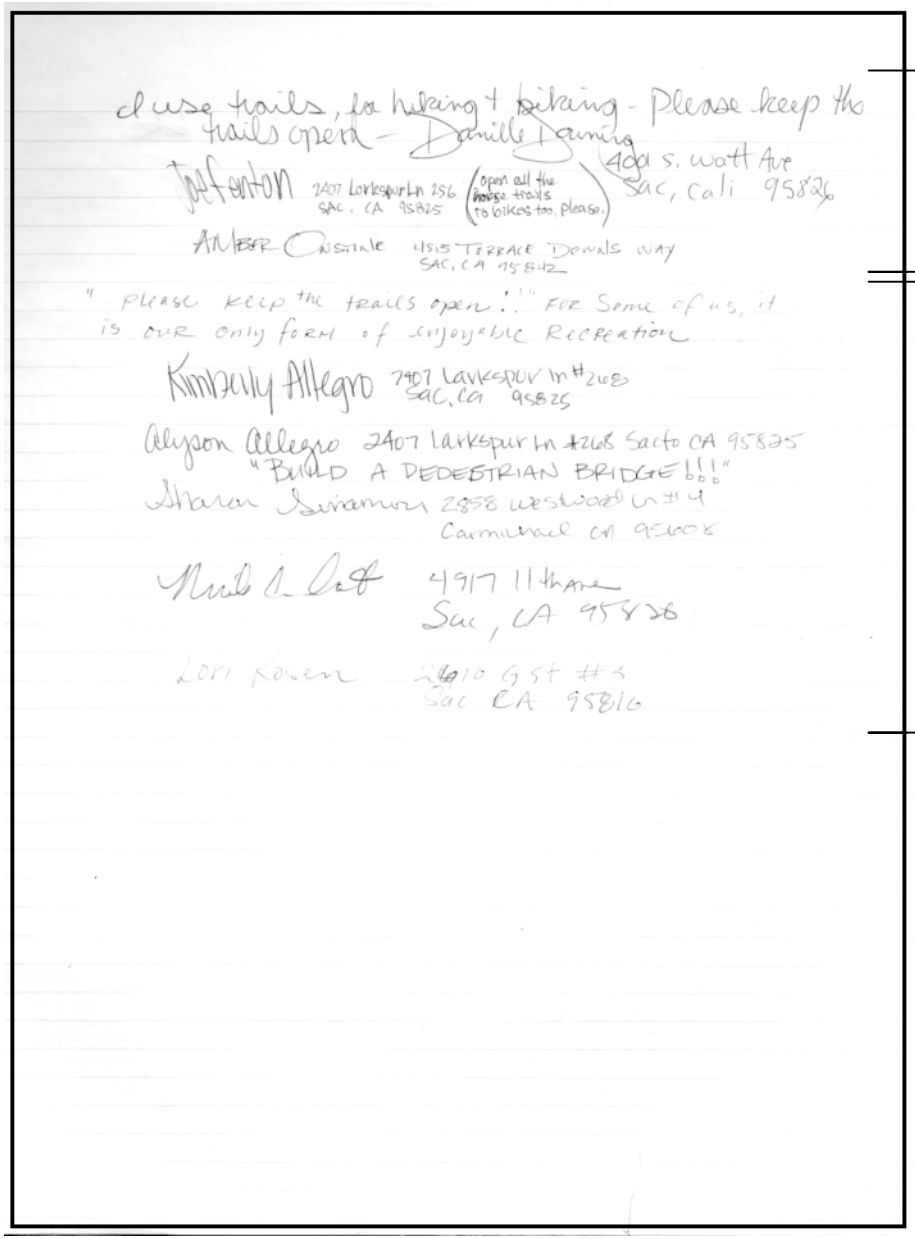
CONCERN FOR MARINA OPERATION
6 ≈ 10' LOWER NOS NEGITIVE IMPACTS:
- ON MARINA OPERATION: MORE WORK
- IMPACT ON BOATERS' ABILITY TO ACCESS & ENJOY LAKE
- MORE HAZARDS APPEARING MORE RAPIDLY AS LAKE DROPS
- POTENTIAL FOR LAKE TO NOT RECOVER IN DRY YEARS FORCING DROUGHT CONDITION OVER WIDE SPEAD AREA
- FISHING NOT AS GOOD DURRING LOW LEVELS
- NEGITIVE IMPACT TO STATE PARK REVENUE
- SIGNIFICANT IMPACT ON REVENUE TO FOLSOM LAKE MARINA

Keith Wootton
KEITH WOOTTON
661 GREEN VALLEY RD
EL DORADO HILLS
12-13-01 CA 95762 3950

L-330 → The Draft EIS/EIR includes an evaluation of potential recreation-related impacts at Folsom Reservoir according to widely-used significance criteria (Chapter 3.0, Section 3.8, Recreation).

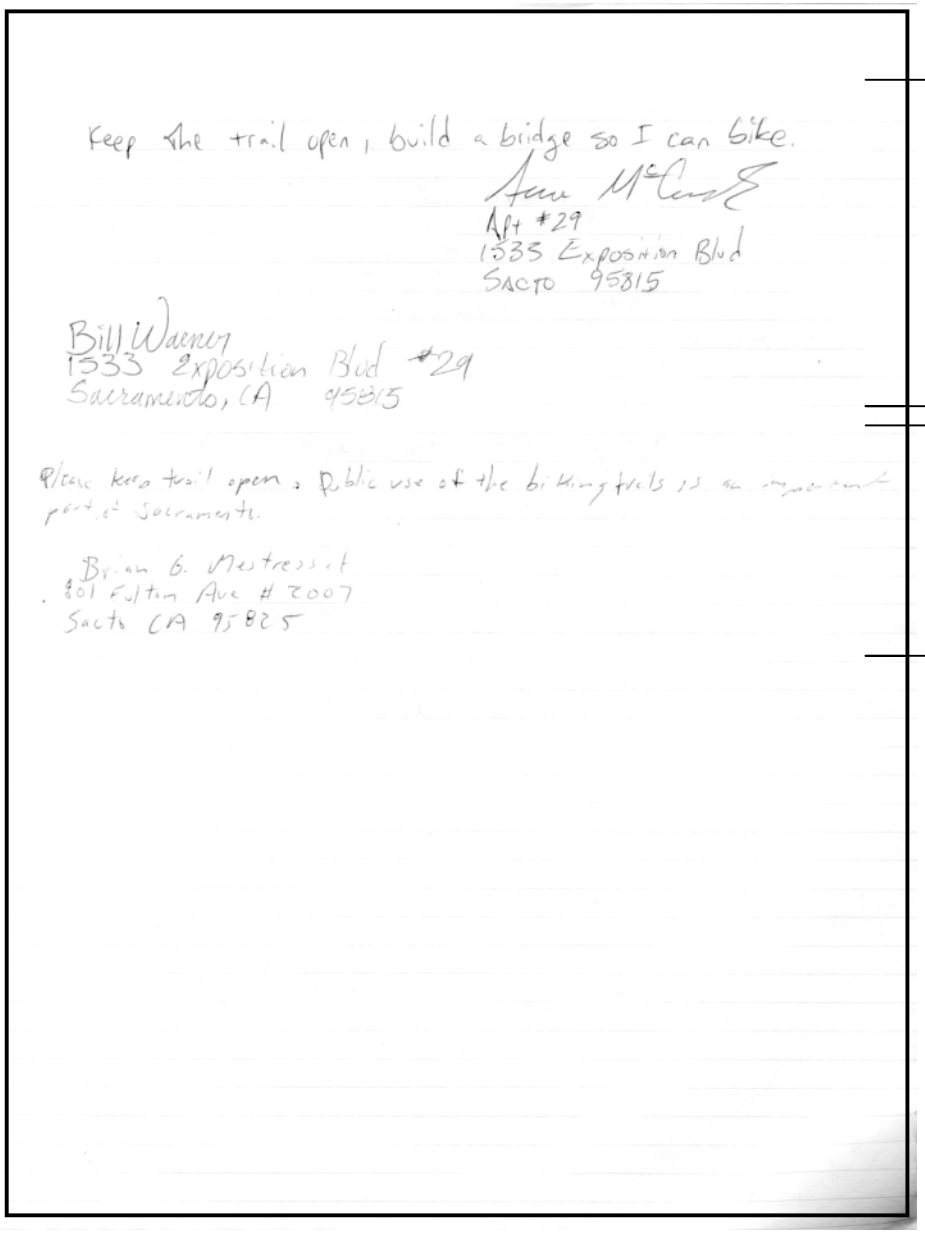


L-331 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



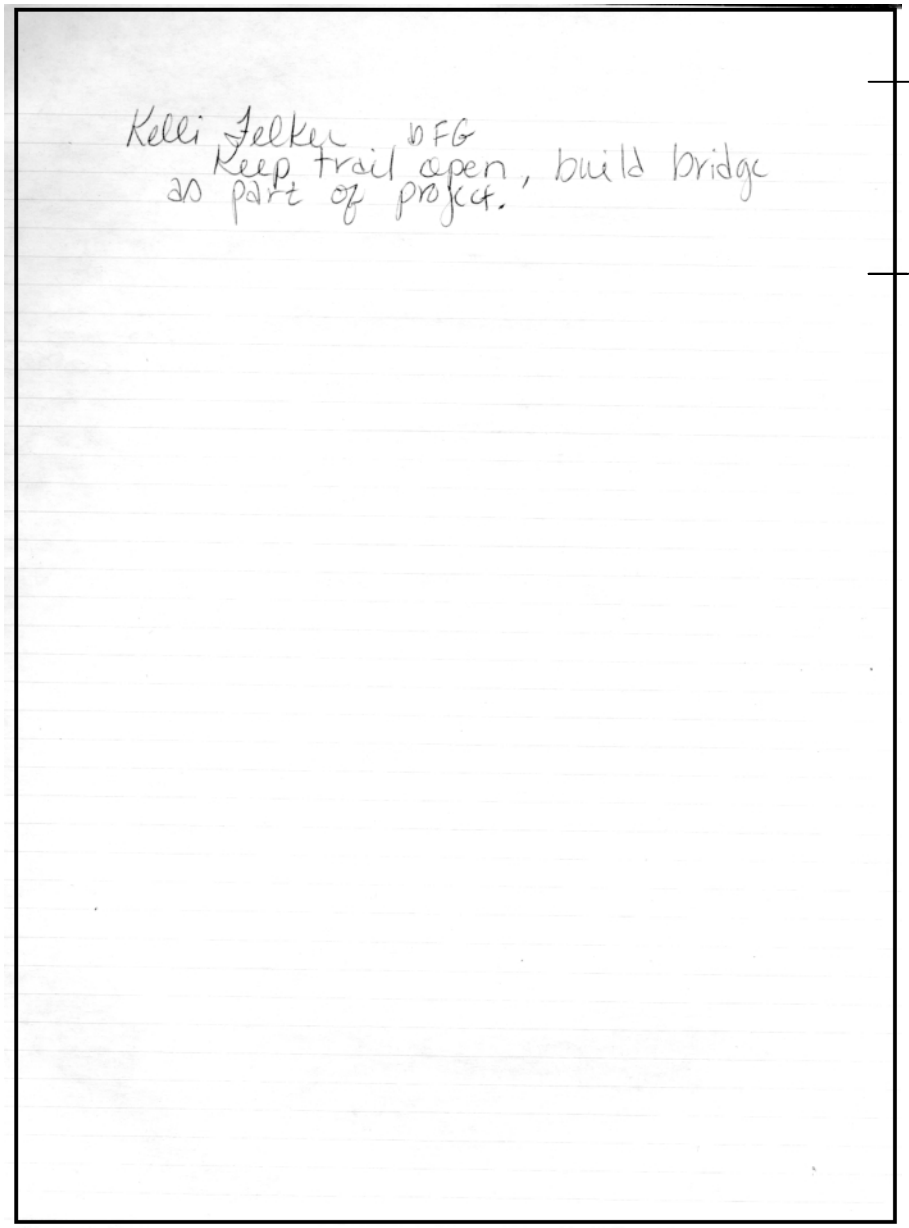
L-332 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-333 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

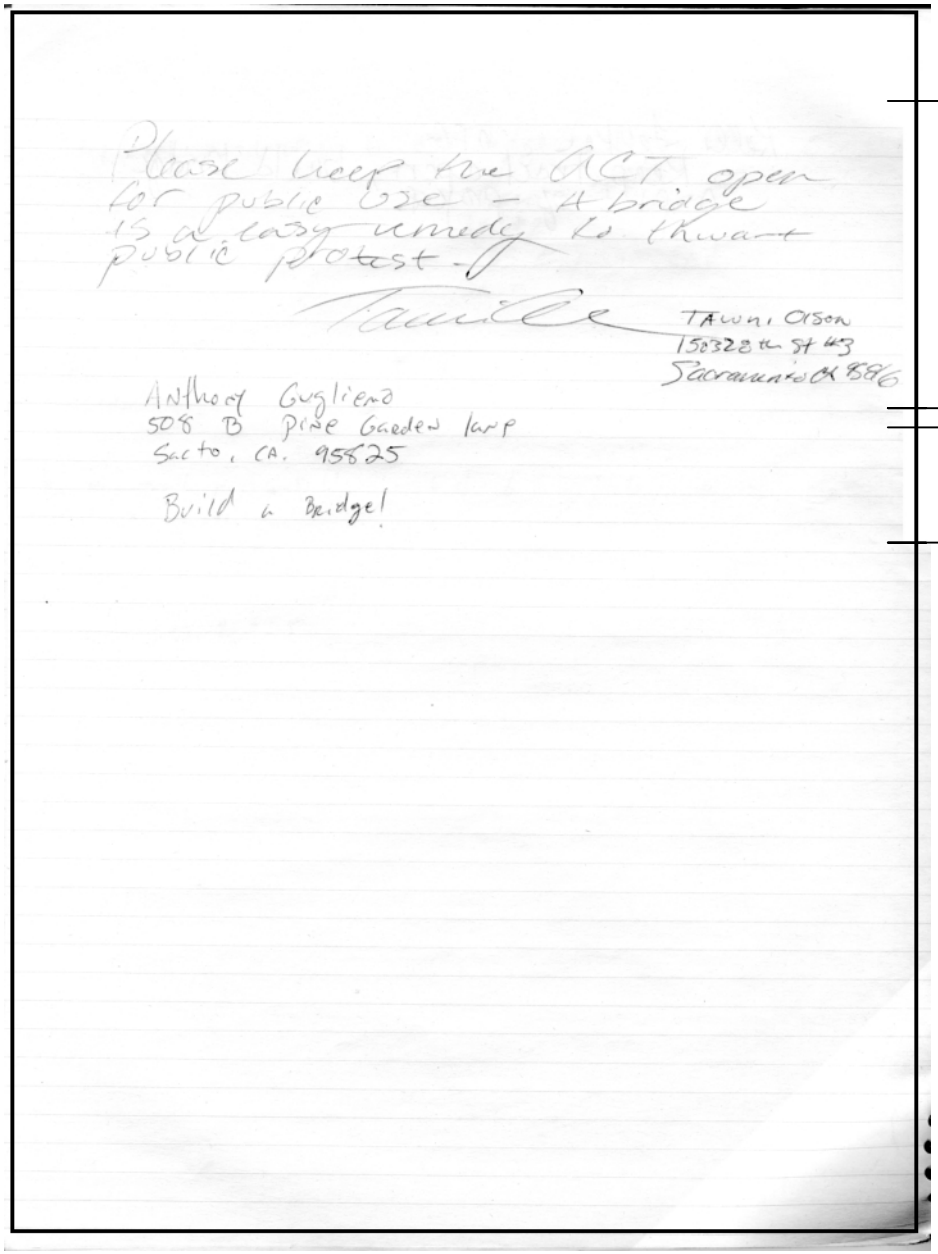


L-334 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-335 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-336 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



L-337 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-338 → Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-339

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0004
(916) 319-2004

DISTRICT OFFICE
300 DOUGLAS BLVD., #430
ROSEVILLE, CA 95661
(916) 774-4430

Assembly
California Legislature

TIM LESLIE
ASSEMBLYMEMBER, FOURTH DISTRICT

COMMITTEES:
RULES
AGRICULTURE
BANKING & FINANCE
TRANSPORTATION
WATER, PARKS & WILDLIFE

March 14, 2002

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Subject: PCWA American River Pump Station Project
Draft Environmental Impact Statement/Environmental Impact Report
SCH # 1999062089

To Whom it May Concern:

Thank you for the opportunity to comment on the PCWA American River Pump Station Project. I understand that the response time has past, but I wish to inform you of my opposition to inclusion of a pedestrian bridge and the recreational/parking lot component in this project.

A

I understand that the City of Auburn, the Department of Forestry and Fire Protection – Nevada-Yuba-Placer Unit, The United States Bureau of Reclamation, and the Skyridge Residents for Safety have also expressed various objections and concerns regarding the recreational component of this project. I agree with the City of Auburn and the Bureau of Reclamation that these emerging recreational issues can best be addressed by working with the state Department of Parks and Recreation in the American River Canyon instead of including it in this project, at this time.

I encourage the state Department of Parks and Recreation to begin its Auburn State Recreation Area Task Force, as required by court order (Friends of the River; Sierra Club; and Environmental Law Foundation v. Rusty Areis – Director of the California Department of Parks and Recreation, etal. – Case 00CS00391 – 7/20/00). This is clearly the proper forum to discuss recreational issues in the Auburn State Recreation Area.

In conclusion, I believe it is inappropriate to include recreational components into the PCWA American River Pump Station Project. This is a water delivery problem that should not be held hostage to the desires of a few special interest groups.

Printed on Recycled Paper

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-339, pg. 2

Please inform my office of the time and date of the final EIS/EIR hearing. Either I or my representative will attend to formally present my opposition to this project.

Sincerely,

Jim Leslie

TIM LESLIE
Assemblyman, Fourth District

TL:bk

Cc: Honorable John Doolittle, Congressman, 4th Congressional District
Honorable Rico Oller, State Senator, 1st Senate District
Jodie Hale, Mayor, City of Auburn
Rusty Areias, Director, California State Department of Parks and Recreation
Tom Aiken, Central California Area Manager, U.S. Bureau of Reclamation
David Breninger, General Manager, Placer County Water Agency
Tony Clarabut, Unit Chief, Department of Forestry and Fire Protection
Kevin Dimmick, Skyridge Residents for Safety

L-340

CAPITOL OFFICE
STATE CAPITOL, ROOM 2048
SACRAMENTO, CA 95814
TEL (916) 445-5788
FAX (916) 324-2680

DISTRICT OFFICES
DOUGLAS BLVD., SUITE 300
GRANITE BAY, CA 95746
TEL (916) 969-8232
FAX (916) 783-5487

411 MAIN STREET
CHICO, CA 95928
TEL (530) 895-6088
FAX (530) 895-6820

330 BROADWAY
JACKSON, CA 95642
TEL/FAX (209) 223-9140

California State Senate

SENATOR
RICO OLLER
FIRST SENATORIAL DISTRICT

COMMITTEES
LABOR & INDUSTRIAL RELATIONS
VICE-CHAIR
NATURAL RESOURCES & WILDLIFE
VICE-CHAIR
INSURANCE
PUBLIC EMPLOYMENT & RETIREMENT

SELECT COMMITTEES
CALIFORNIA'S WINE INDUSTRY
CAPITAL AREA FLOOD PROTECTION
GENETICS & PUBLIC POLICY

April 10, 2002

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Subject: PCWA American River Pump Station Project
Draft Environmental Impact Statement/Environmental Impact Report
SCH# 1999062089

To Whom It May Concern:

A Thank you for the opportunity to comment on the PCWA American River Pump Station Project. The purpose of this letter is to inform you of my opposition to the recreation/parking lot component of the project.

While I have virtually no objection to the pump station, the recreation/parking lot component of the project is of great concern. I agree with the City of Auburn, the United States Bureau of Reclamation, the Department of Forestry and Fire Protection—Nevada-Yuba-Placer Unit, and the Skyridge Residents for Safety in saying that it is inappropriate for this component to be included in the PCWA American River Pump Station Project at this time.

Thank you for your consideration.

Sincerely,

Thomas "Rico" Oller
California State Senate

SERVING THE COUNTIES OF:
ALPINE, AMADOR, BUTTE, CALAVERAS, EL DORADO, LASSEN, MODOC, MONO, NEVADA, PLACER, PLUMAS, SIERRA AND YUBA

A. Please refer to Master Response 3.1.6, Public River Access Features.

L-341

Georgetown Divide Recreation District
P.O. Box 1418
Georgetown, CA 95634
(530) 333-4000
(530) 823-9090
FAX (530) 333-4055

April 1, 2002

Tami Mihm, Project Manager
Surface Water Resources, Inc.
2031 Howe Avenue, Suite 110
Sacramento, CA 95825

Dear Ms. Mihm:

RE: PCWA American River Pump Station Project

The purpose of this letter is to provide you with the comments and recommendations of the Board of Directors of the Georgetown Divide Recreation District regarding the potential effects to the Auburn-to-Cool Trail System identified as part of the PCWA American River Pump Station Project.

A

The Board is supportive of the trail improvements identified in Impact 3.8-3: Impacts to Public Recreation Trail Access. However, as trails systems comprise a vital component of our recreational opportunities available on the Georgetown Divide, the Board strenuously objects to the permanent closure of the multi-use trail between Auburn and Cool. To that end the Board strongly recommends that a crossing be constructed in the vicinity of the cofferdam to maintain the integrity of the existing trail system between Auburn and Cool.

Thank you for providing us the opportunity to comment on this important issue. Please feel free to contact me if you have any concerns or questions.

Sincerely,

Bill Berger
District Manager

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

PLACER COUNTY WATER AGENCY

AND

U.S. BUREAU OF RECLAMATION

--oOo--

ORIGINAL

PUBLIC HEARING

AMERICAN RIVER PUMP STATION PROJECT

--oOo--

THURSDAY, OCTOBER 11, 2001

7:00 P.M.

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M B & A Mary Bardellini & Associates

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MR. SMITH: I'D LIKE TO GO AHEAD AND GET STARTED ON BEHALF OF THE PLACER COUNTY WATER AGENCY AND THE BUREAU OF RECLAMATION.

I'D LIKE TO WELCOME YOU TO THE PUBLIC HEARING. THIS IS FOR THE AMERICAN RIVER PUMP STATION PROJECT.

ARE WE ALL HERE FOR THE RIGHT PROJECT? THIS IS THE GOOD PROJECT.

A COUPLE OF INTRODUCTORY COMMENTS. SOME 40 YEARS AGO WATER PLANNERS SAW THE IMPORTANCE OF PUMPING -- OF NEEDING A PUMP STATION IN THE AMERICAN RIVER CANYON. AND I THINK IT'S APPROPRIATE THIS EVENING THAT WE'RE MEETING IN THE AMERICAN RIVER ROOM OF THE BUSINESS CENTER. AND ON THE BACK WALL, I'D ENCOURAGE YOU BEFORE YOU LEAVE TO SEE A LOT OF THE ORIGINAL PUMPING PLANT IN THE AMERICAN RIVER AT THIS LOCATION.

I'D LIKE TO TALK ABOUT THE PROJECT REAL BRIEFLY. THERE ARE THREE MAIN COMPONENTS OF THIS PROJECT.

NUMBER ONE, IT INVOLVES THE CONSTRUCTION OF A PUMP STATION. THE SECOND COMPONENT IS CLOSING THE EXISTING DIVERSION TUNNEL. AND THE THIRD COMPONENT, AS A RESULT OF CLOSING THE DIVERSION TUNNEL, WOULD BE TO RESTORE THE AMERICAN RIVER BACK TO THE ORIGINAL CHANNEL.

REAL BRIEFLY, IF I COULD, I'D LIKE TO INTRODUCE SOME OF THE KEY STAKE HOLDERS OF THIS PROJECT.

FROM PLACER COUNTY WATER AGENCY, MYSELF, BRENT SMITH. I'M A CIVIL ENGINEER WITH PCWA.

EINAR MAISCH, IF YOU'D RAISE YOUR HAND. WE HAVE FROM THE PCWA BOARD OF DIRECTORS, I THINK WE HAVE LOWELL JARVIS. YES, OVER ON THE SIDE. WE HAVE JAN GOLDSMITH, OUR LEGAL COUNSEL, WITH US THIS EVENING. FROM THE BUREAU OF RECLAMATION, WE HAVE ROD HALL AND TOM AIKEN --

MR. HALL: I HAVEN'T SEEN HIM.

MR. SMITH: HE WAS GOING TO TRY TO MAKE IT.

REAL QUICKLY, WE HAVE PUT TOGETHER A TEAM OF ENVIRONMENTAL AND DESIGN PROFESSIONALS. FROM THE FIRM OF MONTGOMERY WATSON, WAYNE DOLL AND MARK HARGROVE. THEY'RE WORKING ON THE PUMP STATION AND THE ACCESS ROADS.

FROM THE FIRM OF MCLAUGHLIN WATER ENGINEERS, RICK MCLAUGHLIN AND RICHARD STOCKTON.

AND TO MAKE SURE -- THEY'RE WORKING ON THE DESIGN OF THE DIVERSION FACILITY AND THE CHANNEL RESTORATION TO MAKE SURE THAT THAT LOOKS GOOD. THEY'VE GOT JOHN ANDERSON, FROM THE ARCHITECT AND FROM OUR ENVIRONMENTAL COMPLIANCE TEAM, PAUL BRATOVICH AND TAMI MIHIM -- WAY BACK IN THE BACK.

THIS PROJECT INVOLVED A LOT OF AGENCIES. FROM THE STATE, JONAS MINTON, DEPARTMENT OF WATER RESOURCES,

DEPUTY DIRECTOR -- WHERE DID JONAS GO? THERE HE IS.

FROM STATE PARK RECREATION, JIM MICHAELS, ON THE SIDE. AND FROM THE DEPARTMENT OF FISH AND GAME -- MISS HEIDELBERG.

SO, A COUPLE OF QUICK HOUSEKEEPING ITEMS. AT THE BACK WE DO HAVE A SPEAKER REQUEST CARD. IF YOU WOULD LIKE TO MAKE SOME COMMENTS, GO AHEAD AND FILL THIS OUT. THIS WILL ALLOW US TO CALL YOUR NAME AND GIVES US AN IDEA OF HOW MANY ARE INTERESTED IN SPEAKING TONIGHT.

WE HAVE A SIGN-IN SHEET THAT IS -- THESE ARE IN THE BACK OR MAYBE GOING AROUND. IF YOU COULD PLEASE SIGN THAT BEFORE YOU LEAVE. AND WE DO HAVE COMMENT CARDS, IF YOU WOULD LIKE TO FILL THIS OUT, IF YOU HAVE ANY COMMENTS YOU'D JUST LIKE TO LEAVE WITH US. YOU DON'T NEED TO USE THIS FORM. THE COMMENT PERIOD RUNS UNTIL NOVEMBER 13TH, SO THERE IS NO REQUIREMENT THAT YOU PROVIDE COMMENTS THIS EVENING.

WITH THAT, I'D LIKE TO TURN IT OVER TO THE DESIGN TEAM REAL QUICK FOR A PRESENTATION OF THE PROJECT. AND FOLLOWING THAT, WE'LL HAVE PAUL SAY A COUPLE OF WORDS ABOUT THE ENVIRONMENTAL REVIEW PROCESS.

SO, WAYNE.

MR. DOLL: THANK YOU, BRENT. AGAIN, MY NAME IS WAYNE DOLL. I'M WITH MONTGOMERY WATSON, AND WE -- WE HAVE A SHORT SLIDE PRESENTATION TO DESCRIBE THE PROJECT.

(WHEREUPON A SLIDE PRESENTATION WAS MADE BY MR. DOLL.)

MR. HALL: THANKS, PAUL.

WE HAVE A LOT OF PEOPLE THAT WANT TO SPEAK TONIGHT. I DID WANT TO PROVIDE AN OPPORTUNITY, IF SOME PEOPLE HAVE SOME VERY BASIC QUESTIONS ON WHAT WE JUST PRESENTED, WE'LL TAKE A FEW QUESTIONS.

THE TEAM WILL BE HERE AFTER THIS MEETING TO ANSWER ANY QUESTIONS ON A ONE-TO-ONE BASIS. SO, WHAT I'D LIKE TO DO NOW IS TRY TO KEEP THE AMOUNT OF QUESTIONS TO A BASIC MINIMUM THAT MIGHT BE NECESSARY IN ORDER FOR YOU TO PROVIDE US YOUR COMMENTS ON THE EIS/EIR. BUT IF ANYONE HAS THEM, I'LL ENTERTAIN THEM NOW.

THE AUDIENCE: I HAVE A VERY BASIC QUESTION ON WHAT'S 75 CFS MEAN?

MR. HALL: THE REASON THE 75 CFS --

THE AUDIENCE: I UNDERSTAND WHAT IT MEANS TECHNICALLY. I JUST DON'T KNOW HOW YOU ARRIVED AT THAT.

MR. HALL: 75 CFS IS A REQUIREMENT OF COUNTY WATER AGENCY FOR THE WATER RIGHT TO PASS THROUGH THE DIVERSION.

THE AUDIENCE: MEANING THAT --

MR. HALL: THAT'S THE LEGAL MINIMUM.

THE AUDIENCE: LEGAL MINIMUM THAT YOU'RE

MANDATED TO MAKE SURE THAT IT FLOWS DOWNSTREAM AS DIVERSION?

MR. HALL: CORRECT.

THE AUDIENCE: I HAD A QUESTION ON THE COMMENT ABOUT THE POOL GOING UP TO TAMAROO BAR. AND I KNOW HE WAS TRYING TO BE CLEAR, BUT I DIDN'T REALLY UNDERSTAND IF WOULD MEAN TAMAROO BAR WOULD BE FLOODED, OR WOULD THE POOL BE JUST BELOW THAT EXISTING POOL?

MR. HALL: DEPENDING UPON THE FLOW IN THE RIVER, THE WATER MAY BACK UP TO TAMAROO BAR AT A DEEPER DEPTH THAN IT IS NOW. BUT THE DESIGN CRITERIA WAS, BY THIS PROJECT, WE WOULD NOT CAUSE ANY BACKUP UPSTREAM OF TAMAROO BAR.

THE AUDIENCE: YES. TALKED ABOUT IT AS THREE-PHASE. SEEMS TO ME REALLY THEY'RE ALL INTERDEPENDENT. YOU CAN'T DO ONE WITHOUT DOING ALL THREE PHASES.

MR. HALL: THAT'S CORRECT.

THE AUDIENCE: ON A HUNDRED YEAR FLOOD PLAINS, WHAT HAPPENS IF THE WATER GOES OVER THAT? DOES IT WIPE OUT THE PUMPING STATION OR ...

MR. HALL: YOU WANT TO ANSWER THAT, WAYNE?

MR. DOLL: NO, IT WOULDN'T WIPE OUT THE PUMPING STATION. THAT'S OUR DESIGN CRITERIA. AND IF IT WERE TO EXCEED THAT, THERE COULD BE DAMAGE BUT -- WE'LL

JUST HAVE TO REPLACE THE COMPONENTS.

THE AUDIENCE: HOW MUCH IS ALL THIS GOING TO COST, AND WHO'S PAYING FOR IT?

MR. HALL: IT'S -- WE'RE ESTIMATING AT THIS POINT IN TIME IT'S ABOUT 31 MILLION DOLLARS, AND IT'S BEING PAID FOR BY BOTH FEDERAL APPROPRIATED AND STATE APPROPRIATED FUNDS.

THE AUDIENCE: IS PLACER COUNTY WATER DEPARTMENT PAYING FOR ANY OF IT?

MR. HALL: THE PORTION OF THE STUDIES. BACK THERE.

THE AUDIENCE: ON COST, COULD YOU GUYS PROVIDE A ROUGH BREAKOUT OF THE COSTS ON THE PROPOSED ALTERNATIVE, ON THE DIFFERENT PHASES, PERHAPS?

MR. HALL: I -- DO WE HAVE THAT SOMEWHERE HANDY?

MR. DOLL: I CAN JUST TELL YOU.

THE AUDIENCE: I'D LIKE TO SEE IT LATER.

MR. DOLL: THE PUMP STATION -- I GUESS WE DON'T HAVE A FIGURE -- COULD WE PUT THIS UP? THE PUMP STATION ITSELF IS IN THE RANGE OF 14 MILLION DOLLARS, AND THE DIVERSION AND THE WORK ON THE RIVER IS IN THE RANGE OF 13 MILLION. AND THERE'S ROUGHLY THREE MILLION IN PLANNING AND DESIGNS. THE ENTIRE PROJECT -- THAT PROJECT DOESN'T HAVE QUITE THE 31 MILLION, BUT THAT'S

SORT OF HOW IT BREAKS OUT.

THE AUDIENCE: YOU'VE GOT SOME EXCAVATION?

MR. DOLL: THAT'S IN THE 13 MILLION.

MR. HALL: RIGHT HERE.

THE AUDIENCE: I WAS A LITTLE CONFUSED ABOUT WHERE THE PARKING WOULD BE RELATIVE TO THE INTAKE. YOU HAD ONE PARKING FACILITY?

MR. HALL: THE PARKING AREAS ARE BOTH DOWNSTREAM OF THE INTAKE.

THE AUDIENCE: HOW FAR AWAY?

MR. HALL: THE UPPER PARKING LOT IS PROBABLY A QUARTER TO A HALF A MILE.

MR. DOLL: THERE'S THE INTAKE. THERE'S THE LOWER PUMP. AND THERE'S THE UPPER PARKING LOT.

MR. HALL: THE OTHER WAY AROUND.

MR. DOLL: THIS IS UP. IS THAT WHAT I SAID? IT'S UP THE HILL.

MR. HALL: THE AREA BETWEEN THE EXIT OF THE TUNNEL AND OREGON BAR HAS SOME FAIRLY GOOD RAPIDS, AND WE FELT IT WAS APPROPRIATE TO HAVE A PLACE WHERE PEOPLE WHO ARE LESS -- WANT LESS CHALLENGE TO BE ABLE TO GET OUT AND NOT HAVE TO GO DOWN OREGON BAR, AND THAT WAS THE REASON FOR THAT UPPER LOT.

YES? OVER HERE --

THE AUDIENCE: WELL, WHAT KIND OF

CONSIDERATION DO WE HAVE FOR BRIDGING THE TWO RIVERBANKS, SUCH AS A BRIDGE GOING ACROSS SO WE DO NOT HAVE TO CLOSE THE COOL TRAIL? WHAT KIND OF TALKS HAVE BEEN IN THAT AREA?

MR. HALL: THAT IS NOT INCLUDED IN OUR PROPOSAL RIGHT NOW. BASED ON SOME COMMENTS WE'VE ALREADY GOTTEN, AND FURTHER COMMENTS I EXPECT TO HEAR TONIGHT, WE'LL BE RECONSIDERING THE POSSIBILITIES OF BEING ABLE TO KEEP THAT TRAIL OPEN, BUT I'M NOT SURE JUST HOW WE'RE GOING TO COME OUT. THAT'S THE RECORD OF DECISION, AND IT WILL BE ADDRESSED IN THE FINAL EIS/EIR.

THE AUDIENCE: I DIDN'T GET ANY SENSE OF THE PERMANENCE OR IMPERMANENCE OF THE TUNNEL CLOSURE.

MR. HALL: THE TUNNEL CLOSURE IS BEING DESIGNED SUCH THAT IT WILL BE FAIRLY EASILY REOPENED SHOULD CONSTRUCTION OF AUBURN DAM BE REAUTHORIZED.

THE AUDIENCE: THANK YOU.

MR. HALL: IT'S NOT -- AS YOU CAN SEE, WE PUT SHEET PILE IN THERE AND ROCK IN FRONT OF IT, AND THAT CAN BE EASILY REMOVED IF NECESSARY AT A LATER DATE.

OVER HERE.

THE AUDIENCE: I MIGHT HAVE MISSED IT. DID SOMEBODY TALK ABOUT THAT THE OPERATION OF OXBOW AND RALSTON FOREBAY?

MR. HALL: THAT'S EVALUATED IN THE EIS.

THE AUDIENCE: I CAN'T TELL IF IT'S FOR THE HUNDRED SECOND OR EXPANDABLE DIVERSION WHEN THEY TALKED ABOUT THE EIGHT DAYS IN JULY OF REDUCED PERIOD OF PEAK FLOWS FOR BOATING?

MR. HALL: I'M NOT SURE WHO TO ASK ON THAT.

EINAR?

MR. MAISCH: I THINK FOR THE CFS DIVERSION, I THINK.

THE AUDIENCE: I BELIEVE THE ESTIMATE WAS EIGHT HOURS PER MONTH, NOT EIGHT DAYS.

MR. HALL: BASICALLY WHAT THAT AMOUNTS TO IS IN THE SUMMERTIME, PLACER COUNTY WATER AGENCY IS GOING TO HAVE TO MAKE RELEASES AT OXBOW TO DIVERT THEM AT AUBURN, AND THAT'S GOING TO MAKE A SLIGHT MODIFICATION IN THE PATTERN IN WHICH THEY RELEASE WATER FROM WHAT IT IS TODAY.

THE AUDIENCE: THERE WON'T BE ANY CHANGE TO THE -- I GUESS THAT WOULD BE THE SOUTH FACE OF THE DAM -- THE DAM PROJECT? IN OTHER WORDS, IT'S STILL GOING TO BE THERE AND UGLY?

MR. HALL: OTHER THAN THE FACT THAT WE'RE GOING TO BE FILLING IN THE DEEP HOLE IN THE KEYWAY, YES, YOU'LL STILL BE ABLE TO SEE THE EXCAVATIONS THAT WERE DONE AS PART OF THE KEYWAY.

OKAY. LET'S MOVE RIGHT ON INTO OUR COMMENT

PERIOD -- ONE MORE QUESTION?

THE AUDIENCE: I'M NOT EDUCATED ABOUT THIS THING AT ALL, EXCEPT THAT I WANT TO SEE THE RIVER BACK -- SOMEBODY BROUGHT UP A REALLY GOOD QUESTION -- WHAT IN THE WORLD, WOULD WE CLOSE THIS IN FACT IF DOOLITTLE OR WHATEVER COMES OUT 5, 6, 10 YEARS LATER, OPENS IT BACK UP AGAIN, AND PUTS A DAM THERE? I MEAN, I'M VERY ECONOMICALLY MINDED, AND I CAN'T IMAGINE SPENDING 31 MILLION DOLLARS AND THEN WIPING IT OUT.

MR. HALL: THE REASON WE'RE MOVING FORWARD AT THIS TIME WITH THIS PROJECT IS THAT PLACER COUNTY WATER AGENCY CANNOT GET ITS WATER -- SUFFICIENT WATER SUPPLY FOR THE COUNTY, AND THEY BASICALLY ARE RUNNING OUT OF WATER IN 2004. WE NEED TO HAVE A PROJECT HERE IF PLACER IS GOING TO CONTINUE TO MEET ITS REQUIREMENTS UNDER ITS CHARTER TO DELIVER WATER.

THE AUDIENCE: SO, WHAT'S GOING TO SAY --

MR. HALL: THE OTHER ISSUE IS THE BUREAU IS VERY, VERY CONCERNED ABOUT SAFETY ISSUE OF THE TUNNEL BEING OPENED. IT'S AN ACCIDENT WAITING TO HAPPEN. AND FROM OUR STANDPOINT, WE'VE WAITED LONG ENOUGH, SO IT'S --

THE AUDIENCE: CAN THAT BE OVERRIDDEN SOMEHOW IF SOME BIG CONGRESSMAN OR SENATOR WERE SAYING --

MR. HALL: IT WOULD TAKE -- IT WOULD LITERALLY

TAKE AN ACT OF CONGRESS TO REAUTHORIZE AUBURN DAM. WE -- WE DON'T SEE IT HAPPENING ANY TIME SOON, AND, THEREFORE, WE'RE GOING FORWARD WITH THIS PROJECT AT THIS TIME.

YES.

THE AUDIENCE: HAS PLACER COUNTY INSTITUTED ANY CONSERVATION MEASURES TO MINIMIZE THEIR DEMAND?

MR. HALL: WANT TO ANSWER THAT, EINAR?

MR. MAISCH: MY NAME IS EINAR MAISCH. I WORK HERE TOO.

PLACER COUNTY WATER AGENCY, I THINK, AS EVERYBODY WHO LIVES AROUND HERE KNOWS, IS GROWING VERY RAPIDLY. WE HAVE COMMITTED IN THIS DOCUMENT TO IMPLEMENT ALL OF THE TERMS OF THE WATER FORM AGREEMENT, WHICH INCLUDE ALL THE BEST MANAGEMENT PRACTICES IN TERMS OF CONSERVATION.

WE ARE ALREADY 100 PERCENT METERED, WHICH IS, BELIEVE IT OR NOT, RATHER RARE WITHIN THE SACRAMENTO AREA. CITY OF SACRAMENTO IS NOT METERED AT ALL. A LOT OF PLACES AREN'T METERED. WE'VE IMPLEMENTED A LOT OF CONSERVATION MEASURES, AND WE'LL IMPLEMENT ALL THE REST OF THE MEASURES FOR BEST PRACTICE. AND THAT BARELY SLOWS DOWN THE DEMAND A LITTLE BIT BECAUSE IT'S GROWING EXTREMELY RAPIDLY.

THE AUDIENCE: THAT'S NOT A TRUE STATEMENT.

THERE'S A LOT OF PEOPLE IN ROSEVILLE THAT AREN'T ON METERS YET.

MR. MAISCH: PLACER COUNTY WATER AGENCY DOESN'T SERVE ROSEVILLE, BUT YOU'RE RIGHT.

MR. HALL: WE'LL TAKE ONE MORE QUESTION, AND THEN WE'VE GOT TO MOVE INTO THE COMMENT PERIOD.

YES, SIR.

THE AUDIENCE: IF ROSEVILLE ISN'T BEING SERVED BY PCWA, WHAT IS THE SERVICE AREA?

MR. MAISCH: WE HAVE WHAT'S CALLED A ZONE 1 AND ALSO HAVE 2, 3, AND 4. ZONE 1 BASICALLY GOES DOWN AUBURN, ALONG THE I-80 CORRIDOR TO ROCKLIN AND OUT TO LINCOLN. SO, LOOMIS, PENRYN, NEWCASTLE. THE BIGGEST DEMAND CENTERS ARE IN ROCKLIN AND LINCOLN. THERE'S -- THERE'S A MAP ON THE WALL THAT SHOWS YOU.

THE AUDIENCE: ISN'T PLACER COUNTY GOING TO GET 3500 -- 35,000 ACRE FEET OUT OF THE SACRAMENTO RIVER? IS THIS WATER IN ADDITION TO THAT USAGE?

MR. MAISCH: YES.

THE AUDIENCE: SO, WE NEED ALL THIS WATER?

MR. MAISCH: WE'VE JUST RECENTLY GONE TO A BUILD-OUT DEMAND ANALYSIS. FIRST OF ALL, PLACER COUNTY WATER AGENCY IS NOT IN THE LAND USE BUSINESS. THAT'S MY DISCLAIMER. THE LAND USE AUTHORITIES ARE THE CITY OF AUBURN, THE TOWN OF LOOMIS, THE CITY OF ROCKLIN, THE

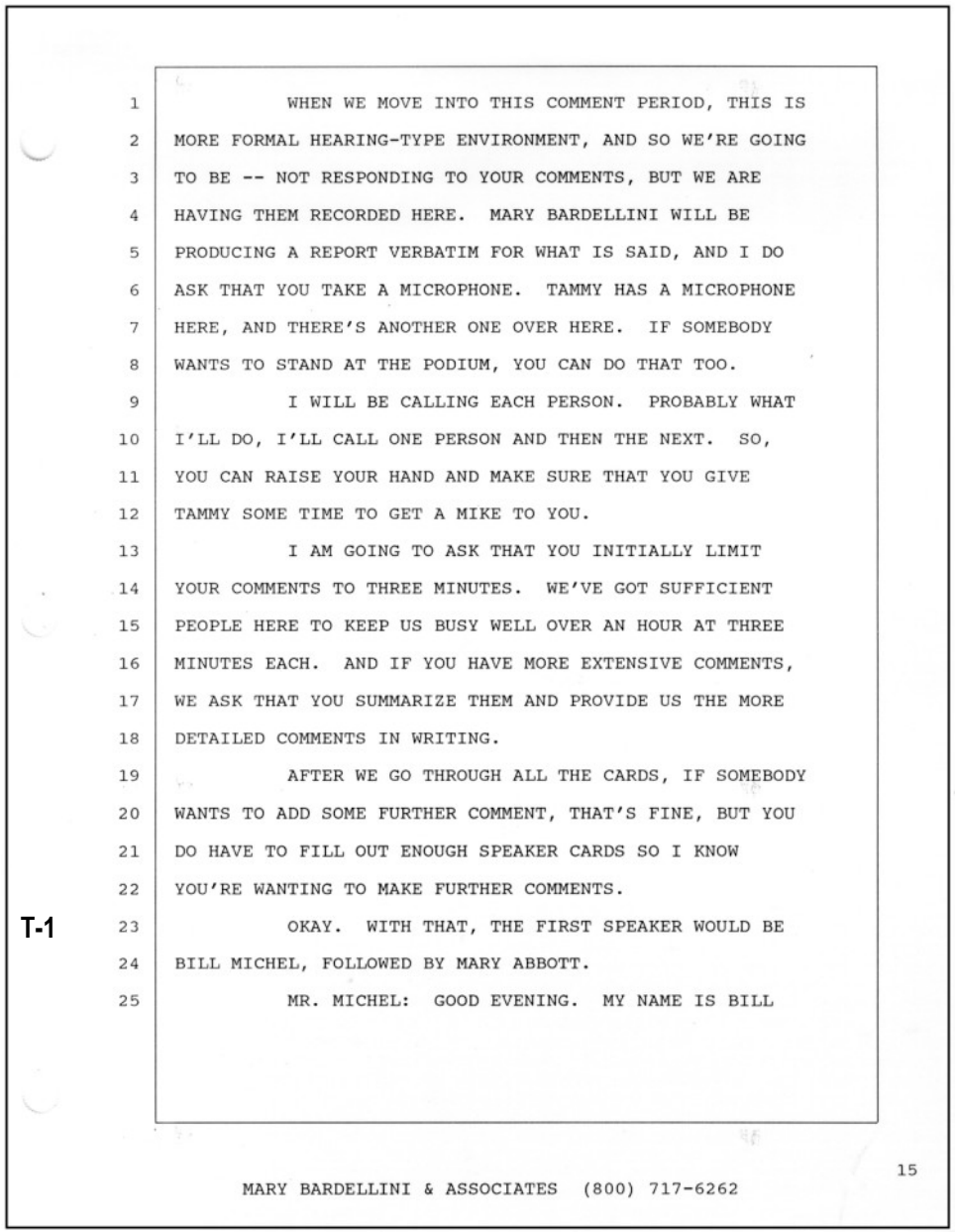
CITY OF LINCOLN, AND PLACER COUNTY.

AND THEIR EXISTING GENERAL PLANS ALLOW A CERTAIN LEVEL OF DEVELOPMENT WITHOUT ANY CHANGES TO THOSE GENERAL PLANS. AND THE BUILD-OUT OF THOSE GENERAL PLANS WE ANTICIPATE TO TAKE UNTIL ABOUT 2030. AND THAT WILL REQUIRE AN ADDITIONAL 70,000 ACRE FEET OF WATER IN ORDER TO SERVE.

WE'RE PLANNING ON TAKING 30,000 ACRE FEET, AND ANOTHER 35,000 ACRE FEET WE'VE COMMITTED IN WATER FORM. WE'VE ATTEMPTED TO GET THAT OUT OF THE SACRAMENTO RIVER INSTEAD OF HERE, WHERE WE HAVE WATER RIGHTS, BECAUSE THAT WOULD IMPACT DOWNSTREAM ON THE AMERICAN RIVER. IT HAS SIGNIFICANT ENVIRONMENTAL EFFECTS.

WE'RE ENGAGED WITH MOVING FORWARD WITH THAT NEXT PHASE OF OUR WATER SUPPLY PROJECT, AND WE HOPE WITHIN 10 YEARS TO BE READY TO MOVE FORWARD WITH CONSTRUCTION OF A NEW DIVERSION FACILITY ON THE SACRAMENTO FACILITY.

MR. HALL: I'M SORRY. AT THIS POINT I THINK I'M GOING TO NEED TO CUT THEM OFF BECAUSE WE HAVE A LOT OF PEOPLE THAT WANT TO PROVIDE COMMENTS, AND WE WANT TO MAKE SURE THAT EVERYBODY HAS TIME TO MAKE THEIR COMMENTS. AND JUST ASSURE YOU THAT WE'LL BE HERE AFTER THIS SESSION TO ANSWER ANY FURTHER QUESTIONS THAT YOU DO HAVE.



WHEN WE MOVE INTO THIS COMMENT PERIOD, THIS IS MORE FORMAL HEARING-TYPE ENVIRONMENT, AND SO WE'RE GOING TO BE -- NOT RESPONDING TO YOUR COMMENTS, BUT WE ARE HAVING THEM RECORDED HERE. MARY BARDELLINI WILL BE PRODUCING A REPORT VERBATIM FOR WHAT IS SAID, AND I DO ASK THAT YOU TAKE A MICROPHONE. TAMMY HAS A MICROPHONE HERE, AND THERE'S ANOTHER ONE OVER HERE. IF SOMEBODY WANTS TO STAND AT THE PODIUM, YOU CAN DO THAT TOO.

I WILL BE CALLING EACH PERSON. PROBABLY WHAT I'LL DO, I'LL CALL ONE PERSON AND THEN THE NEXT. SO, YOU CAN RAISE YOUR HAND AND MAKE SURE THAT YOU GIVE TAMMY SOME TIME TO GET A MIKE TO YOU.

I AM GOING TO ASK THAT YOU INITIALLY LIMIT YOUR COMMENTS TO THREE MINUTES. WE'VE GOT SUFFICIENT PEOPLE HERE TO KEEP US BUSY WELL OVER AN HOUR AT THREE MINUTES EACH. AND IF YOU HAVE MORE EXTENSIVE COMMENTS, WE ASK THAT YOU SUMMARIZE THEM AND PROVIDE US THE MORE DETAILED COMMENTS IN WRITING.

AFTER WE GO THROUGH ALL THE CARDS, IF SOMEBODY WANTS TO ADD SOME FURTHER COMMENT, THAT'S FINE, BUT YOU DO HAVE TO FILL OUT ENOUGH SPEAKER CARDS SO I KNOW YOU'RE WANTING TO MAKE FURTHER COMMENTS.

OKAY. WITH THAT, THE FIRST SPEAKER WOULD BE BILL MICHEL, FOLLOWED BY MARY ABBOTT.

MR. MICHEL: GOOD EVENING. MY NAME IS BILL

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MARY BARDELLINI & ASSOCIATES (800) 717-6262

T-1

Beginning of formal hearing and speaker comment session.

MICHEL. I'M A 15-YEAR RESIDENT OF AUBURN. I'VE BEEN A PADDLER SINCE 1974, AND I'M HERE TONIGHT TO EXPRESS MY SUPPORT FOR THE PREFERRED ALTERNATIVE PLAN, THE MID-CHANNEL DIVERSION PROJECTS.

I ACTUALLY FEEL VERY JOYFUL TO BE STANDING HERE TONIGHT. I WANT TO EXPRESS MY THANKS IN PARTICULAR TO PARC, PROTECT AMERICAN RIVER CANYONS, TO ALL THE FOLKS WHO OVER THE YEARS HAVE WORKED SO HARD TO BRING US TO THIS POINT, INCLUDING THE TIRELESS EFFORTS OF THE LATE FRANK ULRICH.

WHILE I'M VERY HAPPY FOR PCWA THAT YOU'RE GETTING WHAT YOU WANT IN TERMS OF THE PUMPING STATION, WHAT I'D LIKE TO DO TONIGHT IS ADDRESS THE RECREATIONAL ASPECTS OF THE PLAN, PARTICULARLY THE RECREATION OF A NATURALLY APPEARING AND FUNCTIONING RIVER BED.

BE IT KNOWN THAT WE'RE NOT THE FIRST COMMUNITY IN THE UNITED STATES WHO HAS DECIDED TO RESTORE THEIR RIVER. THIS SHOULD GIVE US SOME COMFORT. IT'S BEEN DONE BEFORE, BUT PERHAPS NEVER ON SUCH A GRAND SCALE.

ABOUT 14 YEARS AGO, WHEN I BEGAN TO FIRST LOOK INTO THIS SUBJECT, I WAS FOND OF CARRYING AROUND THIS ARTICLE. APPEARED IN THE MAY 1977 OF RIVER RUNNER MAGAZINE, AND THEY HAD AN ARTICLE IN THIS MAGAZINE THAT DESCRIBED THE EFFORTS OF CITIES WHO HAD RESTORED THEIR RIVERS AND CREATED MANMADE WATER COURSES. THE ARTICLE

T-1.A

A. Project support noted.

MENTIONS SOUTH BEND AND WAUSAU, WISCONSIN, AS EXAMPLES.

AND SINCE THEN, OTHER COMMUNITIES, LARGE AND SMALL, HAVE -- DENVER, COLORADO, WAS MENTIONED, MINNEAPOLIS, MINNESOTA, ROCHESTER, NEW YORK. THESE CITIES HAVE LOOKED INTO THE IDEA OF CREATING WATER PARKS. ALL THE PROPOSED PARKS, ALL THE PROJECTS WERE DIFFERENT, BUT IN EACH CASE EMPHASIS WAS PUT ON CREATING WATER COURSES THAT WERE AESTHETICALLY PLEASING, EXCITING TO THE PUBLIC, AND SAFE.

NOW, IN OUR BACK YARD WE HAVE A LOT OF ROCK TO REMOVE TO GET DOWN TO WHERE THE RIVER WILL ACTUALLY FLOW DOWNSTREAM, AND A PROJECT LIKE THIS NEEDS A GENERAL. AND THIS IS THE MAIN POINT THAT I WANT TO MAKE.

PERHAPS THE MOST ENJOYABLE, SATISFYING DAY THAT I HAVE SPENT IN MY INVOLVEMENT IN THIS STRUGGLE CAME ON A SUNNY DAY IN EARLY 1997, -- NOVEMBER OF 1997, I HAD THE OPPORTUNITY TO LEAD JOHN ANDERSON AND A GROUP OF PADDLERS, SOME OF THE PEOPLE THAT ARE IN THIS ROOM, DOWN THE AUBURN DAM RUN.

AND I'M VERY GRATIFIED THAT BOTH THE BUREAU AND PCWA ARE UTILIZING THE SERVICES OF JOHN ANDERSON. JOHN, I DON'T KNOW IF YOU KNOW THIS, DEVELOPED THE WHITE WATER COURSE ON THE OCOEE RIVER FOR THE 1997 OLYMPICS, AND HE KNOWS WHAT HE'S DOING, AND I APPLAUD THE EFFORTS TO UTILIZE HIS TALENTS.

WITH THE VOLUME OF ROCK THAT NEEDS TO BE REMOVED TO CREATE A MANDATE OF A FUNCTIONING RIVER BED, IT'S CRITICAL THAT WE HAVE THE INPUT OF AN EXPERT AND A LOT OF CONCERN ABOUT HOW MUCH THIS IS GOING TO COST. JOHN IS SOMEONE WHO WILL HELP US GET THE JOB DONE RIGHT AND SAVE US MONEY.

IN CLOSING I'D LIKE TO SAY THE RESTORATION OF THE RIVER CHANNEL IS REALLY ONLY A BEGINNING. I STRONGLY ENCOURAGE REPRESENTATIVES FROM THE BUSINESS COMMUNITY HERE IN THE AUBURN AREA TO PUT THEIR FULL WEIGHT BEHIND THIS PROJECT. IF YOU'VE BEEN ON THE TRUCKEE RIVER AT NORTH LAKE TAHOE OR DOWN THE LOWER AMERICAN IN SACRAMENTO, YOU CAN GET A FEEL FOR HOW POPULAR OUR AUBURN DAM RUN WILL EVENTUALLY BECOME.

WHAT WE HAVE IN OUR OWN BACK YARD IS POTENTIALLY ONE OF THE GREATEST PARKS IN THE NATION. WHETHER WE CALL IT AMERICAN RIVER CONFLUENCE PARKWAY OR ARC PARK OR FRANK ULRICH MEMORIAL PARK OR THE AUBURN GOLD RUSH PARK, IT NEEDS AN OFFICIAL NAME.

THERE ARE A LOT OF VARIOUS IDEAS THAT HAVE BEEN FLOATED AROUND ABOUT, YOU KNOW, WHAT WE CAN DO TO RESTORE OUR PARK. I REMEMBER GEORGE BELAND YEARS AGO MENTIONED PUTTING A TRAM ACROSS THE CANYON. IMAGINE THE FESTIVALS THAT COULD BE HELD DOWN IN THE CANYON INSTEAD OF THE OVERLOOK. THERE WERE TERRACES CUT DURING

CONSTRUCTION COULD BE USED AS PARKING AREAS. ROADS COULD BE IMPROVED.

I'M NOT HERE TO ENDORSE ANY PARTICULAR IDEA OR CONCEPT. I JUST WANT TO SAY THAT THE POTENTIAL FOR OUR ARC PARK IS IMMENSE, AND -- I'D LIKE TO BELIEVE THIS, NOW WE ARE FREED FROM THE FALSE VISION OF AN AUBURN DAM -- WE CAN BEGIN TO CONCENTRATE ON IDEAS FOR RESTORING THE CANYON.

BUT IT ALL STARTS AT THE BOTTOM OF THE CANYON WITH THE RESTORATION OF THE CHANNEL, AND I ENCOURAGE THE BUSINESS COMMUNITY TO GET BEHIND THIS PLAN, AND I APPLAUD THE BUREAU AND PCWA TO UTILIZE JOHN ANDERSON'S SERVICES.

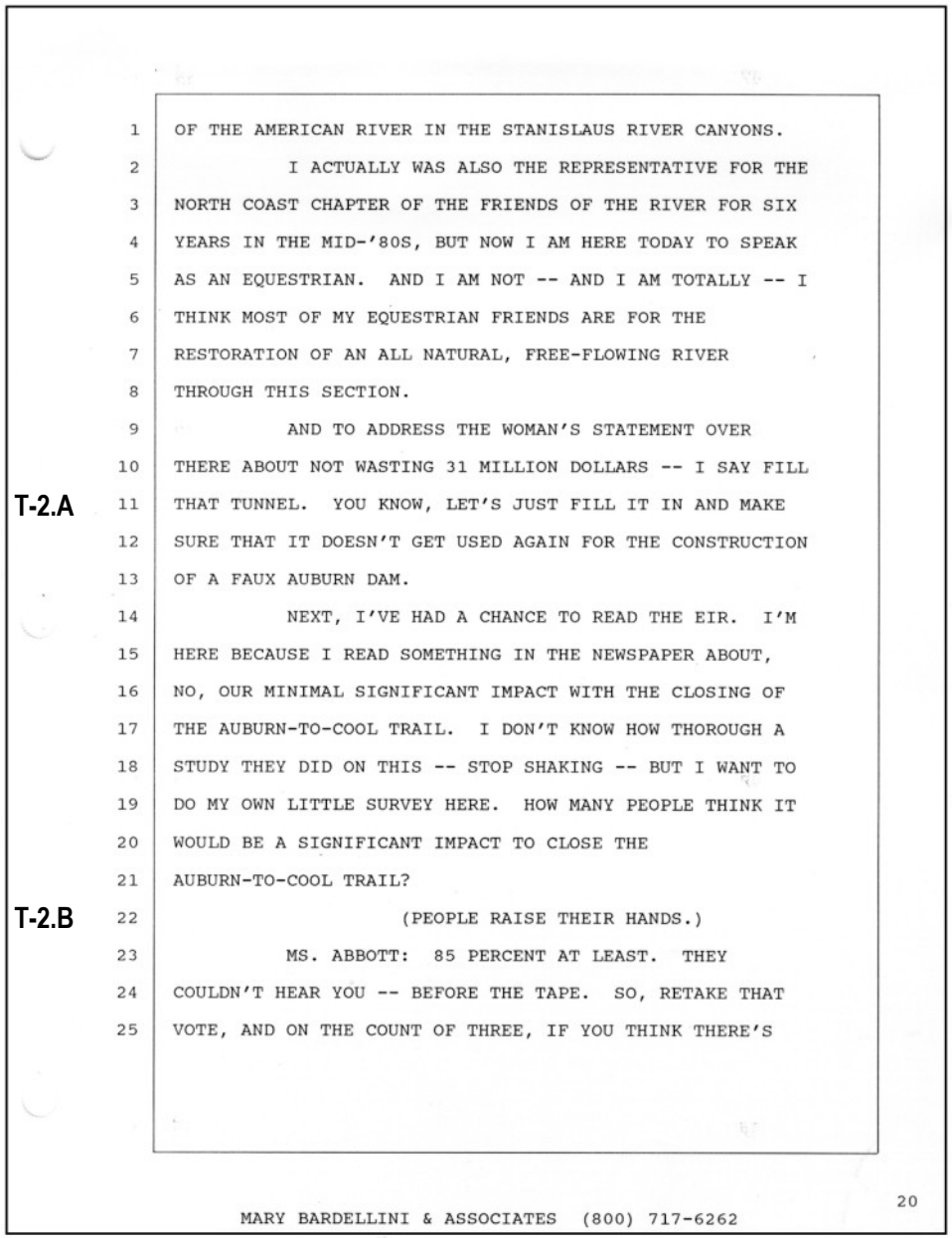
MR. HALL: THANK YOU. MARY ABBOTT AND FOLLOWED BY STEVEN PROE.

BY THE WAY, WHEN YOUR THREE MINUTES IS EXPIRED, I'LL STAND. I ASK IF YOU MIGHT SUMMARIZE AT THAT POINT.

T-2

MS. ABBOTT: I'M NOT GOING TO TRY TO GO UP TO THAT PODIUM BECAUSE I'LL PROBABLY FALL DOWN FROM SHAKING.

FIRST OF ALL, I'LL INTRODUCE MYSELF. I'M MARY ABBOTT. I'VE LIVED IN THIS AREA FOR NINE YEARS. BUT I FIRST CAME TO THE AUBURN AREA 1979, WHEN I CAME THROUGH HERE ON MY WAY TO WHITE WATER SCHOOL ON THE SOUTH FORK



OF THE AMERICAN RIVER IN THE STANISLAUS RIVER CANYONS.

I ACTUALLY WAS ALSO THE REPRESENTATIVE FOR THE NORTH COAST CHAPTER OF THE FRIENDS OF THE RIVER FOR SIX YEARS IN THE MID-'80S, BUT NOW I AM HERE TODAY TO SPEAK AS AN EQUESTRIAN. AND I AM NOT -- AND I AM TOTALLY -- I THINK MOST OF MY EQUESTRIAN FRIENDS ARE FOR THE RESTORATION OF AN ALL NATURAL, FREE-FLOWING RIVER THROUGH THIS SECTION.

AND TO ADDRESS THE WOMAN'S STATEMENT OVER THERE ABOUT NOT WASTING 31 MILLION DOLLARS -- I SAY FILL THAT TUNNEL. YOU KNOW, LET'S JUST FILL IT IN AND MAKE SURE THAT IT DOESN'T GET USED AGAIN FOR THE CONSTRUCTION OF A FAUX AUBURN DAM.

NEXT, I'VE HAD A CHANCE TO READ THE EIR. I'M HERE BECAUSE I READ SOMETHING IN THE NEWSPAPER ABOUT, NO, OUR MINIMAL SIGNIFICANT IMPACT WITH THE CLOSING OF THE AUBURN-TO-COOL TRAIL. I DON'T KNOW HOW THOROUGH A STUDY THEY DID ON THIS -- STOP SHAKING -- BUT I WANT TO DO MY OWN LITTLE SURVEY HERE. HOW MANY PEOPLE THINK IT WOULD BE A SIGNIFICANT IMPACT TO CLOSE THE AUBURN-TO-COOL TRAIL?

(PEOPLE RAISE THEIR HANDS.)

MS. ABBOTT: 85 PERCENT AT LEAST. THEY COULDN'T HEAR YOU -- BEFORE THE TAPE. SO, RETAKE THAT VOTE, AND ON THE COUNT OF THREE, IF YOU THINK THERE'S

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T-2.A A. Please refer to Master Response 3.1.4, Auburn Dam Construction Bypass Tunnel.

T-2.B B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

GOING TO BE AN IMPACT WITH THE CLOSURE OF THAT TRAIL FROM AUBURN-TO-COOL, GIVE ME A NICE LOUD YES.

(AUDIENCE RESPONDS.)

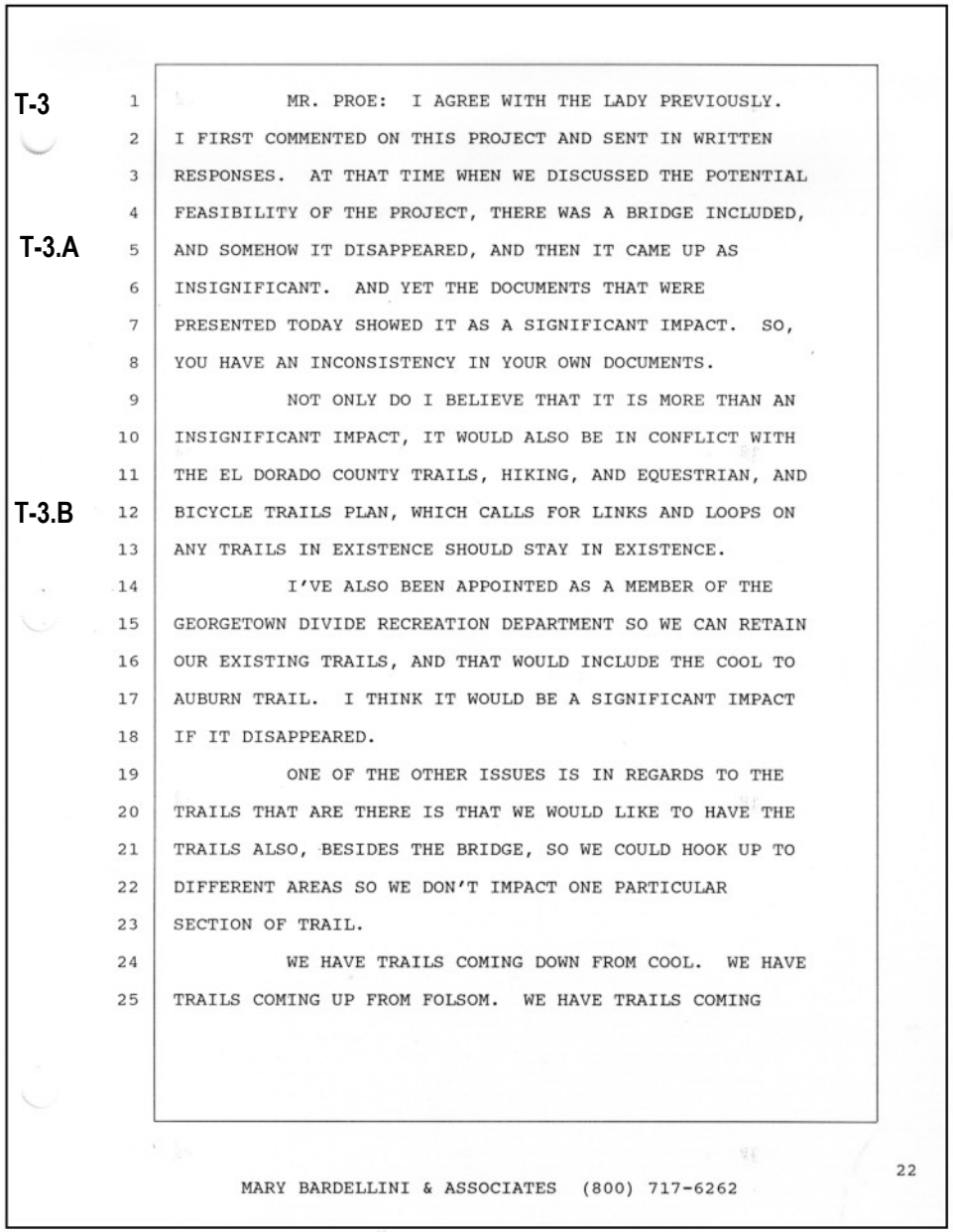
MS. ABBOTT: THAT MAKES MY POINT WHY I'M HERE, AND I PLAN TO STUDY THE EIR MORE. I THANK -- HAVING THE OPPORTUNITY TO SPEAK HERE TODAY. I CERTAINLY HOPE THE FINAL EIR WILL CONSIDER A BRIDGE SO THAT RUNNERS, HIKERS EQUESTRIANS, WHO HAVE USED THAT TRAIL FOR YEARS, CAN CONTINUE TO UTILIZE THAT TRAIL, AND THAT LITTLE PIZZA PLACE IN COOL CAN STILL GET MY BUSINESS WHEN I PARK AT THE OVERLOOK.

SO, THAT'S PRETTY MUCH IT. ALSO, I NOTICED IN YOUR NICE VISUALS OF RESTORING THE RIVER CANYON, I DID NOT SEE A TRAIL WITH SOME SWITCHBACKS UP THAT SIDE LEADING TO COOL. IF THAT BRIDGE CANNOT BE BUILT THE FIRST GO-AROUND, PERHAPS WE CAN HAVE A NICE WIDE SECTION WHERE HORSES COULD CROSS MOST OF THE YEAR. BUT TO ME THAT'S JUST TEMPORARY. WE NEED A BRIDGE, AND WE NEED TO HAVE THAT TRAIL MAINTAINED TO COOL, ALONG WITH A FREE-FLOWING RIVER.

THANK YOU. THANK YOU FOR THE OPPORTUNITY TO SPEAK.

MR. HALL: THANKS, MARY.

NEXT SPEAKER IS STEVEN PROE, FOLLOWED BY BOB DHONDT.



T-3

MR. PROE: I AGREE WITH THE LADY PREVIOUSLY. I FIRST COMMENTED ON THIS PROJECT AND SENT IN WRITTEN RESPONSES. AT THAT TIME WHEN WE DISCUSSED THE POTENTIAL FEASIBILITY OF THE PROJECT, THERE WAS A BRIDGE INCLUDED,

T-3.A

AND SOMEHOW IT DISAPPEARED, AND THEN IT CAME UP AS INSIGNIFICANT. AND YET THE DOCUMENTS THAT WERE PRESENTED TODAY SHOWED IT AS A SIGNIFICANT IMPACT. SO, YOU HAVE AN INCONSISTENCY IN YOUR OWN DOCUMENTS.

NOT ONLY DO I BELIEVE THAT IT IS MORE THAN AN INSIGNIFICANT IMPACT, IT WOULD ALSO BE IN CONFLICT WITH THE EL DORADO COUNTY TRAILS, HIKING, AND EQUESTRIAN, AND

T-3.B

BICYCLE TRAILS PLAN, WHICH CALLS FOR LINKS AND LOOPS ON ANY TRAILS IN EXISTENCE SHOULD STAY IN EXISTENCE.

I'VE ALSO BEEN APPOINTED AS A MEMBER OF THE GEORGETOWN DIVIDE RECREATION DEPARTMENT SO WE CAN RETAIN OUR EXISTING TRAILS, AND THAT WOULD INCLUDE THE COOL TO AUBURN TRAIL. I THINK IT WOULD BE A SIGNIFICANT IMPACT IF IT DISAPPEARED.

ONE OF THE OTHER ISSUES IS IN REGARDS TO THE TRAILS THAT ARE THERE IS THAT WE WOULD LIKE TO HAVE THE TRAILS ALSO, BESIDES THE BRIDGE, SO WE COULD HOOK UP TO DIFFERENT AREAS SO WE DON'T IMPACT ONE PARTICULAR SECTION OF TRAIL.

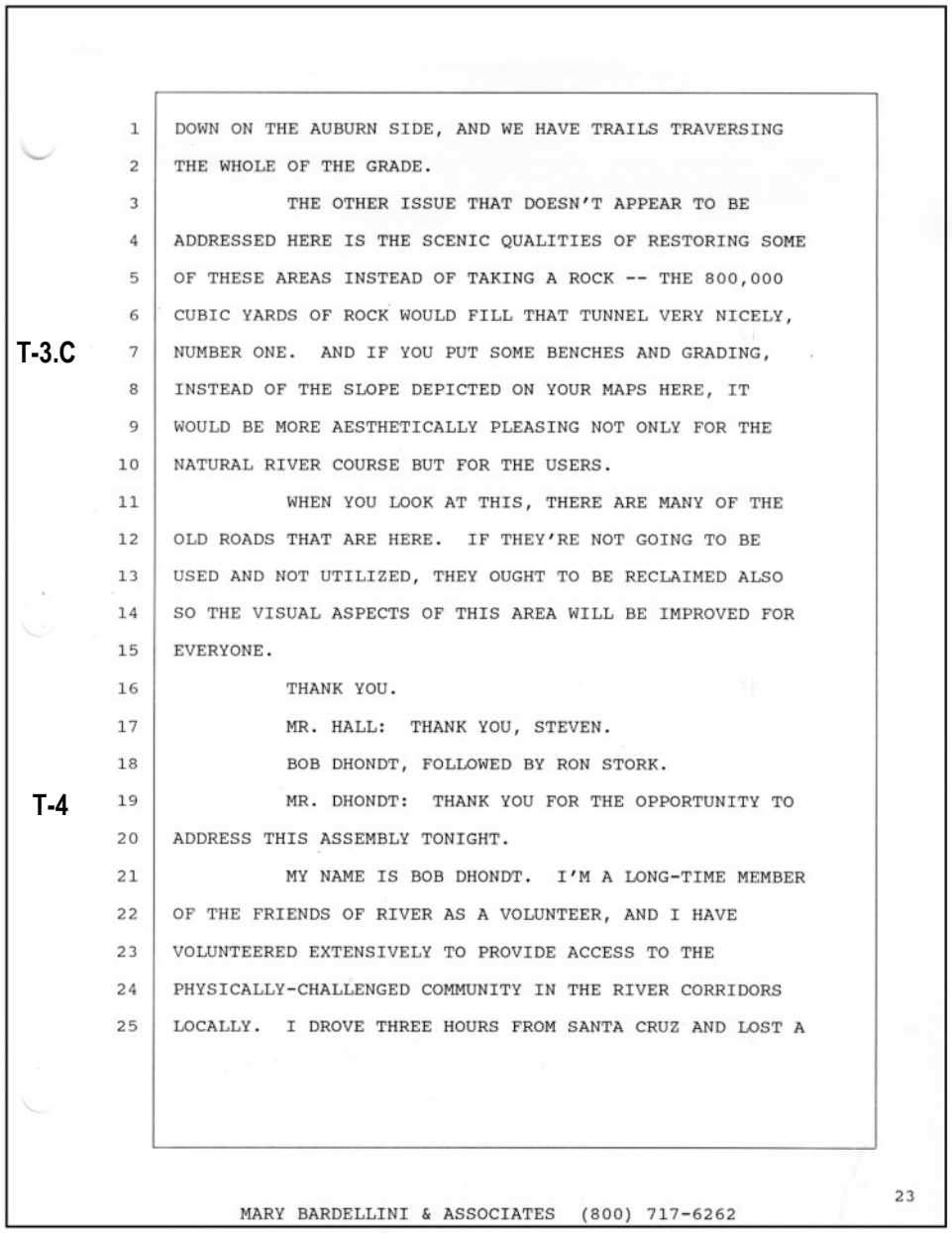
WE HAVE TRAILS COMING DOWN FROM COOL. WE HAVE TRAILS COMING UP FROM FOLSOM. WE HAVE TRAILS COMING

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A. Reclamation and CDPR through the Auburn State Recreation Area Interim Resource Management Plan (ASRA IRMP 1992) considered future development of a bridge near the ruins of the Greenwood Bridge, which was washed out in 1964 when the uncompleted Hell Hole Dam failed and caused a wall of water to surge through the canyon. Today, the Ruck-a-Chucky Campground borders the river where the bridge used to stand (ASRA IRMP 1992) and the intent of the proposed bridge reconstruction project was to provide hikers, bikers and equestrians access at the Greenwood crossing. Construction of a bridge across the North Fork American River near Auburn has not been part of the planning for the American River Pump Station Project. Please see Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Response L-28.J.



DOWN ON THE AUBURN SIDE, AND WE HAVE TRAILS TRAVERSING THE WHOLE OF THE GRADE.

THE OTHER ISSUE THAT DOESN'T APPEAR TO BE ADDRESSED HERE IS THE SCENIC QUALITIES OF RESTORING SOME OF THESE AREAS INSTEAD OF TAKING A ROCK -- THE 800,000 CUBIC YARDS OF ROCK WOULD FILL THAT TUNNEL VERY NICELY, NUMBER ONE. AND IF YOU PUT SOME BENCHES AND GRADING, INSTEAD OF THE SLOPE DEPICTED ON YOUR MAPS HERE, IT WOULD BE MORE AESTHETICALLY PLEASING NOT ONLY FOR THE NATURAL RIVER COURSE BUT FOR THE USERS.

WHEN YOU LOOK AT THIS, THERE ARE MANY OF THE OLD ROADS THAT ARE HERE. IF THEY'RE NOT GOING TO BE USED AND NOT UTILIZED, THEY OUGHT TO BE RECLAIMED ALSO SO THE VISUAL ASPECTS OF THIS AREA WILL BE IMPROVED FOR EVERYONE.

THANK YOU.

MR. HALL: THANK YOU, STEVEN.

BOB DHONDT, FOLLOWED BY RON STORK.

MR. DHONDT: THANK YOU FOR THE OPPORTUNITY TO ADDRESS THIS ASSEMBLY TONIGHT.

MY NAME IS BOB DHONDT. I'M A LONG-TIME MEMBER OF THE FRIENDS OF RIVER AS A VOLUNTEER, AND I HAVE VOLUNTEERED EXTENSIVELY TO PROVIDE ACCESS TO THE PHYSICALLY-CHALLENGED COMMUNITY IN THE RIVER CORRIDORS LOCALLY. I DROVE THREE HOURS FROM SANTA CRUZ AND LOST A

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T-3.C

T-4

C. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.5, Project Area River Restoration.

T-4.A

DAY'S PAY TO BE HERE TONIGHT.

I CAME TO SPEAK IN FAVOR OF RESTORING BOTH FLOWS AND CONDITIONS TO OUR AMERICAN RIVER NEAR THE MIDDLE AND NORTH FORK CONFLUENCE OF THE AUBURN DAM SITE. AND THE RIVER TO THE CHOSEN BED, FACILITATE ACCESS FOR ALL OF US TO HIKE, BIKE, AND HORSEBACK RIDE HER HILLSIDES, THE FISHERIES, USE BOATS AND FLOAT HER RIVERS, CELEBRATE THE SIMPLE BOUNTY OF NATURE AND EXERCISE OUR PRUDENT COMMON SENSE.

MANY OF US HERE HAVE BEEN INVOLVED IN THIS DISCUSSION FOR DECADES, AND MANY OF US GATHER HERE VERY WELL-INTENTIONED AND OBVIOUSLY IT'S A BAD IDEA ABOUT THE AUBURN DAM SINCE MULTIPLE PARALLEL AND INTERSECTING FAULT LINES, EARTHQUAKE FAULT LINES, HAVE BEEN FOUND NEAR THE DAM FOUNDATION. THIS IS ONLY ONE OF THE COMPELLING REASONS TO ABANDON THIS WELL-INTENTIONED BUT BAD IDEA.

THIS HAS IMPLICATIONS ON OUR NATIONAL PHILOSOPHY THAT ALLOWS US TO USE LEAF BLOWERS WITH ELECTRICAL CORDS INSTEAD OF GARDEN HOSES AND BROOMS. THIS IS REALLY PART OF THE ESSENCE OF THIS ARGUMENT.

FLOOD IRRIGATION, WITH A GOLF COURSE IN EVERY TOWN, AND TWO-ACRE FEET OF WATER FOR EVERY COW IN THIS COUNTRY ARE IDEAS WHOSE IDEAS HAVE COME AND GONE. WE CAN'T AFFORD THEM AND NEITHER CAN THE REST OF THE LIFE

A. Project support noted.

ON THIS PLANET.

OUR SLAVISH DEPENDENCE ON FOREIGN OIL HAS CAUSED OUR FEAR AND SUFFERING DUE TO CURRENT EVENTS. SO TOO OUR TRADITION OF USING MORE THAN WE NEED, ESPECIALLY AS IT RELATES TO WATER, AIR, EARTH, AND FIRE IS DRIVING SPECIES EXTINCTION AND GLOBAL WARMING TO THE VERY BRINK.

EINSTEIN WOULD COUNSEL US FROM THE GRAVE, THE SAME KIND OF THINKING THAT CREATES PROBLEMS WILL NEVER SOLVE THOSE PROBLEMS. THINK INSTEAD OF THE EARTH AS OURSELVES, THE FRESH WATER OUR BLOOD, THE RIVER, ARTERIES AND VEINS, CONNECTING THE FLOW OF LIFE UNINTERRUPTED FROM THE SUMMITS TO THE SEAS.

A COMPARATIVELY LOW IMPACT DIVERSION, MINIMIZED BY PRUDENT ZONING, SHOULD BE THE CALL. DROUGHT-RESISTANT LANDSCAPING AND EXTREME WATER-SAVING APPLIANCES SHOULD BECOME LAW BEFORE ONE MORE GALLON OF AMERICAN RIVER WATER IS DIVERTED.

YOU MAY THINK THESE IDEAS DRACONIAN, BUT DRASTIC TIMES CALL FOR CONSERVATIVE MEASURES. THAT'S -- I JUXTAPOSED TWO OF MY PAGES. I APOLOGIZE IF SOME OF THIS DIDN'T MAKE SENSE.

T-4.B VERY QUICKLY, I WOULD JUST LIKE TO ASK PLACER COUNTY -- JUST SEEMS TO ME THAT IT'S A VERY VAGUE AND RELATIVE TERM TO SAY THAT THE BEST RECOMMENDED CONSERVATION PRACTICES ARE BEING IMPLEMENTED, BECAUSE

B. Please refer to Master Response 3.1.11, Placer County Water Agency's Water Conservation Program.

THESE CAN MEAN WIDELY VARIANT THINGS TO MANY, MANY PEOPLE.

AND I REALLY THINK CONSERVATION IS THE WAY TO GO, AND I WANT TO SEE A BIG CONCRETE PLUG POURED THE WHOLE LENGTH OF THAT TUNNEL. WE'RE INVITING A DISASTER OF BIBLICAL PROPORTIONS IF WE BUILD AUBURN DAM.

MR. HALL: THANKS, BOB.

RON STORK, FOLLOWED BY JIM LARIMER.

MR. STORK: MY NAME IS RON STORK, AND I'M A CONSERVATIONIST WITH THE FRIENDS OF RIVER. I THINK THE TURNOUT TONIGHT SHOWS JUST HOW IMPORTANT AND HOW READY THIS COMMUNITY IS FOR THE AMERICAN RIVER CONFLUENCE PARKWAY. OUR PARK IS CLEARLY HAPPENING, FOLKS.

THE ISSUES THAT WERE ASSOCIATED WITH THE CLOSURE OF THE NO-HANDS BRIDGE CREATED AN INTERESTING CLINICAL DYNAMIC, THE OPENING -- THE GRADUAL KIND OF QUASI-LEGAL USE OF THE CONFLUENCE PARKWAY HAS, I THINK, BECOME AN ACKNOWLEDGED FACT IN THIS COMMUNITY, AND PEOPLE ARE CLEARLY EXCITED ABOUT THE OPPORTUNITY TO PARTICIPATE IN THE PLANNING AND DEVELOPMENT AND ENJOYMENT OF THIS BEAUTIFUL LANDSCAPE.

CLEARLY THIS PROJECT IS THE INTERSECTION OF THAT -- OF THAT FORCE AND INTEREST IN THIS COMMUNITY. IT'S ALSO AN INTERSECTION OF THE SEVEN OR SO YEARS OF NEGOTIATION BETWEEN THE ENVIRONMENTAL COMMUNITY AND

T-5

PLACER COUNTY AND OTHER WATER INTERESTS AND GOVERNMENT INTERESTS IN THE WATER FORUM.

AND WE HAVE REACHED SOME FAIRLY SUBSTANTIAL AGREEMENTS WITH PLACER COUNTY. PLACER COUNTY HAS -- PLACER COUNTY WATER AGENCY HAS -- FOR THAT MATTER, EVEN SOME COMMUNITIES IN PLACER COUNTY WATER, HAVE BEEN A SIGNATORY TO THE WATER FORUM, HAVE ACTUALLY MADE SOME AGREEMENTS WITH THE ENVIRONMENTAL COMMUNITY THAT WE THINK WE'RE RESPONSIBLE ONES FOR THE ENVIRONMENT AND FOR THE RIVER AND -- BUT OUR AGREEMENT IS NOT QUITE THERE YET.

THIS IS A KEYSTONE OF THAT, AND THAT IS WHATEVER DIVERSIONS THEY MAKE CONSISTENT WITH THEIR WATER RIGHTS BE TAKEN ALONG AT THE SAME TIME THAT WE RESTORE THE RIVER AND THIS WONDERFUL COMMUNITY -- ASSET.

T-5.A SO, I'M PLEASED TO BE HERE AND PLEASED TO SEE THE ENERGY AND INTEREST IN THIS CROWD. I WOULD ENCOURAGE THE BUREAU AND PLACER COUNTY WATER AGENCY -- FOR THAT MATTER, STATE PARKS AND REPRESENTATIVES OF THE COMMUNITY AND THE RECREATIONAL CONSTITUENTS IN THIS COMMUNITY TO RECOGNIZE THAT THIS IS INDEED A MAJOR STEP IN THE FORMATION OF THE CONFLUENCE PARKWAY.

AND DETAILS ABOUT SUCH AS THE AUBURN-COOL TRAIL ARE MORE THAN APPROPRIATE TO BE DISCUSSED AND IDENTIFIED AND HOPEFULLY SOLVED IN THIS PLANNING EFFORT.

A. Project support noted.

AND IF THEY CAN'T BE, THEY NEED TO BE SOLVED IN A PLANNING EFFORT THAT IS EQUALLY CONTEMPORANEOUS.

I UNDERSTAND THAT THERE MAY BE SOME INTEREST -- I THINK THERE'S BEEN COMMITMENTS ON THE PART OF RECLAMATION AND STATE PARKS TO REALLY BEGIN AN EARNEST PLANNING FOR THE CONFLUENCE IN PARTICULAR AND PARK AREA, SO WE ALL HAVE OUR WORK CUT OUT, BUT THAT IS JOYFUL CIRCUMSTANCE TO BE IN.

THANK YOU.

MR. HALL: THANKS, RON.

T-6

JIM LARIMER, FOLLOWED BY BILL PRYOR.

MR. LARIMER: THIS IS REALLY EXCITING TO SEE THIS KIND OF TURNOUT BECAUSE IT IS AN ISSUE THAT'S DEAR TO MANY HEARTS. I'VE LIVED IN THIS AREA MY ENTIRE LIFE AND TRAVELED UP AND DOWN BOTH BY RIVER AND TRAILS IN THESE CANYONS, SO IT REALLY IS PHYSICALLY AND EMOTIONALLY VERY IMPORTANT FOR US AND THOSE WHO FOLLOW US.

SOME OF THE CONCERNS THAT I HAVE ON THE ENVIRONMENTAL REPORT IS IT DOES IDENTIFY SOME PROBLEMS, BUT IT DOESN'T PROVIDE SOLUTIONS. I DON'T THINK MANY OF US IN OUR GROUP HAVE A PROBLEM WITH THE PROJECT ITSELF BECAUSE, YOU KNOW, OBVIOUSLY WE NEED WATER, AND EVERYONE WANTS TO SEE THE RIVER RESTORED.

BUT WE HAVE LEARNED THAT ONCE WE LOSE A TRAIL,

T-6.A

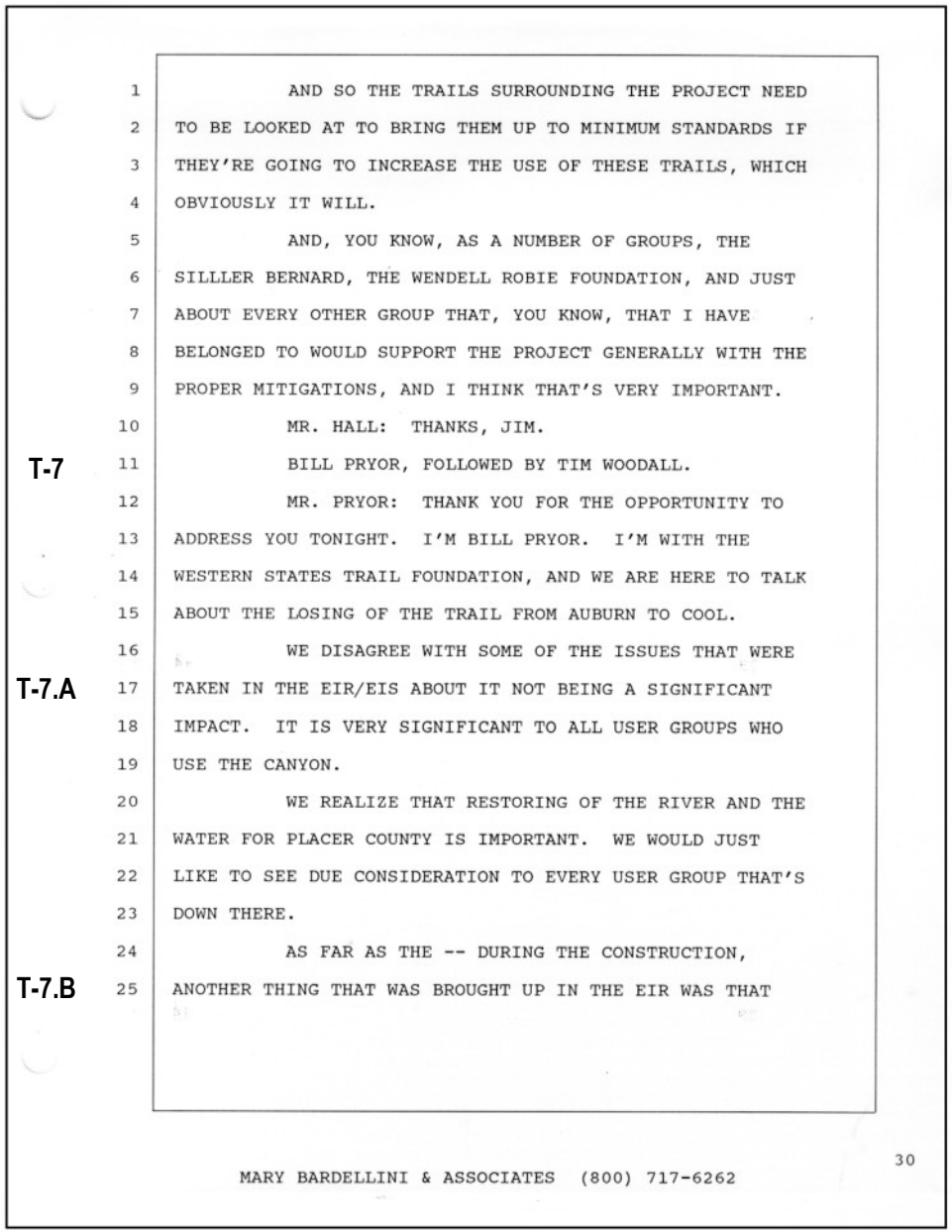
IT DOESN'T JUST COME BACK. IT HAS TO BE ADDRESSED BEFORE THAT TRAIL CLOSES AS TO WHAT ARE WE GOING TO DO. IF WE SIMPLY CLOSE THE TRAIL AND SAYS IT'S AN UNAVOIDABLE IMPACT, WE'VE LOST IT.

AND SO THERE HAS TO BE SOME KIND OF MITIGATION, WHETHER IT'S IN THE FORM OF A BRIDGE, WHICH BENEFITS ALL THE USERS, INCLUDING THE MOUNTAIN BIKES AND EQUESTRIANS AND HIKERS AND RUNNERS. AND THAT'S PROBABLY THE PREFERRED, BECAUSE IT DOES PROTECT EVERY GROUP, AND ALSO ALLOWS A NEW USE FOR THE RIVER RAFTING GOING THROUGH THERE.

AT THE VERY LEAST, THE REPORT TALKS ABOUT INCREASED PARKING AT THE CONFLUENCE OF THE AMERICAN RIVERS AND ALSO, YOU KNOW, THE LOSS OF A TRAIL IF THERE ISN'T A BRIDGE PUT IN. SO, WHAT ARE THESE EQUESTRIAN AND HIKERS GOING TO DO? THEY'RE GOING TO USE OTHER ADJOINING TRAILS.

A LOT OF THESE OTHER ADJOINING TRAILS ARE NOT PREPARED TO ACCEPT ADDITIONAL USE AND DEMAND. FOR EXAMPLE, THE TRAIL FROM NO-HANDS BRIDGE UP TO COOL IS IN TERRIBLE CONDITION FOR ITS CURRENT USE. YOU ADD ANOTHER GROUP OF PEOPLE THAT GO DOWN AND PARK AT THE CONFLUENCE OR NEED TO GO TO COOL OR DESIRE TO GO TO COOL AS A RECREATION, THEN YOU ARE IMPACTING SEVERELY AN ALREADY BAD SITUATION INTO A SERIOUS SITUATION.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



AND SO THE TRAILS SURROUNDING THE PROJECT NEED TO BE LOOKED AT TO BRING THEM UP TO MINIMUM STANDARDS IF THEY'RE GOING TO INCREASE THE USE OF THESE TRAILS, WHICH OBVIOUSLY IT WILL.

AND, YOU KNOW, AS A NUMBER OF GROUPS, THE SILLLER BERNARD, THE WENDELL ROBIE FOUNDATION, AND JUST ABOUT EVERY OTHER GROUP THAT, YOU KNOW, THAT I HAVE BELONGED TO WOULD SUPPORT THE PROJECT GENERALLY WITH THE PROPER MITIGATIONS, AND I THINK THAT'S VERY IMPORTANT.

MR. HALL: THANKS, JIM.

T-7 BILL PRYOR, FOLLOWED BY TIM WOODALL.

MR. PRYOR: THANK YOU FOR THE OPPORTUNITY TO ADDRESS YOU TONIGHT. I'M BILL PRYOR. I'M WITH THE WESTERN STATES TRAIL FOUNDATION, AND WE ARE HERE TO TALK ABOUT THE LOSING OF THE TRAIL FROM AUBURN TO COOL.

T-7.A WE DISAGREE WITH SOME OF THE ISSUES THAT WERE TAKEN IN THE EIR/EIS ABOUT IT NOT BEING A SIGNIFICANT IMPACT. IT IS VERY SIGNIFICANT TO ALL USER GROUPS WHO USE THE CANYON.

WE REALIZE THAT RESTORING OF THE RIVER AND THE WATER FOR PLACER COUNTY IS IMPORTANT. WE WOULD JUST LIKE TO SEE DUE CONSIDERATION TO EVERY USER GROUP THAT'S DOWN THERE.

AS FAR AS THE -- DURING THE CONSTRUCTION,

T-7.B ANOTHER THING THAT WAS BROUGHT UP IN THE EIR WAS THAT

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A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

B. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction.

ACCESS TO THE TRAILS, NOT ONLY THE WESTERN STATE TRAIL BUT OTHER TRAILS, WOULD BE RESTRICTED. WE WOULD LIKE TO BE INFORMED OF HOW THOSE RESTRICTIONS WILL BE IMPLEMENTED, WHO WILL BE PUTTING THEM TOGETHER, AND TO WORK WITH WHATEVER AGENCIES ARE INVOLVED IN THAT TO MAKE SURE THAT WE KEEP THE TRAILS OPEN AS MUCH AS POSSIBLE.

THANK YOU.

MR. HALL: THANK YOU, BILL.

KEN WOODALL, FOLLOWED BY DAVE KASBERG.

T-8 MR. WOODALL: THANK YOU. I'M TIM WOODALL. I'M THE PRESIDENT OF PROTECT AMERICAN RIVER CANYONS. AND FIRST AND FOREMOST I WANT TO SAY CONGRATULATIONS AND THANK YOU FOR A JOB WELL DONE.

I THINK OVERALL, LOOKING AT THE BIG PICTURE,

T-8.A YOU'VE COME UP WITH A VERY COMMENDABLE PLAN. THE DESIGN OF THE PROPOSED PROJECT IS AGAIN, AS A WHOLE, I THINK A SOLID DESIGN, A VERY WELL-THOUGHT OUT DESIGN. AND THE ENVIRONMENTAL IMPACT STATEMENT -- ENVIRONMENTAL IMPACT REPORT SEEMS TO HAVE THOROUGHLY BEEN PREPARED AND, AS A WHOLE, IS A VERY GOOD DOCUMENT, AND THE PARC STRONGLY ENDORSES THE PROPOSED PROJECT.

HAVING SAID THAT, I DO HAVE SOME COMMENTS. FIRST OF ALL, AGAIN IN LINE WITH OUR THINKING THAT THIS IS A GREAT PROJECT, I WANT TO SAY THAT THIS CLEARLY IS AN ENVIRONMENTALLY SUPERIOR WAY OF PERMITTING, THROUGH

A. Project support noted.

THE PLACER COUNTY WATER AGENCY, TO SATISFY ITS WATER RIGHTS. IT DOES HAVE EXISTING RIGHTS IN THE AMERICAN RIVER, AND THIS IS THE -- BY FAR THE ENVIRONMENTALLY SUPERIOR WAY TO SATISFY THOSE RIGHTS.

WHEN YOU THINK ABOUT WHAT THE ORIGINAL AND STILL THREATENED IDEA WAS FOR SATISFYING THOSE WATER RIGHTS, I WOULD SAY WE SHOULD ALL BE EXTREMELY THANKFUL FOR THIS PROPOSAL AND FOR SATISFYING THOSE RIGHTS THIS WAY.

IT'S ALSO A GOOD THING THAT THIS PROJECT WILL ELIMINATE THE SAFETY HAZARD THAT THE BYPASS TUNNEL REPRESENTS. THANK GOD NOBODY HAS DIED IN THAT TUNNEL YET, BUT THAT IS A VERY REAL POSSIBILITY. IT COULD HAPPEN, AND IT WILL BE GOOD TO HAVE THAT THREAT ELIMINATED.

IT'S ALSO A GOOD THING THAT THIS PROJECT IS GOING TO RESTORE THE RIVER TO A NATURALLY APPEARING AND A NATURALLY FUNCTIONING RIVER CHANNEL. AND IN THE PROCESS, OF COURSE, THAT'S GOING TO GREATLY ENHANCE THE RIVER'S FISH AND WILDLIFE VALUES, THE SCENIC VALUE OF THE RIVER AND CANYON, AND RECREATIONAL VALUES OF THE CANYON AND RIVER.

I'M GLAD TO SEE THAT THE PROJECT PROPONENTS ARE TAKING THIS PART OF THE PROJECT DESIGN SERIOUSLY, AND THEY REALLY WANT TO CREATE A NATURALLY FUNCTIONING

AND APPEARING STABLE RIVER CHANNEL. THAT'S A VERY GOOD THING.

THE RECREATIONAL ACCESS COMPONENTS OF THE PLAN ARE ALSO APPROPRIATE. I WAS ACTUALLY, AFTER HAVING READ THROUGH THE DRAFT PLAN, I WAS VERY PLEASED TO SEE THAT THE DESIGN COMPONENTS FOR RECREATIONAL ACCESS AND USE OF THE RIVER CANYON AND THIS PART OF THE CANYON ARE VERY MUCH IN LINE WITH VERY CLOSE TO WHAT PARC HAS BEEN ADVOCATING FOR QUITE A FEW YEARS NOW. THIS IS WHAT WE HAD IN MIND, BY AND LARGE, WITH REGARD TO THE RECREATIONAL COMPONENTS OF THE PLAN.

IT WILL BE WONDERFUL TO HAVE VEHICULAR ACCESS POSSIBLE TO THIS PART OF THE CANYON. IT'S RIGHT ON THE EDGE OF THE CITY OF AUBURN. PEOPLE WHO LIVE HERE ARE GOING TO BENEFIT GREATLY BY BEING ABLE TO GET INTO THIS CANYON MORE EASILY.

IT'S GOING TO CREATE AND MAKE VERY FEASIBLE A NICE, SHORT, EASY BOATING EXPERIENCE FROM THE CONFLUENCE OF THE NORTH AND MIDDLE FORKS DOWN TO THE DAM SITE OR A LITTLE FURTHER DOWN TO OREGON BAR, WITH VEHICULAR ACCESS TO MAKE THAT A DOABLE THING FOR FOLKS WITHOUT SPENDING THE ENTIRE DAY AT IT. SO, THAT'S A GOOD THING. WE'RE HAPPY WITH THAT.

AND WE'RE ALSO HAPPY WITH THE FACT THAT THERE'S NOT A PLAN TO CREATE A DISNEYLAND-TYPE PARKING

LOT IN THE CANYON. THAT'S NOT SOMETHING THAT WE THINK IS THE BEST INTEREST OF THE CANYON OR THE ENVIRONMENT OR THE COMMUNITY, QUITE FRANKLY. I THINK WE'RE GOING TO BE ABLE TO RETAIN THE PRIMITIVE FEEL FOR THE CANYON AND RESPECT THE ENVIRONMENTAL VALUES OF THE CANYON, AND THAT ALSO IS A VERY GOOD THING.

SO, AGAIN, CONGRATULATIONS. THANK YOU. IT'S A GREAT PROPOSAL. WE, AS WELL AS MANY OF THE PEOPLE IN THIS ROOM, HOWEVER, STILL ARE CONCERNED ABOUT THE

T-8.B

CLOSURE OF THE AUBURN -- AUBURN TO COOL TRAIL THROUGH THE DAM SITE. WE AGREE THAT'S VERY SIGNIFICANT IMPACT, AND I THINK THE ENVIRONMENTAL DOCUMENT DOES IDENTIFY THIS AS A SIGNIFICANT IMPACT.

WE DISAGREE, HOWEVER, THAT IT'S AN UNAVOIDABLE IMPACT AND THERE ARE NO FEASIBLE MITIGATION MEASURES. THERE ARE, WE BELIEVE, FEASIBLE MITIGATION MEASURES. WE FEEL THOSE SHOULD BE ANALYZED AND ADDRESSED.

WE THINK THE PEDESTRIAN BRIDGE IS THE BEST ALTERNATIVE TO PRESERVING THAT TRAIL CONNECTOR. WE WOULD LIKE TO SEE IT HAPPEN NOW, IF AT ALL POSSIBLE. AUBURN STATE RECREATION PLANNING PROCESS IS ANOTHER POSSIBLE VENUE FOR THAT TO OCCUR, BUT WE FEEL THIS IS THE BEST AND IDEAL TIME TO LOOK AT THAT AND HOPEFULLY TO MAKE THAT POSSIBLE. A FORD OF THE RIVER IS ANOTHER POSSIBILITY. WE THINK THE PEDESTRIAN BRIDGE PROVIDES A

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B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

SUPERIOR MEANS OF ALLOWING ALL RECREATIONAL USERS TO CONTINUE TO USE THAT TRAIL.

SO, IN CLOSING, I WANT TO SAY THANK YOU ALL FOR COMING OUT. IT'S GREAT TO SEE THIS KIND OF TURNOUT. IT DEMONSTRATES HOW IMPORTANT THIS PARTICULAR PROJECT IS TO THIS COMMUNITY, AND I WANT YOU ALL TO STAY TUNED, AND LET'S MAKE SURE THAT THIS THING GETS CARRIED THROUGH AS IT SHOULD.

THANK YOU.

MR. HALL: THANKS, TIM.

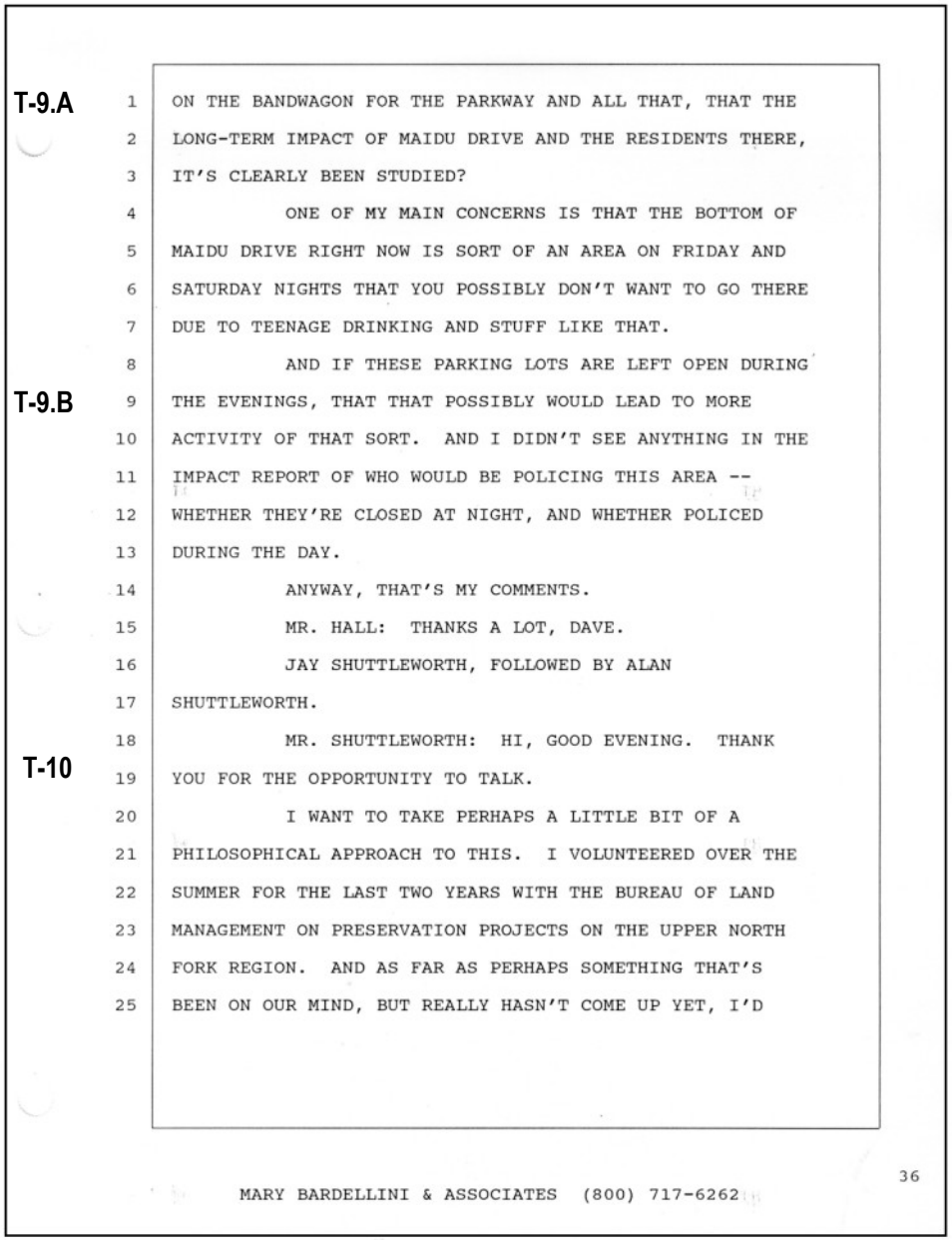
DAVE KASBERG, FOLLOWED BY JAY SHUTTLEWORTH.

T-9

MR. KASBERG: HI, MY NAME IS DAVE KASBERG. I'M AN AUBURN RESIDENT OF 15 YEARS, AND I LIVE RIGHT OFF OF MAIDU, SO THIS HAS BEEN MY PLAYGROUND FOR BIKING AND HIKING FOR ALMOST THAT TIME, SINCE IT'S BEEN LEGAL AT LEAST.

SO, MY -- I'M SORT OF TORN BETWEEN THIS WHOLE PROPOSAL. AS FAR AS THE PARKING LOTS DOWN THERE, MAIDU DRIVE RESIDENT -- AND BASED ON THE NUMBER OF MAIDU DRIVE RESIDENTS HERE, I'M CURIOUS WHETHER ALL THE RESIDENTS IN THOSE NEIGHBORHOODS HAVE BEEN INFORMED OF THE POSSIBLE AND POTENTIAL IMPACT OF THE INCREASED TRAFFIC TO THOSE PARKING LOTS.

SO, MY MAIN CONCERN IS HAVE WE ACTUALLY EVALUATED, WITH ALL THESE OTHER GROUPS, SORT OF JUMPING



T-9.A

ON THE BANDWAGON FOR THE PARKWAY AND ALL THAT, THAT THE LONG-TERM IMPACT OF MAIDU DRIVE AND THE RESIDENTS THERE, IT'S CLEARLY BEEN STUDIED?

ONE OF MY MAIN CONCERNS IS THAT THE BOTTOM OF MAIDU DRIVE RIGHT NOW IS SORT OF AN AREA ON FRIDAY AND SATURDAY NIGHTS THAT YOU POSSIBLY DON'T WANT TO GO THERE DUE TO TEENAGE DRINKING AND STUFF LIKE THAT.

AND IF THESE PARKING LOTS ARE LEFT OPEN DURING

T-9.B

THE EVENINGS, THAT THAT POSSIBLY WOULD LEAD TO MORE ACTIVITY OF THAT SORT. AND I DIDN'T SEE ANYTHING IN THE IMPACT REPORT OF WHO WOULD BE POLICING THIS AREA -- WHETHER THEY'RE CLOSED AT NIGHT, AND WHETHER POLICED DURING THE DAY.

ANYWAY, THAT'S MY COMMENTS.

MR. HALL: THANKS A LOT, DAVE.

JAY SHUTTLEWORTH, FOLLOWED BY ALAN SHUTTLEWORTH.

MR. SHUTTLEWORTH: HI, GOOD EVENING. THANK

T-10

YOU FOR THE OPPORTUNITY TO TALK.

I WANT TO TAKE PERHAPS A LITTLE BIT OF A PHILOSOPHICAL APPROACH TO THIS. I VOLUNTEERED OVER THE SUMMER FOR THE LAST TWO YEARS WITH THE BUREAU OF LAND MANAGEMENT ON PRESERVATION PROJECTS ON THE UPPER NORTH FORK REGION. AND AS FAR AS PERHAPS SOMETHING THAT'S BEEN ON OUR MIND, BUT REALLY HASN'T COME UP YET, I'D

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A. Please refer to Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

LIKE TO TALK A LITTLE BIT ABOUT THE SYMBOLIC VALUE OF THE DIVERSION DAM -- THE DIVERSION TUNNEL CLOSING ON THE FUTURE AUBURN DAM PROJECT.

I SEE THE DIVERSION TUNNEL CLOSING REPRESENTING PERHAPS TWO POSITIVE THINGS. FIRST OF ALL, IT AFFIRMS THAT THE MAIN REGIONS OF A POTENTIAL AUBURN DAM, MIDDLE OF THE NORTH FORK, WESTERN TRAIL, HISTORICAL, STEVENS TRAIL WOULD BE PERHAPS BETTER APPRECIATED, THEREFORE BETTER PRESERVED, AND I THINK THAT'S OUTSTANDING.

BUT, AGAIN, MOST SIGNIFICANTLY, IT SIGNALS A WAY THAT WE ARE PERHAPS CHANGING OUR VIEWS ON HOW WE USE OUR EARTH, HOW WE PERHAPS LIVE, ET CETERA. THE VERY NEAR FUTURE WE MAY WONDER WHERE OUR BEAUTIFUL PLACES HAVE GONE AS WE JUST HAVE A VIEW OF PERHAPS OIL DERRICKS AND SUV'S.

AGAIN, I THINK CLOSING OUR RIVERS -- FLOODING OUR CANYONS, PERHAPS WOULD REPRESENT, AS YOU WOULD SAY, TUNNEL VISION. SORRY ABOUT THAT. BUT, AGAIN, CLOSING THE DIVERSION DAM DOES REPRESENT A STEP IN THE RIGHT DIRECTION TOWARDS WHAT I WOULD SAY IS A HEALTHIER LIFE PHILOSOPHY.

THANK YOU.

MR. HALL: THANK YOU.

ALAN SHUTTLEWORTH.

T-10.A

A. Project support noted.

T-11.A

MR. SHUTTLEWORTH: I'M ONE OF YOUR UPSTREAM NEIGHBORS. I LIVE IN COLFAX. BEEN HIKING THE CANYON AT THE RIVER LEVEL AT LEAST ONCE A WEEK FOR 20 YEARS, AND I'D LIKE TO CONTINUE TO DO SO FOR ANOTHER 20 YEARS. THE PROJECT LOOKS LIKE IT WILL SUPPORT THAT. YOU'VE GOT MY ENDORSEMENT.

MR. HALL: THANK YOU.

BRIAN O'BRIEN, FOLLOWED BY JAY MCKANE.

T-12.A

MR. O'BRIEN: HI, I'M BRIAN O'BRIEN. I'M AN AUBURN RESIDENT AND RECREATIONAL DAM USER. I'M A WHITE WATER BOATER, HIKER, MOUNTAIN BIKER, AND MEMBER OF PROTECT AMERICAN RIVER CANYONS HERE IN AUBURN.

AND I WANTED TO SAY THANKS TO BUREAU OF RECLAMATION AND PCWA FOR YOUR FOLLOW-THROUGH TO MAKING THIS HAPPEN. I WAS HERE IN THIS ROOM A FEW YEARS AGO, YOU GUYS WERE ROLLING THESE PLANS OUT, AND I KNOW IT'S BEEN A ROUGH ROAD. NICE WORK.

ALSO, WANT TO SAY I AGREE WITH THE ISSUE OF WE

T-12.B

OUGHT TO TAKE ANOTHER LOOK AT THAT POTENTIAL CROSSING, WHATEVER THAT MIGHT BE, GET THAT IN THE MIX, AND SEE WHAT WE CAN DO WITH IT. OVERALL IT LOOKS LIKE A REALLY GOOD PLAN. THANKS.

MR. HALL: THANKS, BRIAN.

JAY MCKANE, FOLLOWED BY DALE SHUTTLEWORTH.

JAY MCKANE HERE STILL? OKAY. DALE. DALE IS

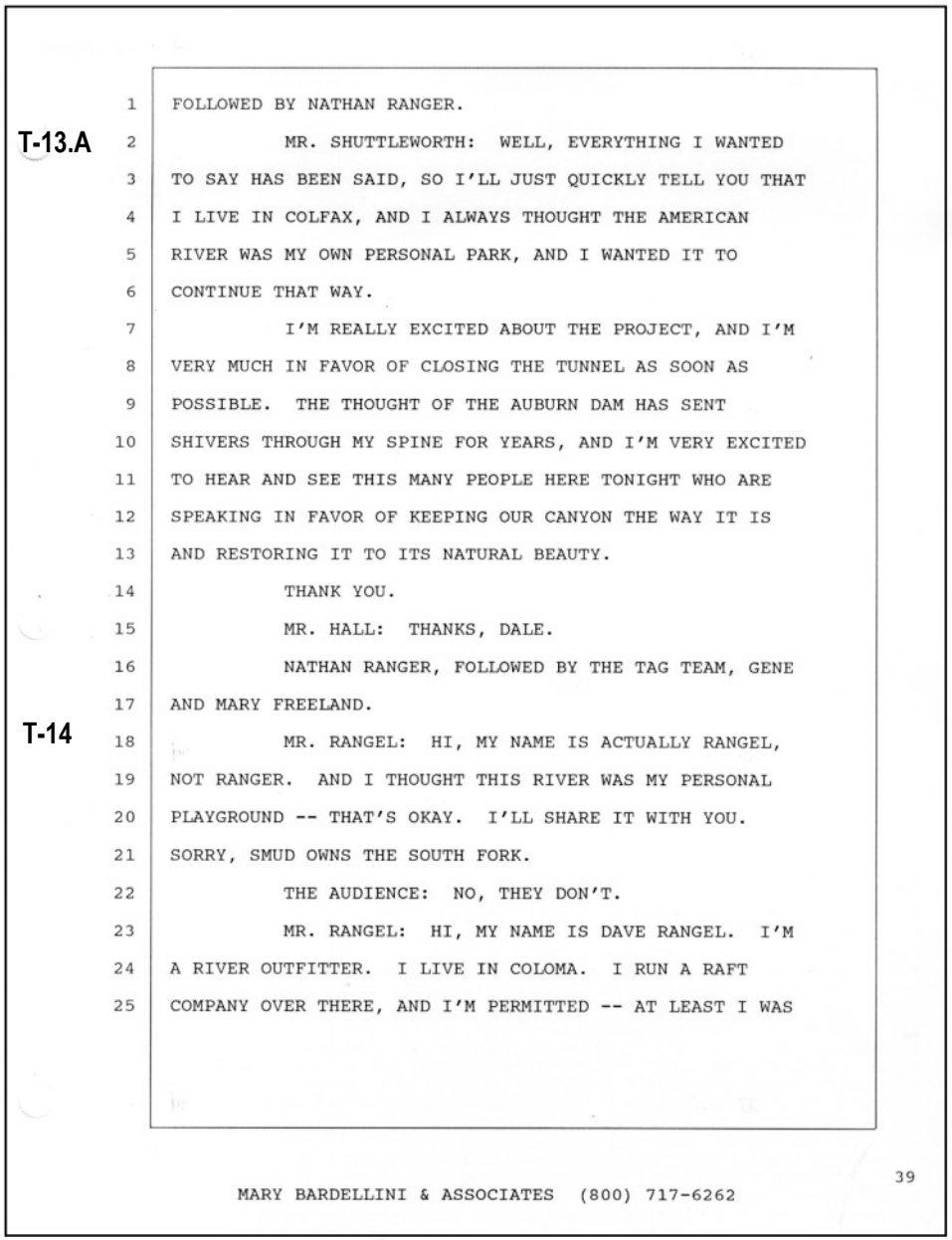
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A. Project support noted.

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



FOLLOWED BY NATHAN RANGER.

T-13.A MR. SHUTTLEWORTH: WELL, EVERYTHING I WANTED TO SAY HAS BEEN SAID, SO I'LL JUST QUICKLY TELL YOU THAT I LIVE IN COLFAX, AND I ALWAYS THOUGHT THE AMERICAN RIVER WAS MY OWN PERSONAL PARK, AND I WANTED IT TO CONTINUE THAT WAY.

I'M REALLY EXCITED ABOUT THE PROJECT, AND I'M VERY MUCH IN FAVOR OF CLOSING THE TUNNEL AS SOON AS POSSIBLE. THE THOUGHT OF THE AUBURN DAM HAS SENT SHIVERS THROUGH MY SPINE FOR YEARS, AND I'M VERY EXCITED TO HEAR AND SEE THIS MANY PEOPLE HERE TONIGHT WHO ARE SPEAKING IN FAVOR OF KEEPING OUR CANYON THE WAY IT IS AND RESTORING IT TO ITS NATURAL BEAUTY.

THANK YOU.

MR. HALL: THANKS, DALE.

NATHAN RANGER, FOLLOWED BY THE TAG TEAM, GENE AND MARY FREELAND.

T-14 MR. RANGEL: HI, MY NAME IS ACTUALLY RANGEL, NOT RANGER. AND I THOUGHT THIS RIVER WAS MY PERSONAL PLAYGROUND -- THAT'S OKAY. I'LL SHARE IT WITH YOU. SORRY, SMUD OWNS THE SOUTH FORK.

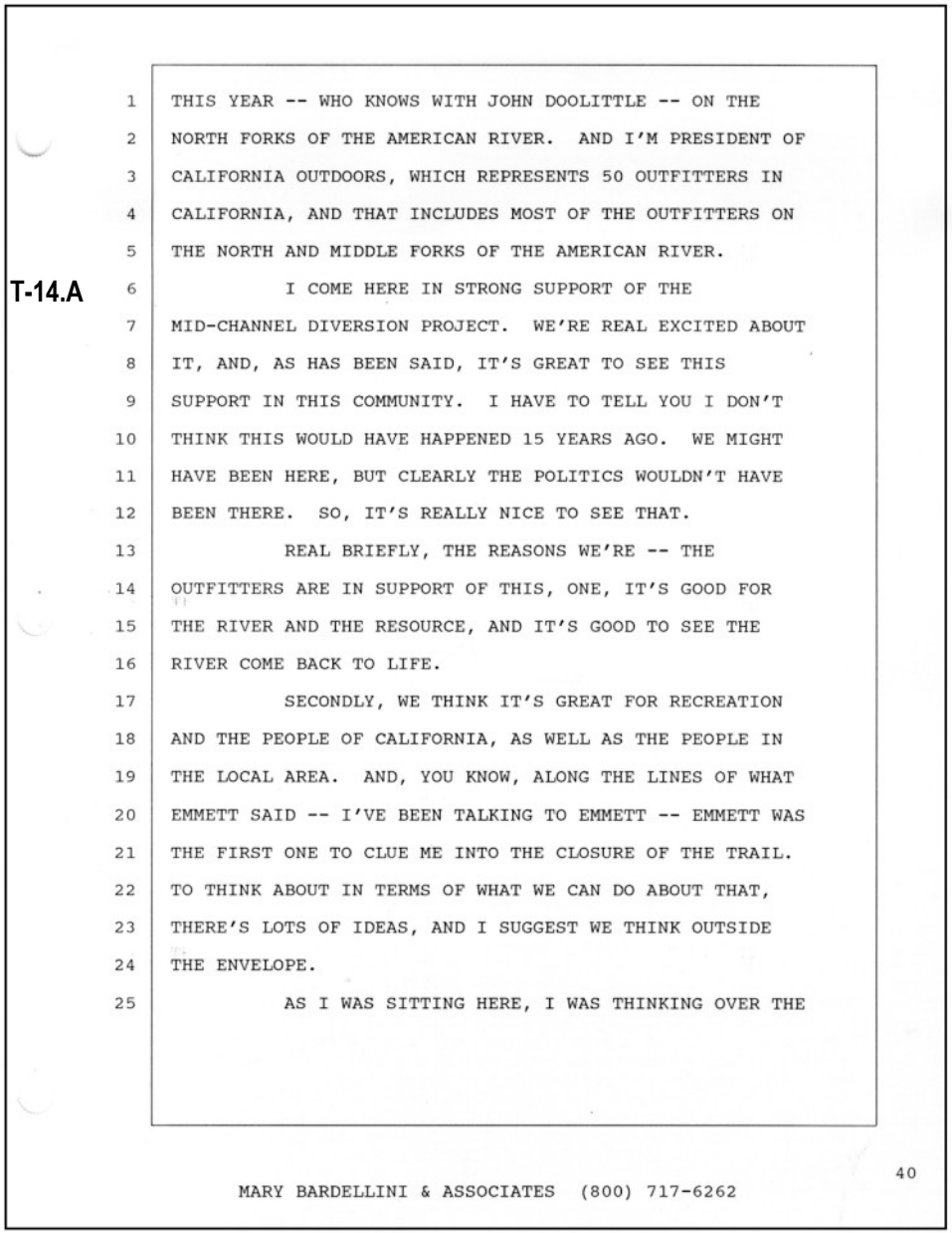
THE AUDIENCE: NO, THEY DON'T.

MR. RANGEL: HI, MY NAME IS DAVE RANGEL. I'M A RIVER OUTFITTER. I LIVE IN COLOMA. I RUN A RAFT COMPANY OVER THERE, AND I'M PERMITTED -- AT LEAST I WAS

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A. Project support noted.



THIS YEAR -- WHO KNOWS WITH JOHN DOOLITTLE -- ON THE NORTH FORKS OF THE AMERICAN RIVER. AND I'M PRESIDENT OF CALIFORNIA OUTDOORS, WHICH REPRESENTS 50 OUTFITTERS IN CALIFORNIA, AND THAT INCLUDES MOST OF THE OUTFITTERS ON THE NORTH AND MIDDLE FORKS OF THE AMERICAN RIVER.

I COME HERE IN STRONG SUPPORT OF THE MID-CHANNEL DIVERSION PROJECT. WE'RE REAL EXCITED ABOUT IT, AND, AS HAS BEEN SAID, IT'S GREAT TO SEE THIS SUPPORT IN THIS COMMUNITY. I HAVE TO TELL YOU I DON'T THINK THIS WOULD HAVE HAPPENED 15 YEARS AGO. WE MIGHT HAVE BEEN HERE, BUT CLEARLY THE POLITICS WOULDN'T HAVE BEEN THERE. SO, IT'S REALLY NICE TO SEE THAT.

REAL BRIEFLY, THE REASONS WE'RE -- THE OUTFITTERS ARE IN SUPPORT OF THIS, ONE, IT'S GOOD FOR THE RIVER AND THE RESOURCE, AND IT'S GOOD TO SEE THE RIVER COME BACK TO LIFE.

SECONDLY, WE THINK IT'S GREAT FOR RECREATION AND THE PEOPLE OF CALIFORNIA, AS WELL AS THE PEOPLE IN THE LOCAL AREA. AND, YOU KNOW, ALONG THE LINES OF WHAT EMMETT SAID -- I'VE BEEN TALKING TO EMMETT -- EMMETT WAS THE FIRST ONE TO CLUE ME INTO THE CLOSURE OF THE TRAIL. TO THINK ABOUT IN TERMS OF WHAT WE CAN DO ABOUT THAT, THERE'S LOTS OF IDEAS, AND I SUGGEST WE THINK OUTSIDE THE ENVELOPE.

AS I WAS SITTING HERE, I WAS THINKING OVER THE

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T-14.A

A. Project support noted.

PAST YEARS, OVER THE 10, WHERE THERE WAS ENOUGH WATER, THEY COULDN'T CLOSE IT TO ALLOW THE HUNDRED MILE RUN ON TRAIL, OUR ORGANIZATION HAS PROVIDED ESSENTIALLY A FERRY SERVICE WITH RAFTS AND -- I'M JUST THINKING -- I'M THINKING MAYBE -- NO. NO. NO. NO. THIS ISN'T A COMMERCIAL THING, BUT, YOU KNOW, GUYS -- YOU HAVE NO FAITH. YOU PEOPLE HAVE NO FAITH.

MAYBE SOMETHING COULD HAPPEN -- ONE OF THE CONCERNS I'VE GOT ABOUT A BRIDGE IS BRIDGES SOMETIMES CAN BE BIG AND UGLY, AND MAYBE SOMETHING COULD HAPPEN ALONG THE LINES OF MAYBE A HISTORICALLY, YOU KNOW, ACCURATE LITERAL FERRY, THAT'S A WOODEN FERRY BUILT WITH A HIGH LINE OR SOMETHING LIKE THAT -- I DON'T KNOW, BUT IT'S JUST A THOUGHT, SOMETHING THAT COULD HAPPEN ALONG THOSE LINES. JUST A THOUGHT. I'M NOT INTERESTED IN BEING INVOLVED IN THAT. I'M NOT -- JUST WANT TO GET THAT OUT THERE.

ALSO, I WANTED TO SAY, AND THIS IS REAL IMPORTANT FOR US, IF THERE ARE TWO UTILITY COMPANIES ON ONE RIVER CANYON THAT HAVE BEEN MORE SENSITIVE TO RECREATION NEEDS OF A COMMUNITY AND OF A STATE AND THE CITIZENS OF A STATE, IT WOULD BE PLACER COUNTY WATER AGENCY AND P.G.& E. ON THE MIDDLE FORK OF THE AMERICAN.

AND THAT'S BEEN TRUE FOR YEARS AND YEARS AND YEARS, AND WE'RE EXCITED TO SUPPORT SOMETHING THAT'S

IMPORTANT TO THEM, AND I THINK IT'S IMPORTANT FOR THE COMMUNITY TO RALLY. YOU CAN'T HAVE YOUR CAKE AND EAT IT, TOO, LIKE THEY SAY. THEY DON'T USE THE LAND USE PROVIDING THEY'RE REQUIRED TO PROVIDE THE WATER. IF YOU HAVE PROBLEMS WITH THE LAND USE, GO TO THE APPROPRIATE PEOPLE AND TALK TO THOSE FOLKS. BUT THESE PEOPLE HAVE DONE AN A INCREDIBLE JOB ALONG WITH P.G.& E., AND THEY SHOULD BE RECOGNIZED.

LIKE A LOT OF YOU, I'M GLAD TO SEE THIS PROJECT GO FORWARD. I THINK IT RIGHTFULLY REPRESENTS ANOTHER COFFIN -- ANOTHER NAIL IN THE COFFIN OF THE AUBURN DAM, AND IT REMINDS ME A LITTLE BIT OF WISDOM I SOMETIMES FORGET. IF THE HORSE IS DEAD, GET OFF. AND IF THERE WAS EVER A DEAD HORSE, IT'S THE AUBURN DAM. AND I'M HOPEFUL THAT SOMETIME IN OUR LIFETIME OUR CONGRESSMAN WILL GET OFF THAT HORSE.

THANK YOU.

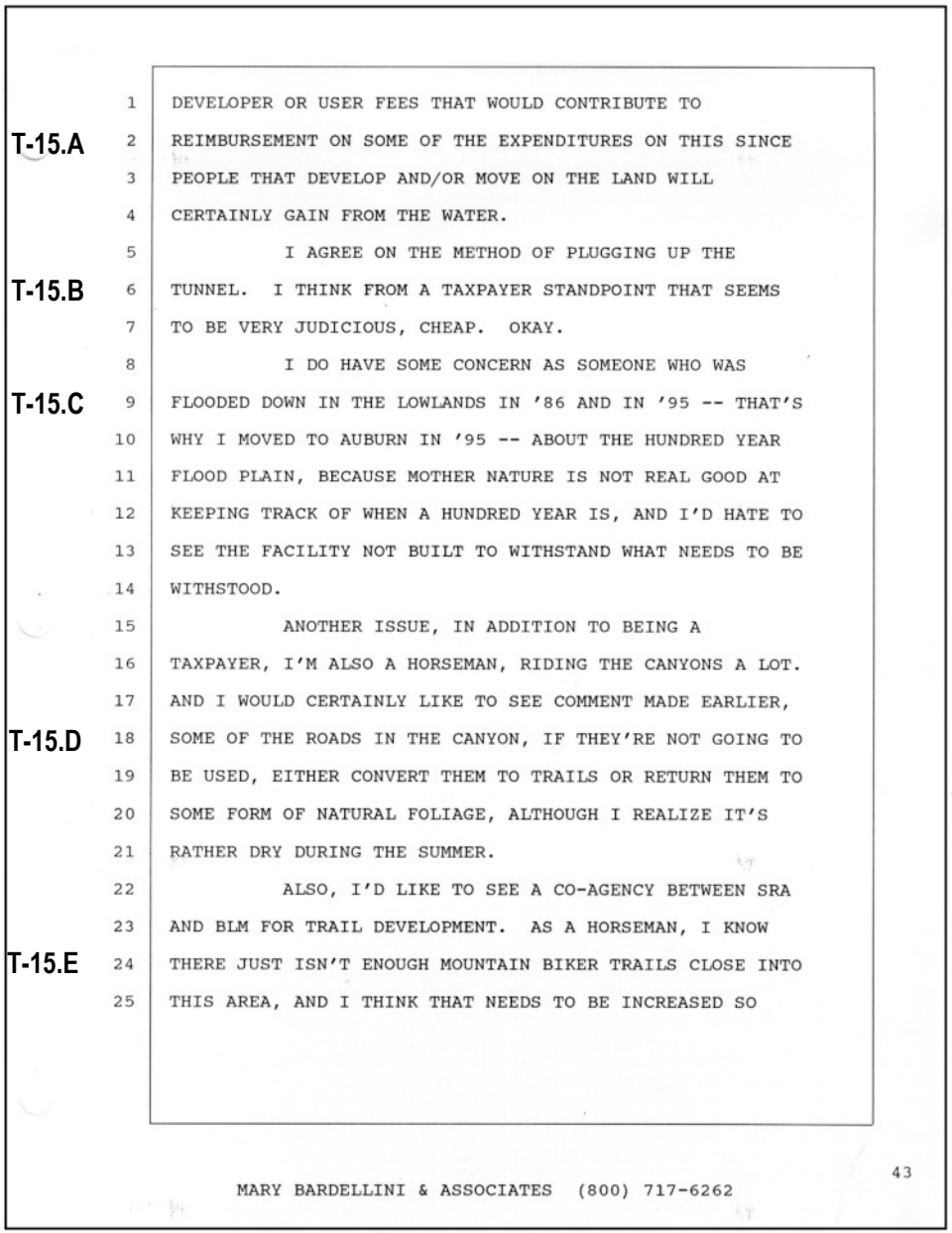
MR. HALL: THANKS, NATE.

T-15

GENE OR MARY FREELAND, FOLLOWED BY MATT PERRY.

MR. FREELAND: THE REASON YOU CALLED US AS A TAG TEAM, AS I WAS SAVING PAPER BY ONLY FILLING OUT ONE SLIP FOR MY WIFE AND I, AND I'LL GO AHEAD AND GO FIRST SINCE I LISTED MY NAME.

I GUESS ONE THING I MIGHT BE CONCERNED ABOUT OR BE INTERESTED IN IS WHETHER THERE WOULD BE ANY FUTURE



DEVELOPER OR USER FEES THAT WOULD CONTRIBUTE TO
T-15.A REIMBURSEMENT ON SOME OF THE EXPENDITURES ON THIS SINCE
PEOPLE THAT DEVELOP AND/OR MOVE ON THE LAND WILL
CERTAINLY GAIN FROM THE WATER.

I AGREE ON THE METHOD OF PLUGGING UP THE
T-15.B TUNNEL. I THINK FROM A TAXPAYER STANDPOINT THAT SEEMS
TO BE VERY JUDICIOUS, CHEAP. OKAY.

I DO HAVE SOME CONCERN AS SOMEONE WHO WAS
T-15.C FLOODED DOWN IN THE LOWLANDS IN '86 AND IN '95 -- THAT'S
WHY I MOVED TO AUBURN IN '95 -- ABOUT THE HUNDRED YEAR
FLOOD PLAIN, BECAUSE MOTHER NATURE IS NOT REAL GOOD AT
KEEPING TRACK OF WHEN A HUNDRED YEAR IS, AND I'D HATE TO
SEE THE FACILITY NOT BUILT TO WITHSTAND WHAT NEEDS TO BE
WITHSTOOD.

ANOTHER ISSUE, IN ADDITION TO BEING A
TAXPAYER, I'M ALSO A HORSEMAN, RIDING THE CANYONS A LOT.
AND I WOULD CERTAINLY LIKE TO SEE COMMENT MADE EARLIER,
T-15.D SOME OF THE ROADS IN THE CANYON, IF THEY'RE NOT GOING TO
BE USED, EITHER CONVERT THEM TO TRAILS OR RETURN THEM TO
SOME FORM OF NATURAL FOLIAGE, ALTHOUGH I REALIZE IT'S
RATHER DRY DURING THE SUMMER.

ALSO, I'D LIKE TO SEE A CO-AGENCY BETWEEN SRA
AND BLM FOR TRAIL DEVELOPMENT. AS A HORSEMAN, I KNOW
T-15.E THERE JUST ISN'T ENOUGH MOUNTAIN BIKER TRAILS CLOSE INTO
THIS AREA, AND I THINK THAT NEEDS TO BE INCREASED SO

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A. Please refer to Response L-9.B.

B. Comment noted.

C. Please refer to Response L-110.I.

D. Please refer to Master Response 3.1.5, Project Area River Restoration.

E. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

THAT WE WON'T HAVE ANY TRAIL USE CONFLICTS.

THANK YOU.

MR. HALL: THANK YOU. MARY, YOU'RE NOT GOING TO SPEAK? OKAY.

MATT PERRY, FOLLOWED BY GREG TUCKER.

THE AUDIENCE: MATT LEFT.

T-16

MR. HALL: CRAIG TUCKER.

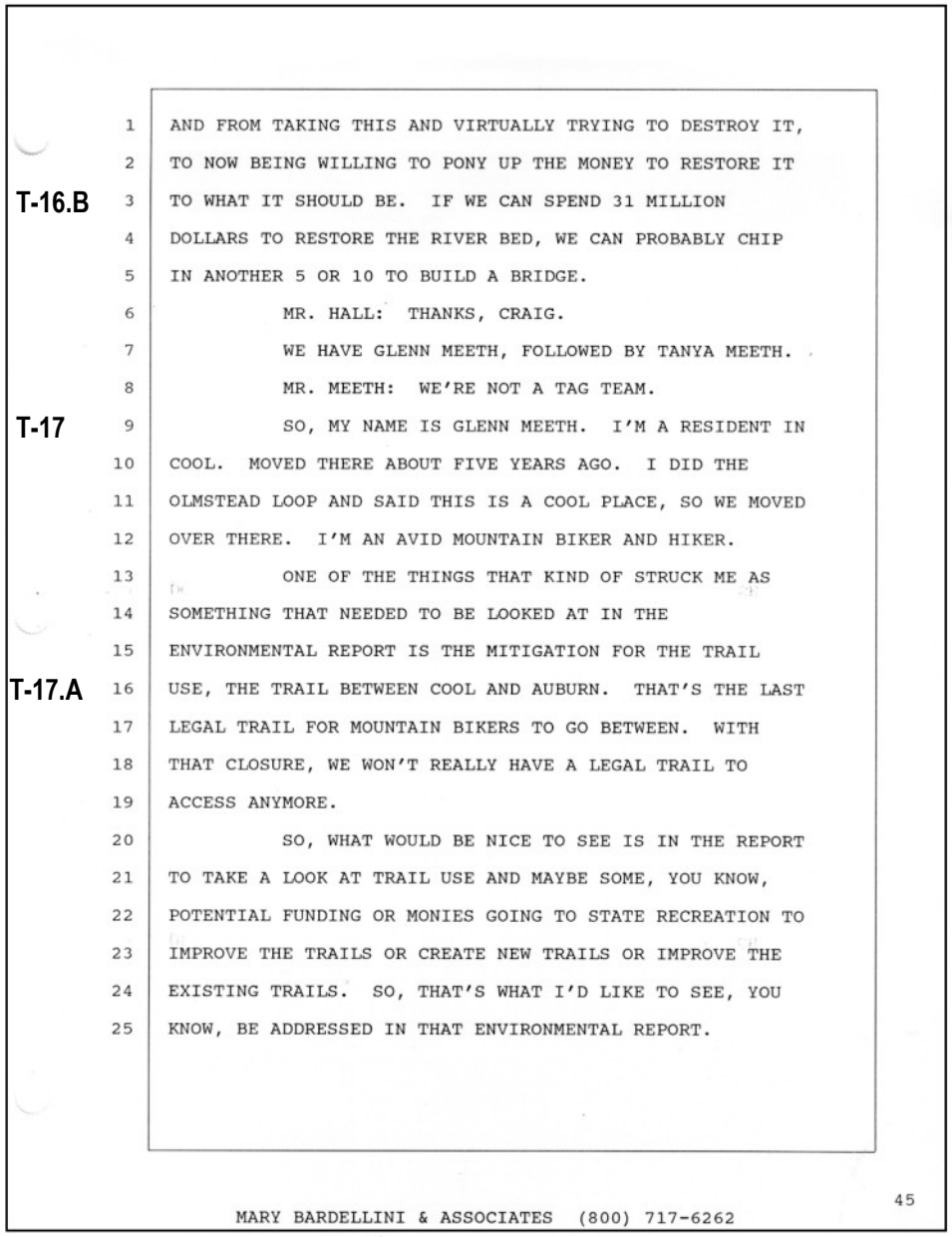
MR. TUCKER: I'M CRAIG TUCKER, AND I HAVE TO ADMIT THAT I LIVE DOWN THE HILL IN SACRAMENTO, SO I'LL REPRESENT MY FELLOW SACRAMENTONS. AND I HAVE TO SAY ONE OF THE COOLEST THINGS ABOUT LIVING IN SACRAMENTO, IT DOESN'T TAKE LONG TO GET TO AUBURN. I COME UP HERE A LOT. I'M A BOATER. I'M AN AVID BOATER AND BIKER AND HIKER.

AND I THINK THIS IS AN AMAZING RESOURCE. ME AND MY FRIENDS IN SACRAMENTO CAN'T WAIT FOR THE WEEKEND TO COME UP HERE AND HAVE FUN AND SPEND MONEY WHILE WE'RE HERE. AND I THINK THAT BEING ABLE TO REWATER THE RIVER BED AND BUILD A PARK HERE IS GOING TO BE GREAT FOR THIS COMMUNITY, BECAUSE YOU CAN TAKE ADVANTAGE OF SUCKERS LIKE ME WHO WANT TO COME AND SPEND MONEY AND HANG OUT FOR A COUPLE OF DAYS IN AUBURN.

T-16.A

SO, I COMMEND YOU ON HAVING THIS PLAN, AND THIS COMMUNITY IS REALLY, FROM EVERYTHING I UNDERSTAND, IS REALLY TURNED SORT OF THE POLITICAL ENERGY AROUND,

A. Project support noted.



AND FROM TAKING THIS AND VIRTUALLY TRYING TO DESTROY IT, TO NOW BEING WILLING TO PONY UP THE MONEY TO RESTORE IT TO WHAT IT SHOULD BE. IF WE CAN SPEND 31 MILLION DOLLARS TO RESTORE THE RIVER BED, WE CAN PROBABLY CHIP IN ANOTHER 5 OR 10 TO BUILD A BRIDGE.

MR. HALL: THANKS, CRAIG.

WE HAVE GLENN MEETH, FOLLOWED BY TANYA MEETH.

MR. MEETH: WE'RE NOT A TAG TEAM.

SO, MY NAME IS GLENN MEETH. I'M A RESIDENT IN COOL. MOVED THERE ABOUT FIVE YEARS AGO. I DID THE OLMSTEAD LOOP AND SAID THIS IS A COOL PLACE, SO WE MOVED OVER THERE. I'M AN AVID MOUNTAIN BIKER AND HIKER.

ONE OF THE THINGS THAT KIND OF STRUCK ME AS SOMETHING THAT NEEDED TO BE LOOKED AT IN THE ENVIRONMENTAL REPORT IS THE MITIGATION FOR THE TRAIL USE, THE TRAIL BETWEEN COOL AND AUBURN. THAT'S THE LAST LEGAL TRAIL FOR MOUNTAIN BIKERS TO GO BETWEEN. WITH THAT CLOSURE, WE WON'T REALLY HAVE A LEGAL TRAIL TO ACCESS ANYMORE.

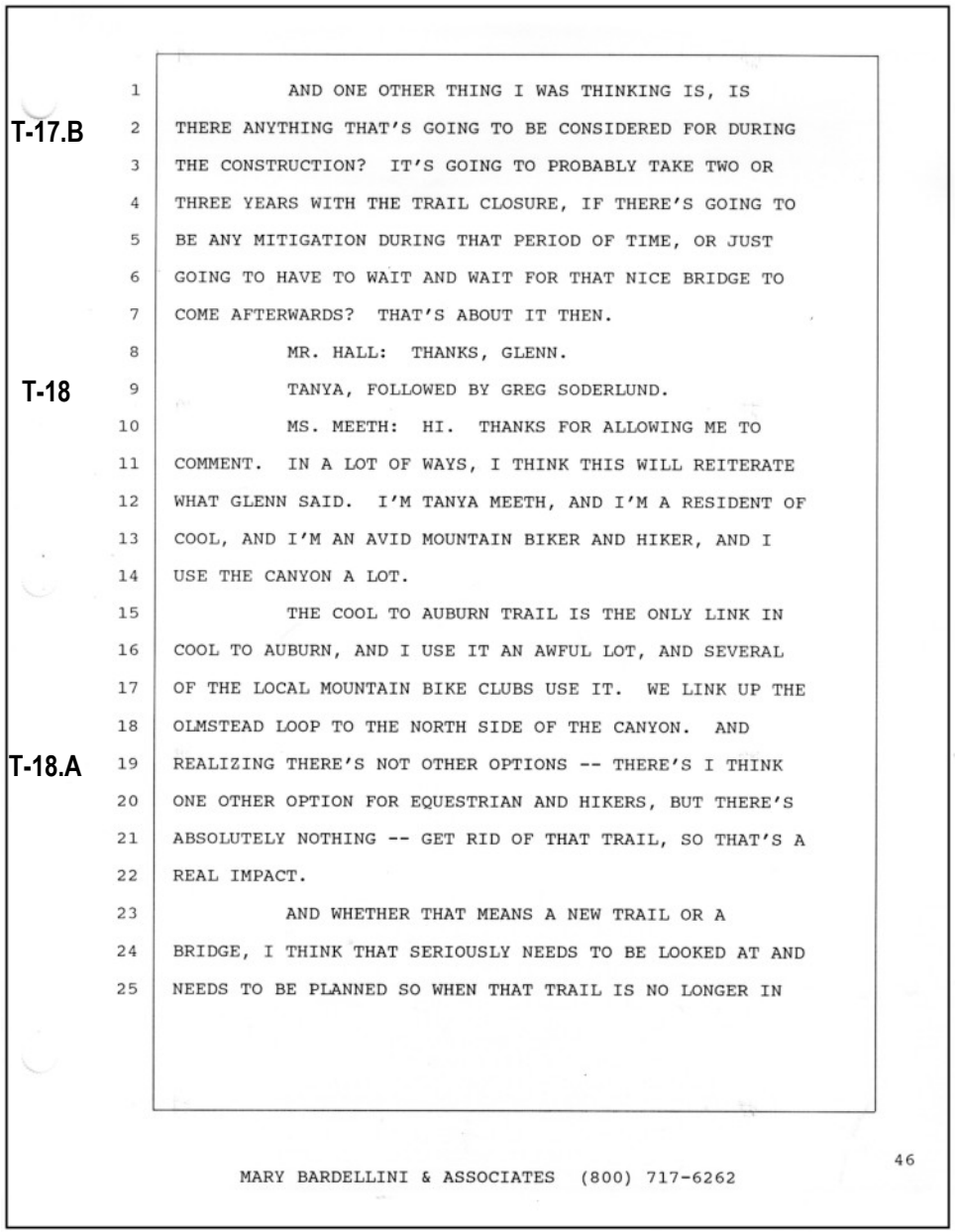
SO, WHAT WOULD BE NICE TO SEE IS IN THE REPORT TO TAKE A LOOK AT TRAIL USE AND MAYBE SOME, YOU KNOW, POTENTIAL FUNDING OR MONIES GOING TO STATE RECREATION TO IMPROVE THE TRAILS OR CREATE NEW TRAILS OR IMPROVE THE EXISTING TRAILS. SO, THAT'S WHAT I'D LIKE TO SEE, YOU KNOW, BE ADDRESSED IN THAT ENVIRONMENTAL REPORT.

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T-16.B B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

T-17.A A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



AND ONE OTHER THING I WAS THINKING IS, IS
T-17.B THERE ANYTHING THAT'S GOING TO BE CONSIDERED FOR DURING THE CONSTRUCTION? IT'S GOING TO PROBABLY TAKE TWO OR THREE YEARS WITH THE TRAIL CLOSURE, IF THERE'S GOING TO BE ANY MITIGATION DURING THAT PERIOD OF TIME, OR JUST GOING TO HAVE TO WAIT AND WAIT FOR THAT NICE BRIDGE TO COME AFTERWARDS? THAT'S ABOUT IT THEN.

MR. HALL: THANKS, GLENN.

T-18 TANYA, FOLLOWED BY GREG SODERLUND.

MS. MEETH: HI. THANKS FOR ALLOWING ME TO COMMENT. IN A LOT OF WAYS, I THINK THIS WILL REITERATE WHAT GLENN SAID. I'M TANYA MEETH, AND I'M A RESIDENT OF COOL, AND I'M AN AVID MOUNTAIN BIKER AND HIKER, AND I USE THE CANYON A LOT.

THE COOL TO AUBURN TRAIL IS THE ONLY LINK IN COOL TO AUBURN, AND I USE IT AN AWFUL LOT, AND SEVERAL OF THE LOCAL MOUNTAIN BIKE CLUBS USE IT. WE LINK UP THE OLMSTEAD LOOP TO THE NORTH SIDE OF THE CANYON. AND
T-18.A REALIZING THERE'S NOT OTHER OPTIONS -- THERE'S I THINK ONE OTHER OPTION FOR EQUESTRIAN AND HIKERS, BUT THERE'S ABSOLUTELY NOTHING -- GET RID OF THAT TRAIL, SO THAT'S A REAL IMPACT.

AND WHETHER THAT MEANS A NEW TRAIL OR A BRIDGE, I THINK THAT SERIOUSLY NEEDS TO BE LOOKED AT AND NEEDS TO BE PLANNED SO WHEN THAT TRAIL IS NO LONGER IN

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B. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

USE, THAT THERE IS SOME OPTION FOR USERS.

AND, IN ADDITION TO THAT, JUST TO REALLY LOOK AT THE INCREASED USE ON THE EXISTING TRAILS. I KNOW ONE COMMENT OR -- THE NORTH SIDE, THE ACCESS ROAD THAT I GO DOWN TO THE WATER -- THE PUMPING STATIONS -- IT'S GOING TO BE ASPHALTED. AND I BELIEVE THAT MIGHT BE THE ONLY MOUNTAIN BIKE TRAIL ON THAT SIDE OF THE CANYON. SO, IF THAT'S THE CASE, AND THAT'S THE ONLY MOUNTAIN BIKE TRAIL ASPHALTED, IT WOULD BE GREAT TO HAVE AN ADDITIONAL TRAIL WHEN THAT'S DONE.

THAT'S IT. THANK YOU.

MR. HALL: THANKS.

GREG SODERLUND, FOLLOWED BY EMMETT CARTIER.

T-19

MR. SODERLUND: HI, I'M GREG SODERLUND, AND I'M HERE REPRESENTING THE AMERICAN RIVER 50 AND THE WESTERN STATES ENDURANCE RUN. THANKS FOR STICKING AROUND.

WE'RE ALL IN AGREEMENT SO FAR, SO I DON'T HAVE MUCH TO SAY. I AM FROM EAST SACRAMENTO, AND I DON'T WORK HERE. AT THE END, WE WOULD LIKE TO SUBMIT A COMMENT LETTER, AND I DON'T KNOW HOW MANY YOU WANT, BUT WE HAVE A LOT OF THEM.

THE WESTERN STATES RUN AND THE AMERICAN RIVER 50 ARE SUBSTANTIALLY IN AGREEMENT WITH THE PROPOSAL, WITH SOME EXCEPTIONS. THE PROJECT WILL HAVE NO IMPACT

T-19.A

ON THE WESTERN STATES TRAIL. I BELIEVE IN THE PROPOSAL IT SAYS IT WILL, BUT OUR FEELING IS THAT'S PROBABLY IN ERROR, UNLESS YOU'RE DOING SOMETHING WE DON'T KNOW. FROM -- BASICALLY THE WESTERN STATES TRAIL, FROM THE OVERLOOK EASTERLY TO NO-HANDS BRIDGE, SHOULD NOT BE IMPACTED, AND I THINK THE PROPOSAL SAYS THAT IT WILL.

THE PROJECT DOES PRODUCE TWO UNNECESSARY AND, IN OUR VIEW, AVOIDABLE IMPACTS. THE PROJECT WOULD SIGNIFICANTLY IMPACT THE AMERICAN RIVER 50. WESTERN STATES IS UNARGUABLY THE PREMIERE TRAIL IN THE WORLD. THE AMERICAN RIVER 50 IS ONE OF THE PREMIERE 50-MILE TRAIL RUNS. IT'S BEEN IN THE AUBURN AREA FOR 23 CONSECUTIVE YEARS. THE AMERICAN RIVER 50 WOULD BE IMPACTED BY LIMITING ACCESS TO THE LAST THREE MILES OF THE COURSE. THE AR 50 IS AN OUTGROWTH OF THE WESTERN STATES ENDURANCE RUN AND SIGNIFICANT PART OF THAT EVENT AS WELL.

WE WOULD REQUEST USE OF THE EXISTING ACCESS ROAD ONE DAY PER YEAR DURING THE CONSTRUCTION PHASE AND PERHAPS ON INTO PERPETUITY WITH THE PARKING LOTS.

THE SECOND MAJOR IMPACT WOULD BE TO THE USE OF THE AUBURN TO COOL TRAIL, WHICH TRANSITS THE AREA OF THE COFFER DAM. THERE'S BEEN A SIGNIFICANT INCREASE IN THE USE OF THIS TRAIL BY RUNNERS, MOUNTAIN BIKERS, AND EQUESTRIAN. PERMANENT CLOSURE WOULD PRODUCE AN ADVERSE

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A. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction and Master Response 3.1.1, Auburn-to-Cool Trail.

Project area trail use for the American River 50 running and equestrian events will be coordinated with the CDPR event coordination and Reclamation's construction contractor such that both events may occur, without interruption, even during project construction phases. Use of the trails in the project area, once construction is completed, would be coordinated with the CDPR event coordinator, as under current practices.

EFFECT FOR COMPETITION FROM THE OVERLOOK VIA NO-HANDS BRIDGE.

THE TRAIL IS JUST NOT DESIGNED FOR MOUNTAIN BIKES. THE AUBURN TO COOL TRAIL IMPACT COULD BE AVOIDED BY CONSTRUCTION OF AN EQUESTRIAN CYCLING BRIDGE AT THE PROJECT SITE. THERE WAS -- A SIMILAR BRIDGE WAS LOOKED AT IN 1992 AT RUCK-A-CHUCKY, AND THE PRICE IN 1992 WAS $100,000, SO IT'S MORE THAN 5 OR 10,000. THIS IS SIGNIFICANTLY A WIDER AREA OF THE STREAM BED, AND SO THE COST COULD BE SIGNIFICANTLY MORE, BUT IT PROBABLY BEATS THE BARGE.

THANK YOU VERY MUCH.

MR. HALL: THANK YOU.

T-20 EMMETT, FOLLOWED BY KATHIE --

MR. CARTIER: HI, I'M EMMETT CARTIER. I LIVED IN AUBURN ABOUT 12 YEARS. NOW, I'M A FLAT-LANDER, AND I STILL USE THE AREA WITH MY FAMILY, AND I DO GUIDE IN THE MIDDLE FORK.

BASICALLY, I'D LIKE TO ADDRESS THE EIR IN TERMS OF THRESHOLD OF SIGNIFICANCE, WITH RESPECT TO CREEK CREATION, SUCH AS THERE SHOULD BE UNDER CEQA COMMUNITY STANDARDS APPLIED FOR DETERMINING A LEVEL OF

T-20.A SIGNIFICANCE, WHETHER IT'S BENEFICIAL, NOT SIGNIFICANT, OR SIGNIFICANT.

AND I THINK THE 1992 RECREATION PLAN FOR THE

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A. Typically, restoration or creation of a waterway that provides resources and habitat enhancement of fish and wildlife would be considered beneficial.

AUBURN CREEK RECREATION AREA SHOULD BE USED BECAUSE THAT FOLLOWED EACH TRAIL; EVERY ACCESS WAS SIGNIFICANT AND HIGHLY SIGNIFICANT, AND IT'S VERY IMPORTANT TO THE COMMUNITY.

AND THERE'S SORT OF CONFLICT BETWEEN BOATERS GOING DOWN THE RIVER AND USERS COMING ACROSS THE RIVER. WHEN YOU CLOSE THE TUNNEL, THEN YOU HAVE A TRAIL CLOSURE, AND THAT ELIMINATES LARGE PROPORTION OF RECREATIONAL USE OF THIS AREA.

SO, THAT'S A CONCERN. NEED TO RECONSIDER AND

T-20.B

RESTATE THE SIGNIFICANCE OF RECREATION IN TERMS OF THE SEASONAL CLOSURES FROM 2002 TO 2004 FOR AN UNDETERMINED SIZE AREA THAT APPARENTLY INCLUDES THE WITHHOLD DRAINAGES OF KNICKERBACKER CREEK AND SALT CREEK UNDER THE PARKS AND RECREATION CLOSURE BORDER.

SO, THAT'S A LITTLE BIT EXCESS, BUT IT INCLUDES THE WHOLE OLMSTEAD LOOP AREA, AND THAT'S WHAT THE EIR SAYS, EXCEPT FOR DESIGNATED TRAILS. SO, THE EIR FURTHER CHARACTERIZED DESIGNED RECREATION FACILITIES, PARKING ACCESSIBILITIES, AND THE USE REGULATIONS AS PART OF THE EIR.

AND I'M CONCERNED ABOUT THE LOSS OF THE ONLY

T-20.C

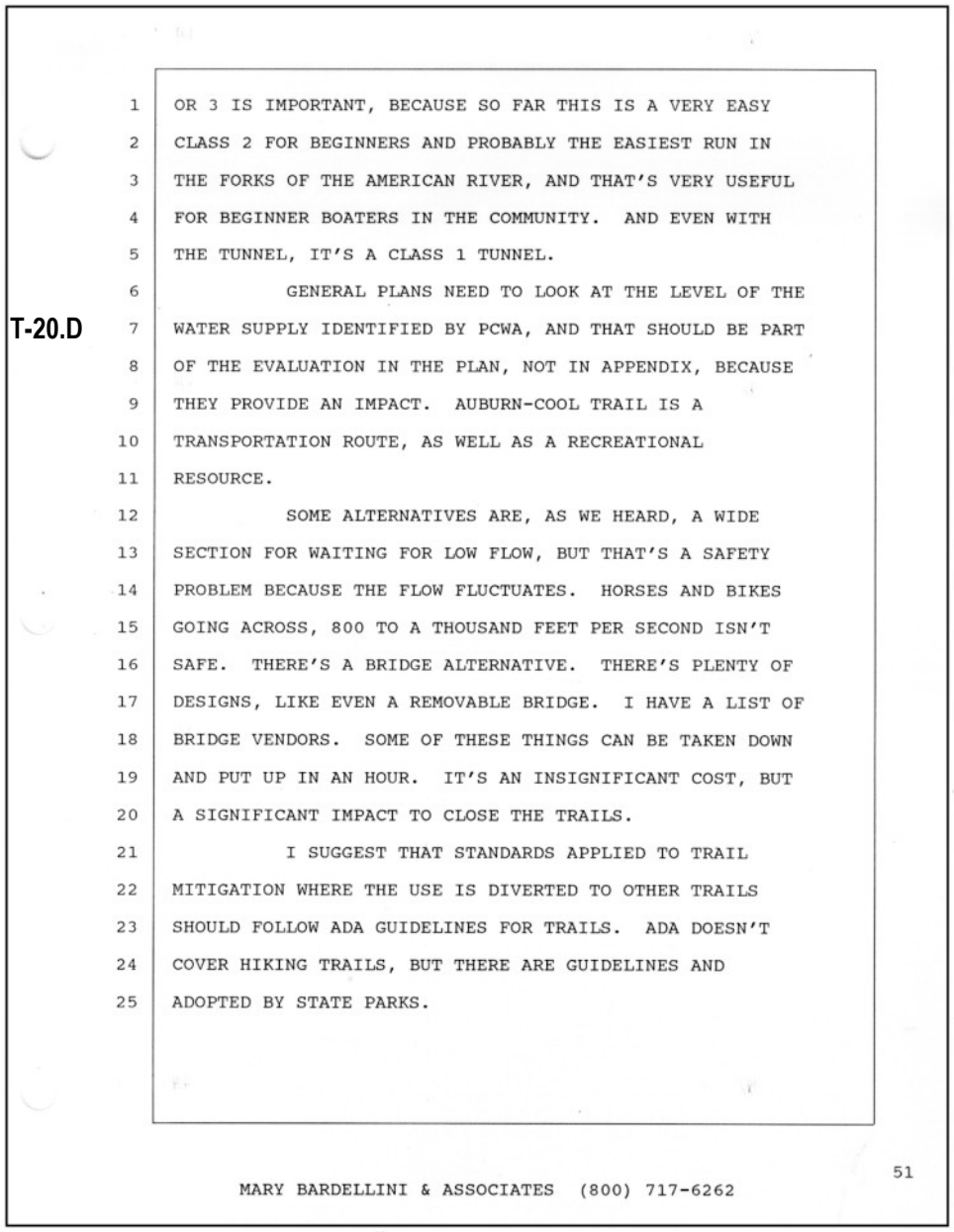
RAPID IN THIS AREA AT TAMAROO BAR. THAT'S A SIGNIFICANT IMPACT THAT SHOULD BE IDENTIFIED, EVEN IF IT'S BEING REPLACED WITH ANOTHER RAPID. AND WHETHER IT'S A CLASS 2

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B. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction.

C. Please refer to Master Response 3.1.7, Tamaroo Bar.



OR 3 IS IMPORTANT, BECAUSE SO FAR THIS IS A VERY EASY CLASS 2 FOR BEGINNERS AND PROBABLY THE EASIEST RUN IN THE FORKS OF THE AMERICAN RIVER, AND THAT'S VERY USEFUL FOR BEGINNER BOATERS IN THE COMMUNITY. AND EVEN WITH THE TUNNEL, IT'S A CLASS 1 TUNNEL.

GENERAL PLANS NEED TO LOOK AT THE LEVEL OF THE WATER SUPPLY IDENTIFIED BY PCWA, AND THAT SHOULD BE PART OF THE EVALUATION IN THE PLAN, NOT IN APPENDIX, BECAUSE THEY PROVIDE AN IMPACT. AUBURN-COOL TRAIL IS A TRANSPORTATION ROUTE, AS WELL AS A RECREATIONAL RESOURCE.

SOME ALTERNATIVES ARE, AS WE HEARD, A WIDE SECTION FOR WAITING FOR LOW FLOW, BUT THAT'S A SAFETY PROBLEM BECAUSE THE FLOW FLUCTUATES. HORSES AND BIKES GOING ACROSS, 800 TO A THOUSAND FEET PER SECOND ISN'T SAFE. THERE'S A BRIDGE ALTERNATIVE. THERE'S PLENTY OF DESIGNS, LIKE EVEN A REMOVABLE BRIDGE. I HAVE A LIST OF BRIDGE VENDORS. SOME OF THESE THINGS CAN BE TAKEN DOWN AND PUT UP IN AN HOUR. IT'S AN INSIGNIFICANT COST, BUT A SIGNIFICANT IMPACT TO CLOSE THE TRAILS.

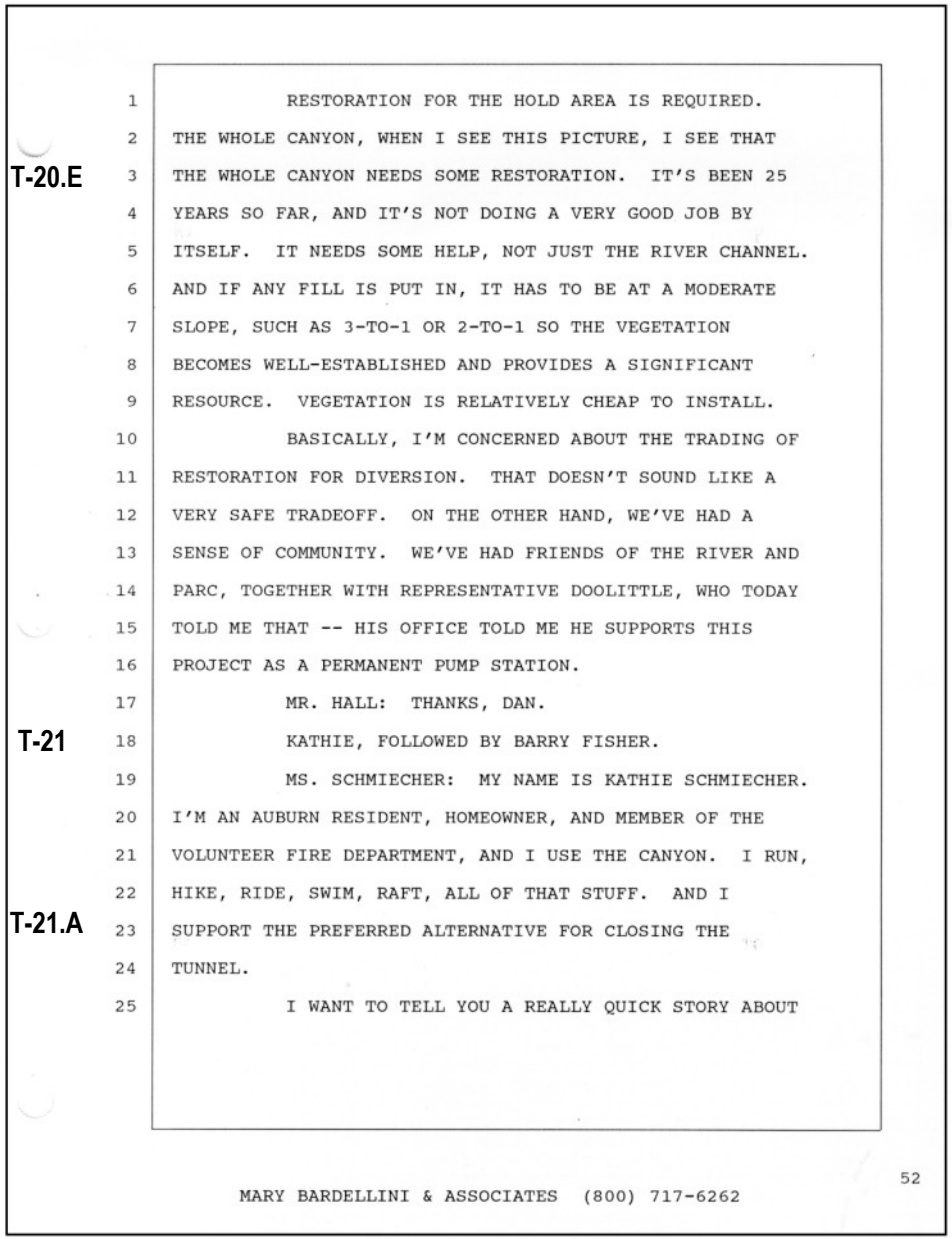
I SUGGEST THAT STANDARDS APPLIED TO TRAIL MITIGATION WHERE THE USE IS DIVERTED TO OTHER TRAILS SHOULD FOLLOW ADA GUIDELINES FOR TRAILS. ADA DOESN'T COVER HIKING TRAILS, BUT THERE ARE GUIDELINES AND ADOPTED BY STATE PARKS.

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T-20.D

D. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



RESTORATION FOR THE HOLD AREA IS REQUIRED. THE WHOLE CANYON, WHEN I SEE THIS PICTURE, I SEE THAT THE WHOLE CANYON NEEDS SOME RESTORATION. IT'S BEEN 25 YEARS SO FAR, AND IT'S NOT DOING A VERY GOOD JOB BY ITSELF. IT NEEDS SOME HELP, NOT JUST THE RIVER CHANNEL. AND IF ANY FILL IS PUT IN, IT HAS TO BE AT A MODERATE SLOPE, SUCH AS 3-TO-1 OR 2-TO-1 SO THE VEGETATION BECOMES WELL-ESTABLISHED AND PROVIDES A SIGNIFICANT RESOURCE. VEGETATION IS RELATIVELY CHEAP TO INSTALL.

BASICALLY, I'M CONCERNED ABOUT THE TRADING OF RESTORATION FOR DIVERSION. THAT DOESN'T SOUND LIKE A VERY SAFE TRADEOFF. ON THE OTHER HAND, WE'VE HAD A SENSE OF COMMUNITY. WE'VE HAD FRIENDS OF THE RIVER AND PARC, TOGETHER WITH REPRESENTATIVE DOOLITTLE, WHO TODAY TOLD ME THAT -- HIS OFFICE TOLD ME HE SUPPORTS THIS PROJECT AS A PERMANENT PUMP STATION.

MR. HALL: THANKS, DAN.

KATHIE, FOLLOWED BY BARRY FISHER.

MS. SCHMIECHER: MY NAME IS KATHIE SCHMIECHER. I'M AN AUBURN RESIDENT, HOMEOWNER, AND MEMBER OF THE VOLUNTEER FIRE DEPARTMENT, AND I USE THE CANYON. I RUN, HIKE, RIDE, SWIM, RAFT, ALL OF THAT STUFF. AND I SUPPORT THE PREFERRED ALTERNATIVE FOR CLOSING THE TUNNEL.

I WANT TO TELL YOU A REALLY QUICK STORY ABOUT

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T-20.E

E. Please refer to Master Response 3.1.5, Project Area River Restoration.

T-21

T-21.A

A. Project support noted.

LAST CHRISTMAS. I WAS DELIVERING MEALS TO PEOPLE WHO ARE HOUSEBOUND, AND I DELIVERED A MEAL TO A VERY, VERY, VERY ELDERLY PERSON. SHE PROBABLY SPOKE LATIN AS HER NATIVE TONGUE. SHE WAS VERY OLD. AND SHE HAD THIS VERY CLUTTERED TRAILER, AND IT DIDN'T HAVE ANYTHING REALLY NATURAL ABOUT THE WHOLE TRAILER, EXCEPT FOR TWO ROCKS OVER ON THE TABLE.

AFTER A LONG CONVERSATION ABOUT HERSELF AND HER LIFE GROWING UP IN THE AUBURN AREA, I ASKED HER ABOUT THE TWO ROCKS OVER THERE ON THAT TABLE. AND SHE SAID: WELL, YOU KNOW, I GREW UP DOWN THERE. WE HAD THESE ORCHARDS, OUR FAMILY -- AND WE USED TO GO SWIMMING IN THE RIVER. AND I WENT DOWN IN THE RIVER ONE DAY, AND I PICKED UP THESE ROCKS, AND I'VE KEPT THEM MY WHOLE LIFE.

AND SO I WAS REALLY INTRIGUED BECAUSE THIS IS REALLY BLOWING MY MIND, BECAUSE I ALSO WORK FOR FRIENDS OF THE RIVER AS THEIR STATE LOBBYIST. SO I ASKED HER: DID YOU FISH? DID YOU SEE THE SALMON COMING UP? DID YOU SEE THE FISH COMING UP? DID YOU GET TO EAT THEM? DID THEY TASTE GOOD? SHE SAID: YEAH, AND I WANT YOU TO TAKE THESE TWO ROCKS HOME WITH YOU.

AND, I MEAN, IF YOU CAN IMAGINE, IT JUST -- I WOULD REALLY LIKE TO SEE THE FISH COME BACK, AND I REALIZE THAT THIS IS PROBABLY JUST A FIRST STEP. THERE

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T-21.B

B. One of the goals of river channel restoration is to provide improved fish resource and aquatic habitat conditions, relative to existing conditions.

WOULD BE OTHER THINGS THAT WOULD NEED TO BE DONE, OBVIOUSLY A LOT OF OTHER THINGS, BUT THIS IS A STEP IN THE RIGHT DIRECTION, SO I SUPPORT IT.

MR. HALL: THANK YOU.

T-22 BARRY FISHER. AND IF THERE ARE ANY OTHER PEOPLE WHO WOULD LIKE TO SPEAK, MAKE SURE YOU GIVE TAMMY THE CARDS.

MR. FISHER: GOOD EVENING. I'M BARRY FISHER FROM FAIR OAKS, CALIFORNIA, AND I'VE GOT NOTHING NEW TO SAY, BUT I'D LIKE TO REINFORCE A LOT OF WHAT HAS BEEN SAID ALREADY.

FIRST, BEFORE I FORGET, GREG SODERLUND HAS ASKED ME TO LET YOU KNOW, IF YOU DIDN'T KNOW ALREADY, THAT CHANNEL 6 IS DOING A ONE-HOUR DOCUMENTARY ON WESTERN STATES ON OCTOBER THE 28TH AT 6:30 P.M. OKAY. SO, PUT THAT DOWN ON YOUR CALENDAR. IT'S A GOOD PROGRAM.

REALLY WHAT I'M HERE, I'M SPEAKING AS A MEMBER OF THE TRAIL-RUNNING COMMUNITY, AS A MEMBER OF THE HIKING COMMUNITY, AND AS A CONCERNED CITIZEN. I LOVE

T-22.A EVERYTHING THAT IS BEEN MENTIONED ABOUT THIS PARTICULAR PLAN WITH, OF COURSE, ONE EXCEPTION, AND THAT EXCEPTION IS THE CLOSURE OF THE TRAIL FROM AUBURN TO COOL.

THIS IS THE ONLY CROSSING UNTIL YOU GET -- DOWNSTREAM YOU PASS FOLSOM LAKE. IF YOU GO UPSTREAM,

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

YOU'RE LOOKING AT NO-HANDS BRIDGE, WHICH IS SIX MILES BY TRAIL, AND IT PROVIDES REALLY AN ATTRACTIVE TRAIL LOOP FOR HIKERS, RUNNERS, AND EQUESTRIAN. I'M AFRAID NOT FOR CYCLISTS, BECAUSE IT GIVES THIS LOOP BETWEEN AUBURN AND COOL GOING ONE DIRECTION OVER NO-HANDS BRIDGE AND ON THE OTHER DIRECTION OVER THE COFFER DAM.

IF THIS PROJECT GOES AHEAD WITHOUT A BRIDGE, THEN THAT LOOP IS LOST FOREVER. AND I'M ONE OF THESE PEOPLE WHO ALSO THINKS UNLESS WE GET A BRIDGE BUILT VERY QUICKLY, YOU CAN FORGET IT COMPLETELY.

WHAT I WOULD SAY, I HIGHLY SUPPORT EVERYTHING THAT'S GOING ON HERE, BUT I DO REQUEST THAT WE GET FUNDS ALLOCATED FOR A BRIDGE AS SOON AS POSSIBLE.

THANK YOU.

T-23 MR. HALL: BEN TROIA.

MR. TROIA: HI, I'M BEN TROIA. I'M AN AUBURN RESIDENT AS WELL, AND I LIVE RIGHT ON THE OTHER SIDE OF THAT RIDGE IN SOUTH AUBURN OFF OF MAIDU, AND I SHARE OPINIONS WITH BASICALLY EVERYBODY HERE. VERY, VERY

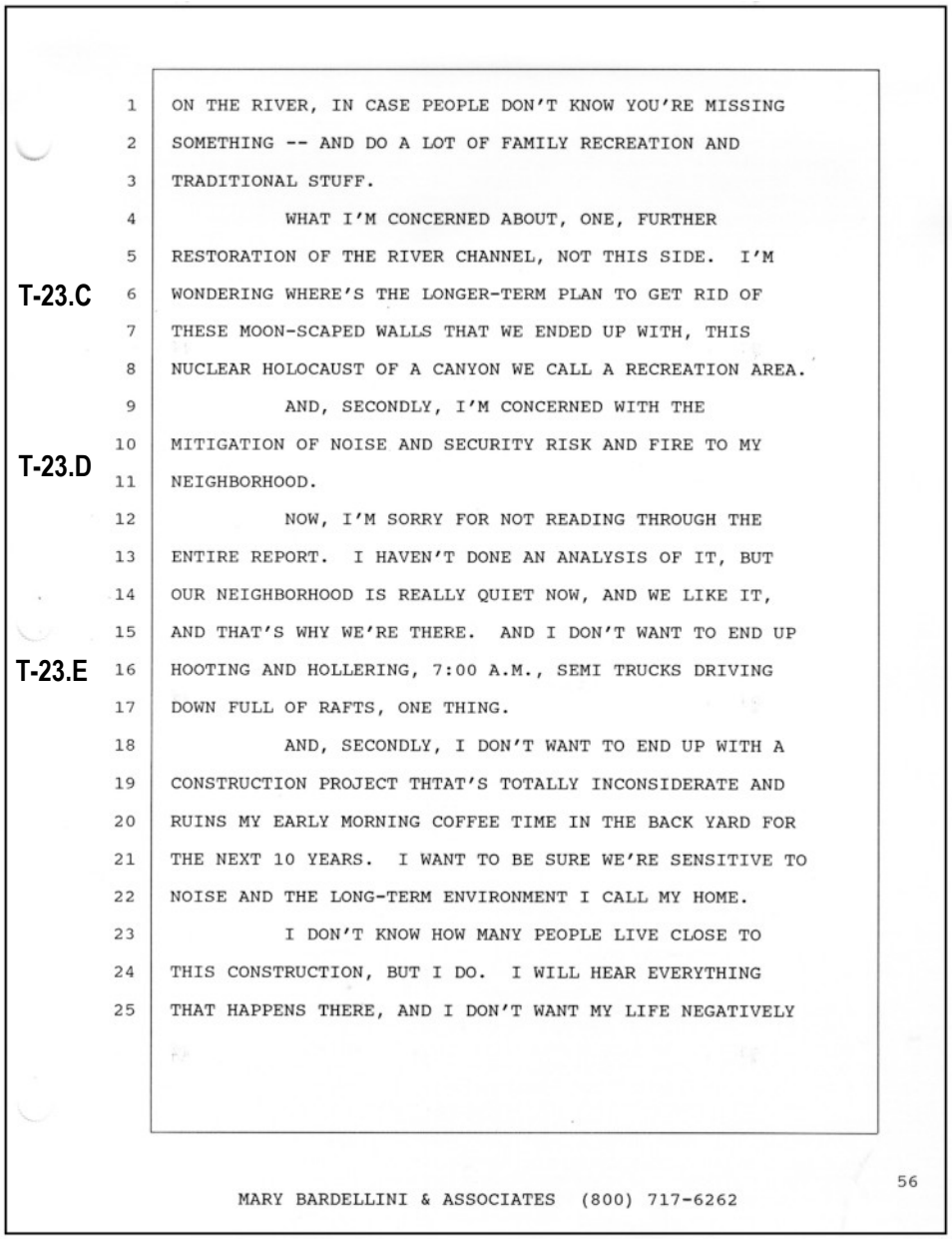
T-23.A HAPPY WITH THE PROJECT, WITH THE BOR AND THE WATER AGENCY AND YOUR ENGINEERING FIRM. THE PLAN LOOKS LIKE A SOUND PLAN.

I SUPPORT THE IDEA THAT WE NEED TO GET A

T-23.B BRIDGE PLAN INTEGRATED INTO THE OVERALL PLAN AND NOT LET THAT GO. I'M AN AVID FISHERMAN -- THIS IS GREAT FISHING

A. Project support noted.

B. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.



ON THE RIVER, IN CASE PEOPLE DON'T KNOW YOU'RE MISSING SOMETHING -- AND DO A LOT OF FAMILY RECREATION AND TRADITIONAL STUFF.

WHAT I'M CONCERNED ABOUT, ONE, FURTHER RESTORATION OF THE RIVER CHANNEL, NOT THIS SIDE. I'M WONDERING WHERE'S THE LONGER-TERM PLAN TO GET RID OF THESE MOON-SCAPED WALLS THAT WE ENDED UP WITH, THIS NUCLEAR HOLOCAUST OF A CANYON WE CALL A RECREATION AREA.

AND, SECONDLY, I'M CONCERNED WITH THE MITIGATION OF NOISE AND SECURITY RISK AND FIRE TO MY NEIGHBORHOOD.

NOW, I'M SORRY FOR NOT READING THROUGH THE ENTIRE REPORT. I HAVEN'T DONE AN ANALYSIS OF IT, BUT OUR NEIGHBORHOOD IS REALLY QUIET NOW, AND WE LIKE IT, AND THAT'S WHY WE'RE THERE. AND I DON'T WANT TO END UP HOOTING AND HOLLERING, 7:00 A.M., SEMI TRUCKS DRIVING DOWN FULL OF RAFTS, ONE THING.

AND, SECONDLY, I DON'T WANT TO END UP WITH A CONSTRUCTION PROJECT THTAT'S TOTALLY INCONSIDERATE AND RUINS MY EARLY MORNING COFFEE TIME IN THE BACK YARD FOR THE NEXT 10 YEARS. I WANT TO BE SURE WE'RE SENSITIVE TO NOISE AND THE LONG-TERM ENVIRONMENT I CALL MY HOME.

I DON'T KNOW HOW MANY PEOPLE LIVE CLOSE TO THIS CONSTRUCTION, BUT I DO. I WILL HEAR EVERYTHING THAT HAPPENS THERE, AND I DON'T WANT MY LIFE NEGATIVELY

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T-23.C

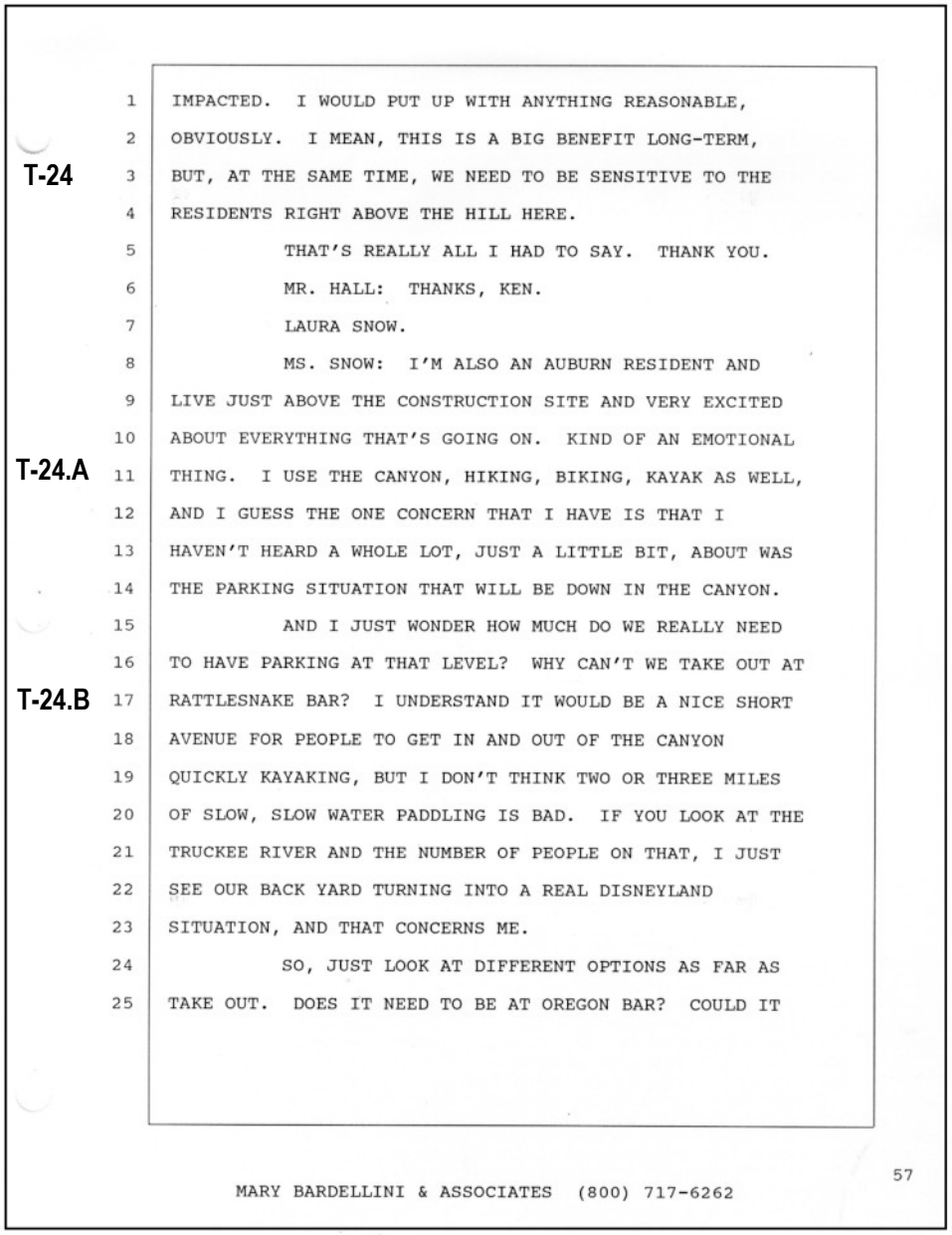
C. Please refer to Master Response 3.1.5, Project Area River Restoration.

T-23.D

D. Please refer to Master Response 3.1.9, Fire Management.

T-23.E

E. Please refer to Master Response 3.1.6, Public River Access Features.



IMPACTED. I WOULD PUT UP WITH ANYTHING REASONABLE, OBVIOUSLY. I MEAN, THIS IS A BIG BENEFIT LONG-TERM, BUT, AT THE SAME TIME, WE NEED TO BE SENSITIVE TO THE RESIDENTS RIGHT ABOVE THE HILL HERE.

THAT'S REALLY ALL I HAD TO SAY. THANK YOU.

MR. HALL: THANKS, KEN.

LAURA SNOW.

MS. SNOW: I'M ALSO AN AUBURN RESIDENT AND LIVE JUST ABOVE THE CONSTRUCTION SITE AND VERY EXCITED ABOUT EVERYTHING THAT'S GOING ON. KIND OF AN EMOTIONAL THING. I USE THE CANYON, HIKING, BIKING, KAYAK AS WELL, AND I GUESS THE ONE CONCERN THAT I HAVE IS THAT I HAVEN'T HEARD A WHOLE LOT, JUST A LITTLE BIT, ABOUT WAS THE PARKING SITUATION THAT WILL BE DOWN IN THE CANYON.

AND I JUST WONDER HOW MUCH DO WE REALLY NEED TO HAVE PARKING AT THAT LEVEL? WHY CAN'T WE TAKE OUT AT RATTLESNAKE BAR? I UNDERSTAND IT WOULD BE A NICE SHORT AVENUE FOR PEOPLE TO GET IN AND OUT OF THE CANYON QUICKLY KAYAKING, BUT I DON'T THINK TWO OR THREE MILES OF SLOW, SLOW WATER PADDLING IS BAD. IF YOU LOOK AT THE TRUCKEE RIVER AND THE NUMBER OF PEOPLE ON THAT, I JUST SEE OUR BACK YARD TURNING INTO A REAL DISNEYLAND SITUATION, AND THAT CONCERNS ME.

SO, JUST LOOK AT DIFFERENT OPTIONS AS FAR AS TAKE OUT. DOES IT NEED TO BE AT OREGON BAR? COULD IT

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T-24 A. Project support noted.

T-24.A B. Please refer to Master Response 3.1.6, Public River Access Features.

T-24.B

BE DOWNSTREAM AT RATTLESNAKE BAR? THERE'S A BOAT RAMP AVAILABLE.

THAT'S ABOUT IT. BUT, OTHER THAN THAT, REALLY EXCITED, AND I GUESS I JUST SELFISHLY DON'T WANT TO BE RUNNING DOWN THERE AND HAVING TO DODGE TRAFFIC.

THANK YOU.

MR. HALL: THANKS.

IS THERE ANYBODY ELSE THAT WOULD LIKE TO SPEAK? YES.

MR. CARDWELL: I JUST HAVE A QUICK COMMENT ON

T-25 KEEPING THE TRAIL OPEN. I THINK YOU SHOULD CONSIDER IT

T-25.A AS A SAFETY ISSUE. I SPEND FIVE DAYS A WEEK IN THE CANYON, AND I LIKE TO RUN THE CANYON. AND I CAN GUARANTEE YOU IF THERE'S NOTHING DONE TO CONNECT THAT TRAIL, THERE'S SOME BIKERS AND RUNNERS AND PROBABLY SOME HORSE PEOPLE THAT ARE GOING TO FIND A WAY ACROSS THAT RIVER AND UP THE BANK AND GET HURT DOING IT.

MR. HALL: COULD YOU PLEASE GIVE US YOUR NAME.

MR. CARDWELL: BARRY CARDWELL, AND I LIVE IN AUBURN.

MR. HALL: OKAY. YES.

MR. JARVIS: I'D LIKE TO MAKE A FEW COMMENTS.

MR. HALL: INTRODUCE YOURSELF.

T-26 MR. JARVIS: I'M LOWELL JARVIS, AND I'M THE DIRECTOR OF THE PCWA.

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

I'M REALLY HAPPY TO SEE ALL THESE PEOPLE TURN OUT HERE. IT SHOWS A REAL STRONG SUPPORT FROM THE COMMUNITY FOR THIS PROJECT.

YOU KNOW, IT'S BEEN KIND OF TOUGH FOR THE STAFF TO DO THIS. I KNOW ABOUT THREE OR FOUR YEARS AGO THEY HAD A VALUE-ADDED PROCESS WHERE THIS WAS THE PROJECT THAT CAME UP WITH, BUT DUE TO POLITICAL PRESSURES, THEY HAD TO BACK OFF THIS MID-COURSE ALTERNATIVE.

I REMEMBER I HAD A TRIP I WENT ON WITH EINAR MAISCH -- I DON'T SEE HIM HERE RIGHT NOW -- BUT IT WAS ONE OF THE MOST DRAMATIC TRIPS TO WASHINGTON I'VE EVER BEEN INTO. EINAR HAD GONE TO SEE THE CONGRESSMEN, AND THEY WERE PEOPLE THERE FROM THE BUILDING ASSOCIATION AND ENVIRONMENTAL GROUPS, AND EVERYBODY WANTED TO KNOW WHAT WAS GOING ON.

AND IT WAS PRETTY DRAMATIC AND SOME PRETTY DIFFICULT SITUATIONS, AND SOMEHOW WE WERE ABLE TO STEER OUR WAY THROUGH OUR PROJECT AND GET OUR CONGRESSMEN TO GIVE US 17 MILLION DOLLAR IN FUNDS.

WE'RE STILL NOT DONE ALL THE WAY. YOU KNOW THAT WE STILL HAVE ABOUT A 10 MILLION DOLLAR GAP FOR THE PROJECT, AS WE SEE IN THE PRESENT EIR.

ACTUALLY, THIS GENTLEMAN, JONAS, WORKS FOR THE STATE OF CALIFORNIA RESOURCE AGENCY, ONE OF THE

EXECUTIVES OVER THERE, AND HE MAY BE INSTRUMENTAL IN HELPING US GET STATE FUNDS FOR THE PROJECT. THERE IS NO GUARANTEES. WE KNOW THE STATE OF CALIFORNIA IS HAVING HARD TIMES, BUT WE MAY HAVE GONE AS FAR AS WE CAN WITH FEDERAL FUNDS.

AND, AS YOU KNOW, THE GOVERNOR GAVE US 4 MILLION DOLLARS ABOUT TWO YEARS AGO. THERE WEREN'T ANY FUNDS IN THE LAST YEAR BUDGET, BUT MAYBE IF WE HAVE ENOUGH SUPPORT AND WORK TOGETHER, WE CAN CONTINUE TO HAVE THE ATTORNEY GENERAL AND BARRY NICHOLS FROM THE RESOURCE AGENCY FIND FUNDS FOR THIS PROJECT SO WE CAN MOVE AHEAD.

WE HEARD A LOT ABOUT GETTING A BRIDGE AND A CONNECTION TO COOL. THAT SOUNDS LIKE A GOOD IDEA. I THINK THE REASON WHY, YOU KNOW, THAT'S NOT INCLUDED HERE IS THAT WOULD ADD AN ADDITIONAL COST THAT WOULD MAY HAVE MADE IT -- INFEASIBLE. BUT I THINK THAT IF WE GET THIS FAR ALONG, AND THERE'S ALWAYS A WAY TO WORK FURTHER, AND WORKING WITH STATE, THE CALIFORNIA STATE PARK SYSTEM, WE CAN FIND FUTURE FUNDS FOR A CONNECTION TO COOL.

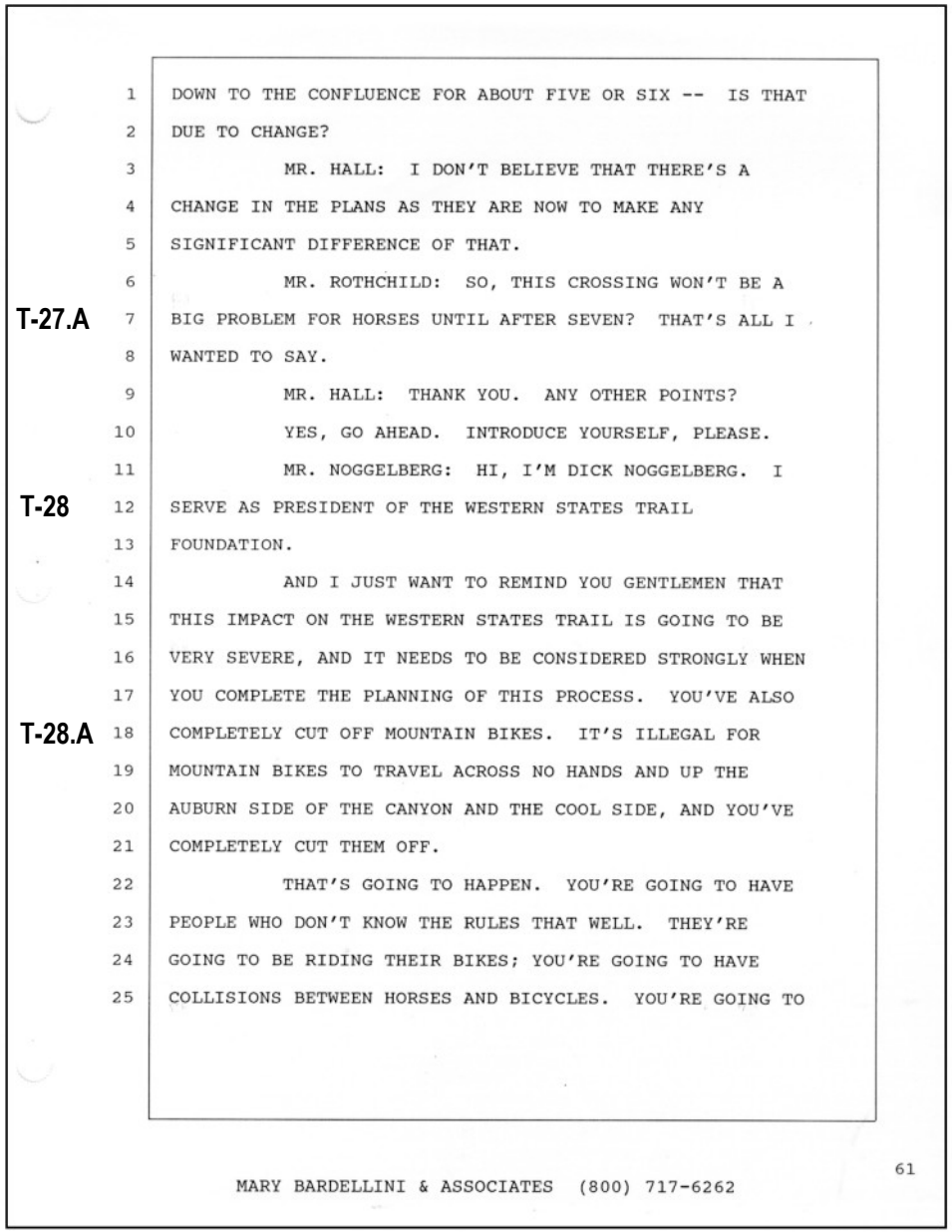
THANKS.

T-27

MR. HALL: THANKS A LOT.

INTRODUCE YOURSELF, PLEASE, FOR THE RECORD.

MR. ROTHCHILD: JOHN ROTHCHILD. I LIVE HERE IN AUBURN. RIGHT NOW, A NOTICEABLE FLOW DOESN'T GET



DOWN TO THE CONFLUENCE FOR ABOUT FIVE OR SIX -- IS THAT DUE TO CHANGE?

MR. HALL: I DON'T BELIEVE THAT THERE'S A CHANGE IN THE PLANS AS THEY ARE NOW TO MAKE ANY SIGNIFICANT DIFFERENCE OF THAT.

MR. ROTHCHILD: SO, THIS CROSSING WON'T BE A BIG PROBLEM FOR HORSES UNTIL AFTER SEVEN? THAT'S ALL I WANTED TO SAY.

MR. HALL: THANK YOU. ANY OTHER POINTS? YES, GO AHEAD. INTRODUCE YOURSELF, PLEASE.

MR. NOGGELBERG: HI, I'M DICK NOGGELBERG. I SERVE AS PRESIDENT OF THE WESTERN STATES TRAIL FOUNDATION.

AND I JUST WANT TO REMIND YOU GENTLEMEN THAT THIS IMPACT ON THE WESTERN STATES TRAIL IS GOING TO BE VERY SEVERE, AND IT NEEDS TO BE CONSIDERED STRONGLY WHEN YOU COMPLETE THE PLANNING OF THIS PROCESS. YOU'VE ALSO COMPLETELY CUT OFF MOUNTAIN BIKES. IT'S ILLEGAL FOR MOUNTAIN BIKES TO TRAVEL ACROSS NO HANDS AND UP THE AUBURN SIDE OF THE CANYON AND THE COOL SIDE, AND YOU'VE COMPLETELY CUT THEM OFF.

THAT'S GOING TO HAPPEN. YOU'RE GOING TO HAVE PEOPLE WHO DON'T KNOW THE RULES THAT WELL. THEY'RE GOING TO BE RIDING THEIR BIKES; YOU'RE GOING TO HAVE COLLISIONS BETWEEN HORSES AND BICYCLES. YOU'RE GOING TO

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T-27.A A. Comment noted.

T-28 **T-28.A** A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

HAVE ACCIDENTS. YOU'RE GOING TO HAVE LIABILITY.

SO, YOU REALLY NEED TO CONSIDER THAT BRIDGE. I THINK IT'S A BIG UPCOMING PROBLEM FOR PCWA AND PLACER COUNTY IN TERMS OF LAWSUITS AND THINGS LIKE THAT WITH ACCESS.

OTHER THAN THAT, I'VE LIVED HERE ALL MY LIFE, AND I THINK THE PROJECT ITSELF IS REALLY GOOD. I'M JUST APPALLED THAT THE TRAIL FROM AUBURN TO COOL WASN'T CONSIDERED WITH ALL OF THE STUDIES THAT HAVE BEEN DONE.

THAT'S ALL I HAVE TO SAY. THANKS.

MR. HALL: THANK YOU.

YES, GO AHEAD.

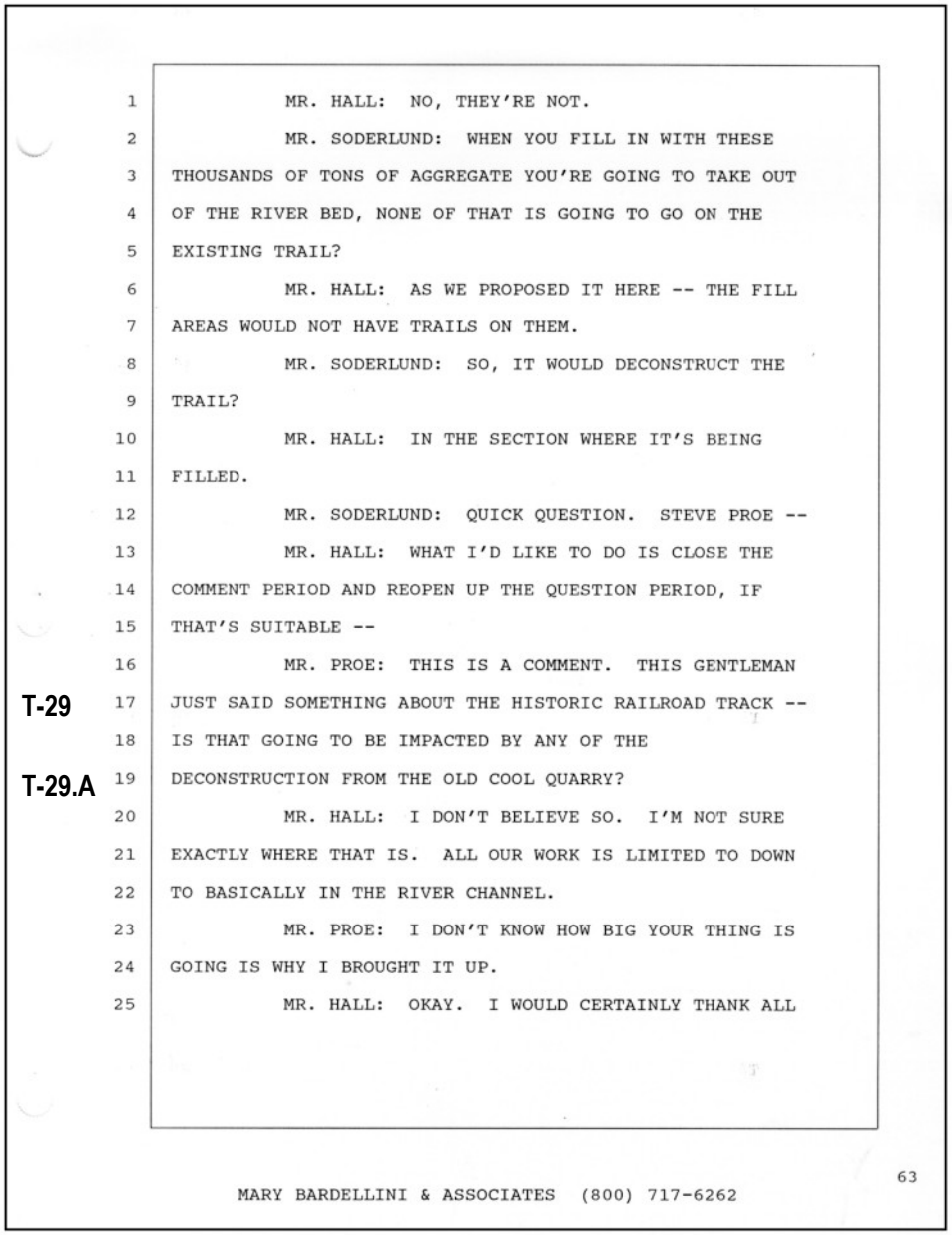
MR. SODERLUND: GREG SODERLUND. I JUST HAVE ONE QUESTION IN THE PROPOSAL --

MR. HALL: CAN WE FINISH -- I'D LIKE TO FINISH ALL THE COMMENTS FIRST, AND THEN WE'LL BE HERE AFTER WE CLOSE THE COMMENTS, AND WE'LL BE HERE TO ANSWER ANY QUESTIONS YOU HAVE.

MR. SODERLUND: THIS IS A QUESTION, SO YOU WANT ME TO WAIT?

MR. HALL: I'D LIKE TO GET ALL THE COMMENTS.

MR. SODERLUND: I'D LIKE TO ASK THIS QUESTION IN FRONT OF EVERYONE, AND THE QUESTION IS -- THE PROPOSAL, AS IT STANDS NOW, ARE THERE PLANS TO DECONSTRUCT THE TRAIL BETWEEN COOL AND AUBURN?



MR. HALL: NO, THEY'RE NOT.

MR. SODERLUND: WHEN YOU FILL IN WITH THESE THOUSANDS OF TONS OF AGGREGATE YOU'RE GOING TO TAKE OUT OF THE RIVER BED, NONE OF THAT IS GOING TO GO ON THE EXISTING TRAIL?

MR. HALL: AS WE PROPOSED IT HERE -- THE FILL AREAS WOULD NOT HAVE TRAILS ON THEM.

MR. SODERLUND: SO, IT WOULD DECONSTRUCT THE TRAIL?

MR. HALL: IN THE SECTION WHERE IT'S BEING FILLED.

MR. SODERLUND: QUICK QUESTION. STEVE PROE --

MR. HALL: WHAT I'D LIKE TO DO IS CLOSE THE COMMENT PERIOD AND REOPEN UP THE QUESTION PERIOD, IF THAT'S SUITABLE --

MR. PROE: THIS IS A COMMENT. THIS GENTLEMAN JUST SAID SOMETHING ABOUT THE HISTORIC RAILROAD TRACK -- IS THAT GOING TO BE IMPACTED BY ANY OF THE DECONSTRUCTION FROM THE OLD COOL QUARRY?

MR. HALL: I DON'T BELIEVE SO. I'M NOT SURE EXACTLY WHERE THAT IS. ALL OUR WORK IS LIMITED TO DOWN TO BASICALLY IN THE RIVER CHANNEL.

MR. PROE: I DON'T KNOW HOW BIG YOUR THING IS GOING IS WHY I BROUGHT IT UP.

MR. HALL: OKAY. I WOULD CERTAINLY THANK ALL

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T-29

T-29.A

A. Construction and operation of the Proposed Project would not include the Old Cool Quarry or the mid-slope Old Railroad Grade that follows the river from the Auburn Dam site to the Middle Fork/North Fork confluence. Within the project area, the Old Railroad Grade lies between 300 and 500 feet above the canyon floor and is outside of the area that would be disturbed by construction activities associated with the Proposed Project.

OF YOU FOR COMING TONIGHT. IT WAS A GREAT TURNOUT, AND WE CERTAINLY HAVE GOT SOME THINGS TO GO BACK AND THINK ABOUT.

I JUST WANT TO MAKE -- REMIND YOU THAT THE COMMENT PERIOD CLOSES NOVEMBER 13, AND WE ASK THAT YOU GO AHEAD AND SEND ANY OF YOUR COMMENTS IN TO US.

THANK YOU AND GOOD NIGHT.

(TIME NOTED: 9:20 P.M.)

--oOo--

STATE OF CALIFORNIA)
) SS.
COUNTY OF PLACER)

I CERTIFY THAT THE FOREGOING HEARING IS A TRUE AND CORRECT TRANSCRIPTION OF MY NOTES AT THE TIME AND PLACE THEREIN NAMED;

I FURTHER CERTIFY THAT I AM NOT OF COUNSEL OR ATTORNEY FOR EITHER OR ANY OF THE PARTIES TO SAID HEARING, NOR IN ANY WAY INTERESTED IN THE OUTCOME OF SAID HEARING.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS 24th DAY OF OCTOBER 2001.

Mary Bardellini

MARY BARDELLINI, CSR NO. 2976
CERTIFIED SHORTHAND REPORTER
STATE OF CALIFORNIA

F-1

Mary L Gould.
P. O. Box 516
Lincoln, Ca 95648
916-326-4242

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave
Sacramento, Ca 95825

November 5, 2001

To Whom It May Concern:

This letter is in regards to the loss of Coffer Dam Trails in Auburn Calif. & the minimal cost to keep it open, maintain it and build a bridge, in comparison to the cost for the project to put the river back to its natural state.

I would like to state my support for a solution to maintain the Trails and keep the safety of riders, hikers & bikers as a priority in this matter as follows:

OVERVIEW: At a public hearing last week PCWA claimed that the Auburn to Cool trail loss is a significant but unavoidable impact of the river restoration and pump station project. This is simply not true as there is a solution. PCWA needs to include the construction of a bridge in their plans. They also need to leave a dirt trail along side the roads that they are paving so those trails aren't lost as well.

A PERMANENT TRAIL LOSS: The Coffer Dam site is one of the few places where several trails merge and provide access to other trail systems (the Western States Trail in Auburn, the Olmstead Trail in Cool and the Maidu area Trails). Most people feel that if the PCWA river project doesn't include a bridge in their plan now that it will never happen and we will loss the Coffer Dam area Trails, three of our best training hills and major trail system connection FOREVER.

B SAFETY ISSUES: Several thousand hikers, outdoor enthusiasts, equestrians, mountain bikers and runners use these trails. If the Auburn to Cool trail is closed, the treacherous canyon trail to "no-hands" bridge (Western States Trail) will become over crowded presenting a seriously dangerous situation. This trail was not designed to handle the kind of traffic that the Coffer Dam trails can. The trails are narrow and the drop-offs are steep, rocky and several hundred feet high. People and horses will be at a much greater risk for potentially deadly accidents involving collisions and falls.

C TRAINING HILL LOSS: The Auburn to Cool trail loss is not just a trail, but also a merging of three canyon hills where athletes have been training for years. Runners and equestrians will no

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail and Master Response 3.1.6, Public River Access Features.

B. Please refer to Master Response 3.1.6, Public River Access Features.

A. Please refer to Master Response 3.1.3, Recreation Trail Access During Construction.

F-1, pg. 2

longer have these hills for training for the world famous 100 mile Western States run, the 100 mile TEVIS endurance race or other events. Auburn is proud to host the finish lines in both of these and other prestigious races. How will people feel from other states and countries when they arrive prior to theses events to acclimatize and train on these trails????

A MOUNTAIN BIKE ACCESS: Mountain biking access to the American River Canyon below Auburn is already limited. In fact, the Auburn to Cool trail is the only access they have to the trails in Cool from Auburn. It is not fair to take their only access route away from them. The canyon represents many user groups that include WATER AND LAND use. The PCWA project needs to support all canyon user groups and recognize the value of keeping the canyon access available to everyone.

B PATROL ISSUE: Currently a volunteer mounted unit patrols the Coffer Dam area. Equestrians will no longer have access to the area as the PCWA plan includes paved roads in the Auburn side and piled river rock from the excavation on the Cool side. Who is willing to take on the expenses and responsibility of patrolling this area when it becomes not so horse friendly?

SUMMARY: Most people want to share in the joy and celebration of opening the river back to its natural course. We are asking PCWA to do the right thing and not take away the use of precious and beautiful canyon trails from our community. This can be achieved by building a bridge!!!!!! A small price to pay when compared to the overall $31 million project budget. A small price to pay compared to the permanent loss of trails that thousands of people have enjoyed using for years.

Sincerely,

F-2

Nov 06 01 12:22p (530) 889-2052 p.1

November 5, 2001

American River Pump Station Project, Draft EIR/EIS Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite # 110
Sacramento, CA 95825

Dear Sir or Madam:

We were only recently made aware of American River Pump Station Project and what changes we could see in our neighborhood. We have major concerns regarding the adverse effect this project will have on our quiet way of life in Falcon Point and other housing tracks in the immediate area.

Some of the impacts to our neighborhood are:

A
- ✓ Increase of traffic flow
- ✓ Vulnerable parking of many unattended vehicles

B
- ✓ Increase noise and safety issues during a two-year construction project
- ✓ Safety of our children in allowing shuttles and busses of rafting companies into our neighborhood

The neighborhood has already seen an increase of traffic with the continued building in this area. We have managed to maintain a somewhat tranquil neighborhood; however, the project in question will change all that.

Vehicles parked unattended may trigger car break-ins and increased burglaries in the neighborhoods.

The proposal will bring in heavy equipment to the community, instigate safety and noise issues for at least a two years period. Did that large truck that recently killed a woman on Indian Hills really belong on that road? We are extremely concerned for the safety of our citizens.

Questions we have:

C
- ➢ What alternative entrance sites are now in review.

D
- ➢ Where is the water being pumped to and is the revenue profits being passed to the people of Auburn?

E
- ➢ Has a current environmental impact study been done which includes the effect on the neighborhoods above the canyon?

F
- ➢ I am sure there are many more issues that have not been addressed in this letter of concern. The planning process is still underway and there has not been much communication to the area most impacted.

NOV- 6-01 TUE 12:21 PM 530 889 2052 P. 1

A. Please refer to Master Response 3.1.6, Public River Access Features.

B. CDPR would not issue commercial rafting permits for the project area as part of the Proposed Project.

C. Please refer to Master Response 3.1.10, Project Access.

D. The water obtained from the Proposed Project would be used to serve municipal, industrial, and commercial treated water customers within PCWA's retail service Zone 1 and agricultural water customers within PCWA service Zone 5. The Draft EIS/EIR describes the service area (Chapter 3, Section 3.2.3, page 3-6) and provides a map (Figure 3.2-1, PCWA's Water Service Area to be served by the American River Pump Station Project, page 3-7).

E. The Draft EIS/EIR evaluates neighborhoods affected by the proposed project and includes environmental protection measures to minimize environmental impacts. Please also refer to Master Response 3.1.6, Public River Access Features.

F. Please refer to Response L-95.A.

F-2, pg. 2

Our neighborhood does care, are concerned, and must have say.

Sincerely,

Jeannie Dayton
10060 Snowy Owl Way
Auburn, CA 95603

F-3

October 20, 2001

John J. Gardiner
204 Hill Street
Grass Valley, CA 95945

American River Pump Station Project
Draft EIS/EIR Comments
Surface Water Resources, Inc.
2031 Howe Ave. Suite 110
Sacramento, CA 95825

To whom it may concern:

A

I am concerned about the loss of the Auburn-to-Cool trail as a result of the closing of the tunnel at the Auburn dam construction site.

The Auburn-to-Cool trail provided the only safe route for bicyclists to get between the two areas. The only other route requires riding on a section of Highway 49 that offers no shoulders and high volume, speeding traffic.

The cost of a bridge to replace the trails would be significant. An alternative would be to create a new trail from the dam overlook to either Highway 49 at the river or the Mt. Quarries Bridge and then up to Cool.

Mitigation for closing the existing trail should include all or partial funding for creating such a trail. The completion of the pump station project will result in more people using the park. Additional long-term funds are needed to manage the park as the number of visitors increase.

Some funding source should be identified for this usage. Thank you for your consideration.

Truly,



John J. Gardiner

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

F-4

October 24, 2001

American River Pump Station Project,
Draft EIS/EIR Comments,
Surface Water Resources,
2031 Howe Avenue Suite 110, Sacramento, CA 95825

RE: American River Tunnel - Support Tunnel Closure and River Restoration

To whom it may concern:

I would like to register my support for closure of the diversion tunnel on the North Fork American River. I understand public comment is now being solicited. Please consider this letter as my official comments and enter it into the official record.

A

I support the preferred alternative (the "Mid-Channel Diversion Alternative") because it will return water to the natural riverbed and restore the river channel, as well as close the tunnel. The other alternatives proposed offer no river restoration and no tunnel closure.

The preferred alternative also begins to set the stage to provide public access to the Confluence Parkway - the long closed reach of the American River from the confluence of the North and Middle Forks of the American River to Folsom Reservoir. The Confluence Parkway, when completed, should maintain access and river crossings, so that the local community and all recreational users may continue enjoying the canyon.

Here are my personal reasons for wanting the river to be restored:

"IT'S A NO-BRAINER!"

It is time to restore the river so that everyone can use it again! Thank you for considering my input.

Sincerely,

Name John Kloss

Address 444 T St.

City/state/zip Sacramento, CA. 95814

A. Project support noted.

F-5

This document is submitted as public comments to the project identified below.

Placer County Water Agency / US Bureau of Reclamation

PCWA American River Pump Station Project Draft EIR and EIS

By signing this document I have indicated my agreement and support of the following statement.

A **I do not support any activity that will increase vehicular traffic on Maidu Drive in Auburn CA. due to recreational access to or construction activity in the North Fork American River canyon.**

Name	Signature	Address	City, State, Zip	Phone	Other comments / Organization if applicable
Julie Monroe	Julie Monroe	10025 Snowy Owl Wy	Auburn, CA 95603	8854272	
Layton Monroe	Layton Monroe	" "	"	"	
Shari Beck	Shari Beck	400 Perkins Way	Auburn CA 95603	886-0631	
Peter Leal	Peter Leal	4175 Eagles Nest	Auburn CA 95603	889-8599	
Steven Lerma	Steven Lerma	10035 Snowy Owl Wy	Auburn CA 95603	886-0752	
John Edgerton	John Edgerton	1449 Buckeye Ct	Auburn CA 95603	888-6102	
Kathy Ray	Kathy Ray	10115 Snowy Owl Way	Auburn, CA 95603	823-3944	What about bringing cars in on Pacific through Overlook?

A. Please refer to Master Response 3.1.6, Public River Access Features and Master Response 3.1.10, Project Access.



American River Pump Station Project

Final Environmental Impact Statement/
Environmental Impact Report

Appendix D
Mitigation Monitoring and Reporting Program/Environmental Commitments Plan

Placer County Water Agency

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

June 2002

SCH# 1999062089

American River Pump Station Project

Final
Environmental Impact Statement/
Environmental Impact Report

Appendix D

Mitigation Monitoring and Reporting Program/
Environmental Commitments Plan

U.S. Bureau of Reclamation

Placer County Water Agency

Placer County
Water Agency

June 2002

American River Pump Station Project
Mitigation Monitoring and Reporting Program/ Environmental Commitments Plan

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1.0 INTRODUCTION

1.1 PURPOSE AND GENERAL GOALS (OBJECTIVES) OF THE MITIGATION PLAN

The American River Pump Station Project (Project) involves construction of new water supply facilities, closure of the Auburn Dam construction bypass diversion tunnel, restoration of the North Fork American River channel through the Auburn Dam construction site, and development of limited public river access facilities across the river from the bypass tunnel outlet and downstream, near Oregon Bar. **Figure 1** shows the major features of the water supply facilities and **Figure 2** shows the public river access features. The Project is being undertaken through a cooperative effort of the U.S. Bureau of Reclamation (Reclamation), Placer County Water Agency (PCWA), California Resources Agency, California Department of Parks and Recreation (CDPR), and California Department of Fish and Game (CDFG). Project approvals include environmental protection and mitigation measures to minimize or eliminate adverse effects to the study area environment. These measures have been described in the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

The lead agencies, PCWA and Reclamation, have developed this document to guide mitigation compliance prior to, during, and following construction as well as providing for long-term Project and study area management, as required by the California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA). Compliance monitoring and evaluation will be performed by the lead agencies or an independent on-site Project representative, as indicated in the description of each measure. The goals of this Mitigation Monitoring and Reporting Program/Environmental Commitments Plan (Mitigation Plan) are to provide the following:

- Compliance requirements for the environmental protection and mitigation measures on which the Project was approved;
- A reference document containing the environmental protection and mitigation measures involving pre-construction, construction and operation of the Project;
- A list of Project lead agency and responsible agency contacts; and
- The timing of mitigation measure implementation.

It is noted that additional measures may be required by specific regulatory agency permit terms and conditions or measures may be identified in biological opinions which may be issued as part of the Endangered Species Act (ESA) consultations between Reclamation and National Marine Fisheries Service (NMFS), and Reclamation and U.S. Fish and Wildlife Service (USFWS). Because agency permitting and ESA consultations were not completed at the time this Mitigation Plan was prepared, it was not possible to include such details in the Mitigation Plan. All terms and conditions of regulatory agency permits obtained for the Project will be implemented by the lead agencies and incorporated into construction specifications or long-term operation/management activities, as required and appropriate.

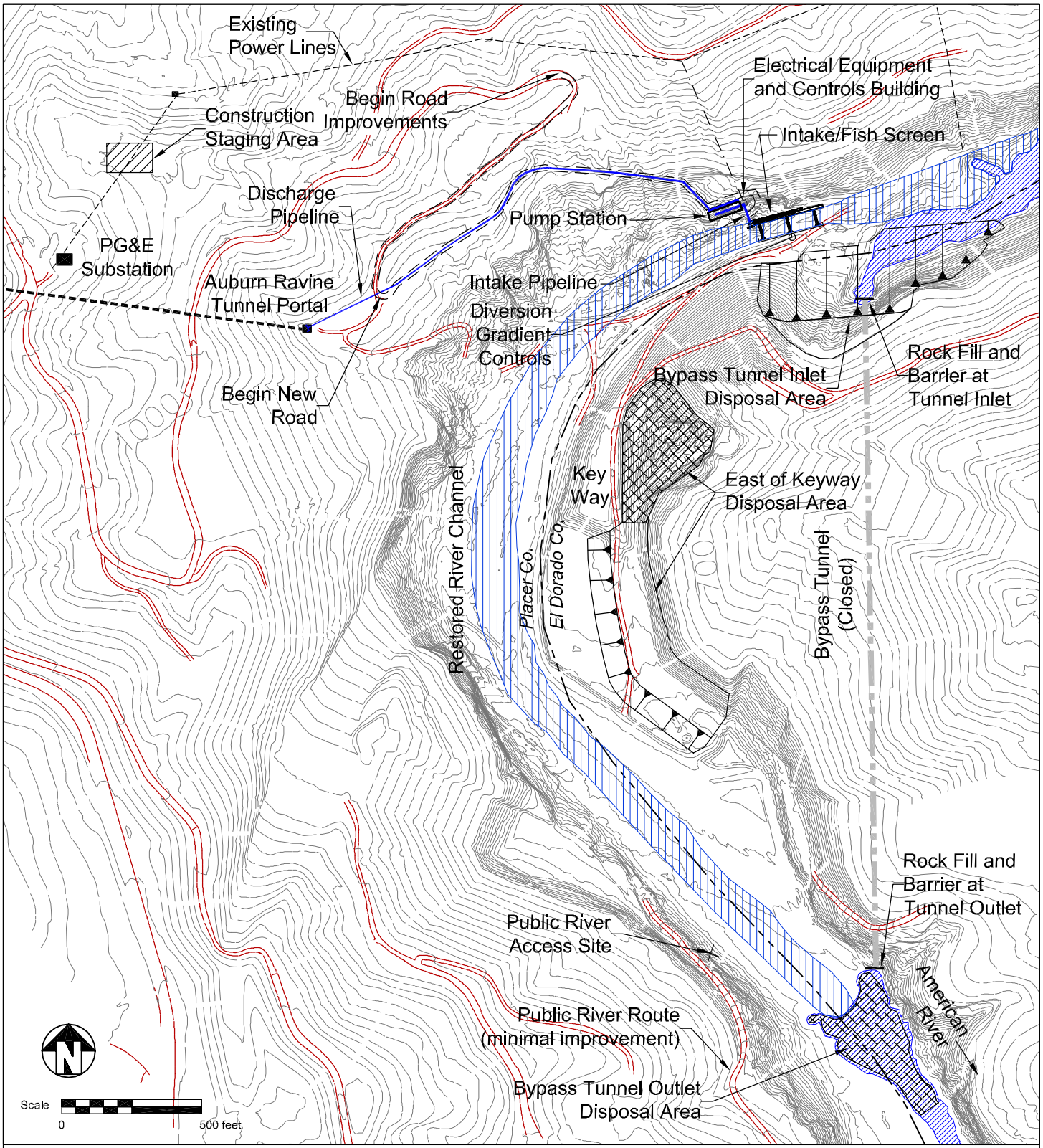


Figure 1 Major Features of the Project



Figure 2 Public River Access Facilities at Auburn Dam Site and Oregon Bar

1.2 PROJECT LOCATION

The regional setting for the Project encompasses the Sacramento River and the American River Basin Central Valley Project (CVP) and State Water Project (SWP) reservoirs and waterways, including the Sacramento-San Joaquin River Delta, that potentially would be affected by Reclamation's changes in operation of the CVP or the Department of Water Resources' (DWR) changes in operation of SWP facilities (**Figure 3**). The local setting of the Project area is located within Placer County on the North Fork of the American River in the vicinity of the Auburn Dam construction site, which lies east of Auburn, California (**Figure 4**). The Project site lies within the American River canyon and includes the section of the North Fork of the American River that extends between Tamaroo Bar and Oregon Bar (**Figure 5**).

1.3 PROJECT DESCRIPTION

1.3.1 Major Features of the Project

The major features and activities associated with construction of the Project include a new pump station, a water diversion/intake structure, installation of fish screens to be designed through consultation with CDFG, closure of the Auburn Dam construction bypass tunnel, excavation of Auburn Dam cofferdam remnant and debris to restore flow to the American River channel, installation of water conveyance pipelines, improvement and development of access roads for Project construction and operation, extension of power supply lines, and creation of public river access and safety features and related improvements at the Auburn Dam site and near Oregon Bar.

1.4 SUMMARY OF PROJECT PURPOSE, NEED, AND OBJECTIVES

The purpose of the Project is threefold: (1) to provide facilities to allow PCWA to convey its Middle Fork Project (MFP) water entitlement to the Auburn Ravine Tunnel to meet demands within its service area; (2) to eliminate the safety issue associated with the Auburn Dam bypass tunnel; and (3) to allow for all pre-construction beneficial uses of water in what is now the dewatered river channel, including recreation, navigation, and other instream beneficial uses. Additionally, implementation of the Project will alleviate Reclamation of its obligations to PCWA under the Land Purchase Agreement for water delivery, management, operation and maintenance activities associated with the seasonal pump station following completion of construction and PCWA's acceptance of title to the pump station facilities. Each of these elements is discussed in greater detail in Chapter 1.0, Section 1.3, Project Needs and Objectives, in the Final EIS/EIR.

Through its water planning studies, PCWA has identified the need for a reliable, year-round pump station to replace the seasonal pumping facilities to enable the agency to continue to provide treated and raw water supplies throughout service area Zones 1 and 5. Development of the pump station would provide a year-round water diversion facility capable of diverting up to 35,500 acre-feet annually (AFA) from PCWA's water entitlements under its MFP on the American River. The

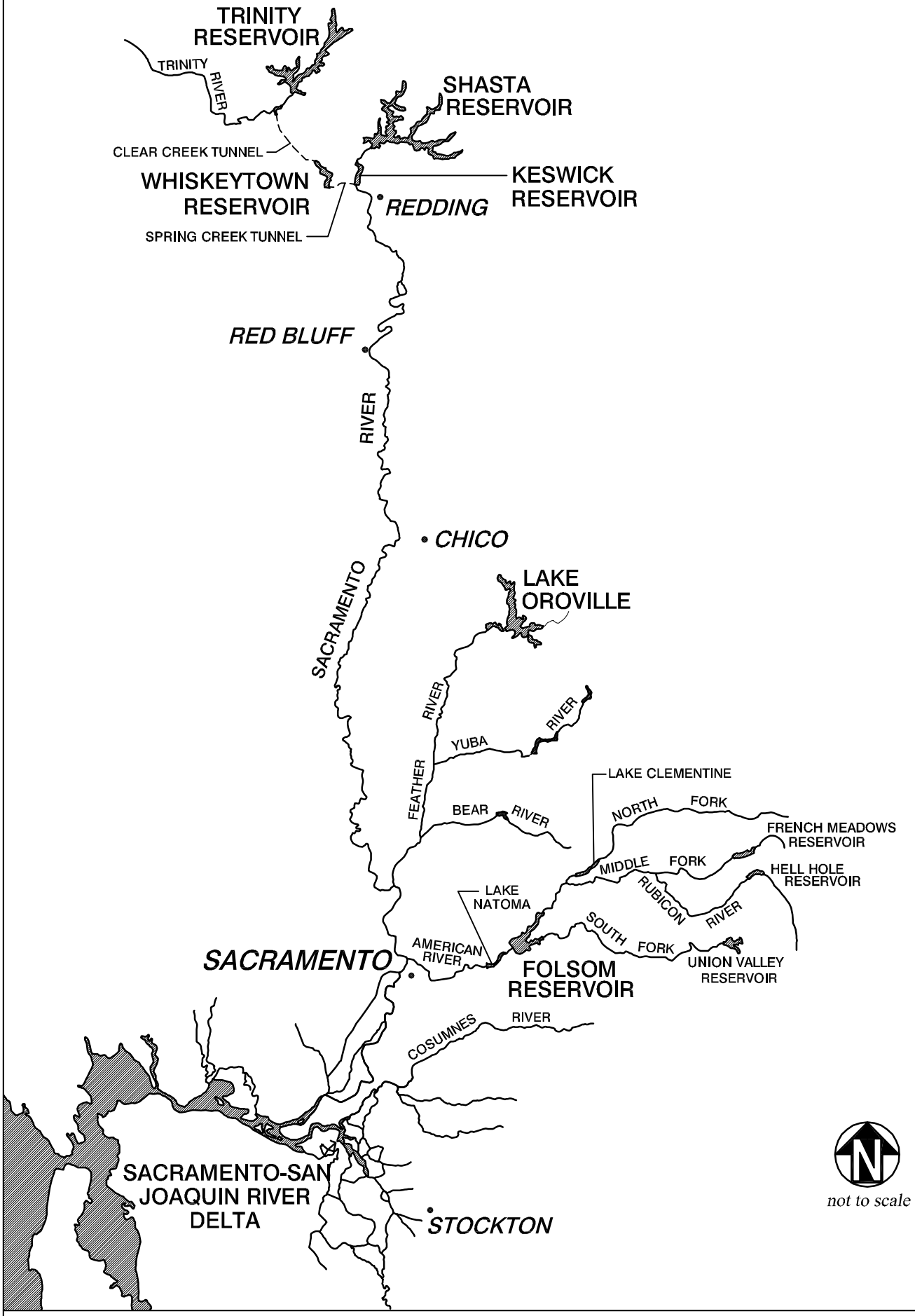


Figure 3 Regional Setting

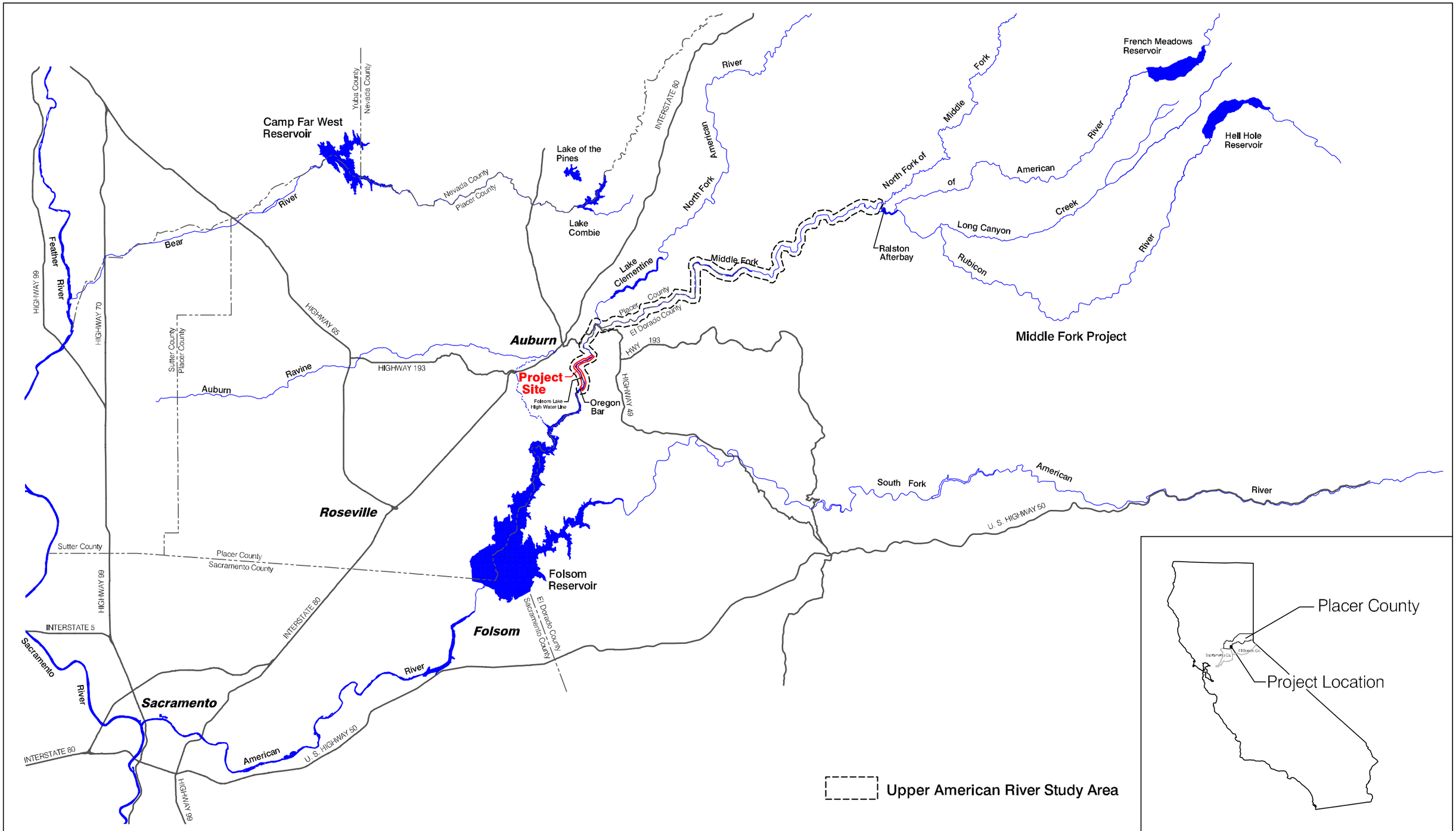


Figure 4 Project Area Setting

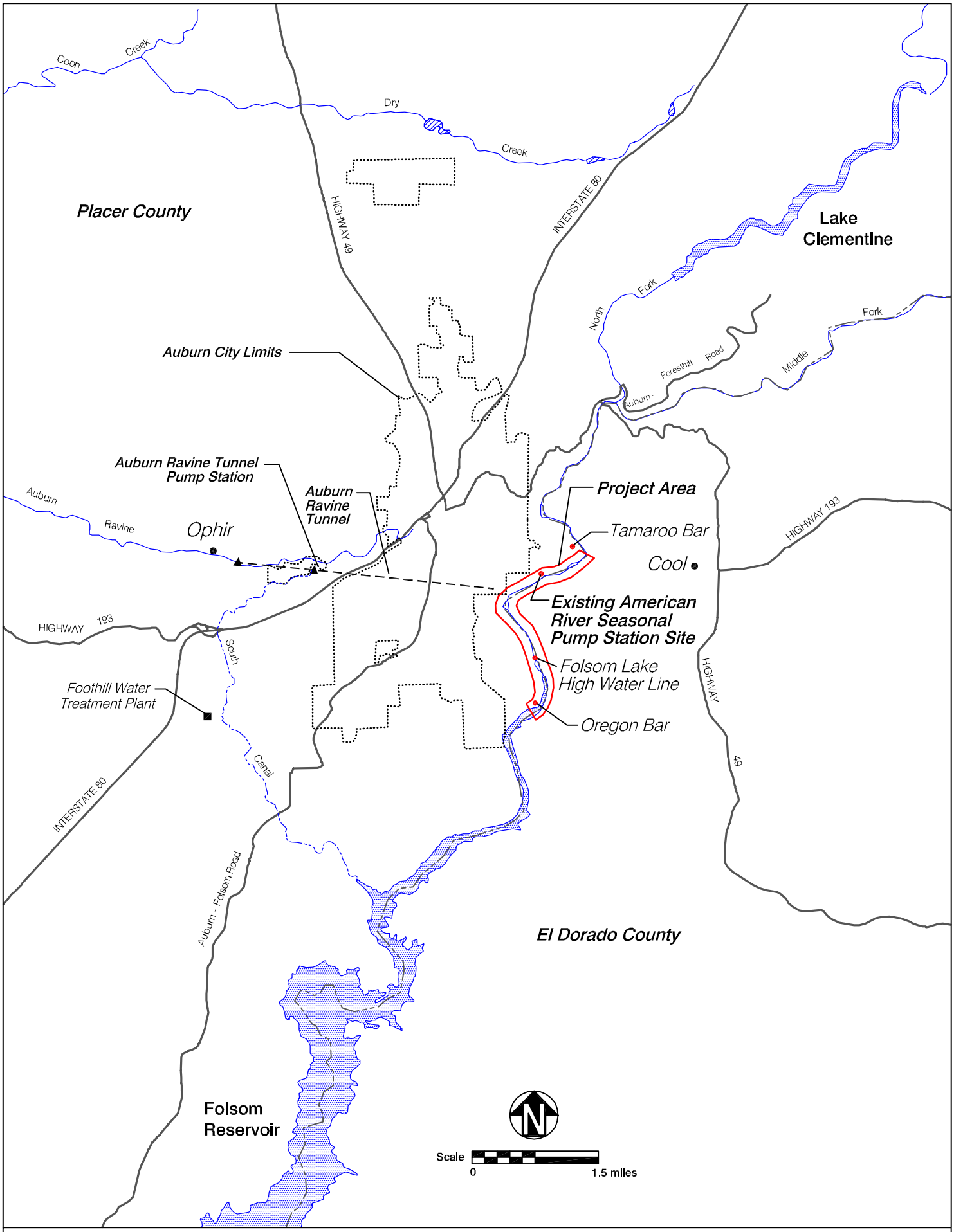


Figure 5 Project Area

closure of the bypass tunnel and rewatering of the historic river channel is a Project element proposed by and to be undertaken by Reclamation in response to (1) assertions by the State of California that, in the absence of a Congressional commitment to proceed with the long-delayed Auburn Dam, Reclamation lacks authority to continue to divert water from the dewatered stretch of the North Fork American River through the bypass tunnel; and (2) the State of California's insistence that the river be restored to its historic (pre-Auburn Dam) channel.

1.4.1 Auburn Dam Bypass Tunnel Safety

As part of the original Auburn Dam construction work, a cofferdam and bypass tunnel were constructed. The cofferdam was breached by high flows in 1986, depositing millions of cubic yards of debris in the downstream channel. The bypass tunnel remains open and passes the entire flow of the American River at normal flow rates. Due in part to the sediment deposition from the eroded cofferdam, it is common for the downstream end of the tunnel to be submerged while the upper end is open. Although the river portion of the construction site is officially closed to the public, it is known that some people enter the area, and could be seriously injured or killed if they enter the bypass tunnel. Both Reclamation and the State of California believe this safety issue needs to be corrected.

1.4.2 River Restoration

Reclamation and the State of California wish to restore the dewatered reach of the river channel, and to manage the site in a safe and environmentally sound way. Their objectives include restoring the river to a condition that would provide the same biological, hydrologic, and recreation functions, including public use, as it did prior to Auburn Dam construction.

1.4.3 Public River Access

Presently, there is public vehicular access to the North Fork American River at the North/Middle Fork confluence on Highway 49 in the Auburn State Recreation Area (SRA) and at Rattlesnake Bar in the Folsom Lake SRA. When Folsom Reservoir is full, the nine-mile reach between these two points is comprised of four miles of moving water and five miles of still water in Folsom Reservoir. When the reservoir is drawn-down for flood control in the winter, the reach of moving water is increased to six miles, or more depending on Folsom Reservoir elevations.

From the perspective of public health and safety, the State of California believes that the public needs vehicular access to the river near the Folsom Reservoir high-water location to prevent people from being stranded in the canyon and for providing emergency services and resource protection. The Project will provide such access just upstream of the bypass tunnel outlet and downstream near Oregon Bar.

1.5 CONSTRUCTION AND OPERATION AND MAINTENANCE SCHEDULE

1.5.1 Construction

Construction of the Project will involve two phases over approximately 22 months. Phase I activities will begin in late 2002 and extend into spring 2004. Phase II construction will be initiated in spring 2003 and extend through summer 2004. Phase I construction will include access roads, initial site preparation, dry streambed excavation (rough grading) and construction of the pump station. Phase II will involve construction of the intake/diversion structure, fish screen, pump station sediment facilities, river gauging stations, standby power facilities, final channel grading, closure of the bypass tunnel and rerouting of river flows, and public river access improvements.

1.5.2 Operation and Maintenance

Upon completion of construction and testing of the pump station, Reclamation will transfer the ownership of the facilities to PCWA, in accordance with the contract between PCWA and Reclamation to be executed prior to construction. PCWA will thereafter assume full responsibility for all operation, maintenance, and related activities associated with the pump station. Reclamation would retain responsibility for all other operation and maintenance activities associated with the authorized Auburn Dam Project, and would have certain aspects of those responsibilities performed by CDPR under its agreement to manage the Auburn SRA.

Under the Project, PCWA could divert up to 100 cubic feet per second (cfs) for a total volume of 35,500 AFA generally following a typical municipal and industrial water demand pattern. Higher diversions would occur during summer and early fall months, May through September to meet customer demands, with lower diversions occurring during October through April.

Operation of the Project will require occasional, minor changes to Ralston Afterbay releases into the Middle Fork American River to meet proposed diversions and maintain a minimum instream flow requirement of 75 cfs downstream of the diversion facility.

Reoperation of Ralston Afterbay, as well as slight modifications in storage releases from upstream reservoirs (French Meadows and Hell Hole) as needed during low-flow months (June through October), will fulfill flow requirements. These releases will ensure a minimum flow of 175 cfs in the river reach to the pump station. Current releases for power-related operations typically meet or exceed this same flow rate. The net result during low-flow months would be that flows downstream of the diversion would be reduced by less than the diversion amount.

Additionally, as part of its commitment to the Water Forum Agreement, during dry years PCWA has agreed to release water from its MFP reservoirs to replace water to the American River (replacement water). The replacement water would be released for downstream use to meet environmental requirements and/or for use by other water purveyors, in accordance with their specific Water Forum agreements. As stated in PCWA's purveyor-specific agreement, release of the replacement water is contingent upon certain agreements with Pacific Gas and Electric

Company (PG&E) and purchase of the water by a downstream entity. Arrangements related to these agreements are currently underway.

Maintenance activities associated with the Project fall into three categories: basic; annual; and periodic or as needed. Basic maintenance includes daily visual inspection of the pump station and diversion structure to make sure they are operating properly. Annual maintenance includes seasonal inspection of the fish screen and diversion structures and removal of any objects that may interfere with proper operation of the diversion structure. Periodic, or as-needed, maintenance includes major maintenance activities such as inspections/removal of pump(s), clearing the river diversion inlet structure, and removal of any material that may be deposited against the diversion structure as a result of a major flood event.

CDPR, through an agreement with Reclamation, will be responsible for maintaining the public river access features. Maintenance activities include removal of trash and cleaning of restrooms on a regular basis; repair of damaged signs, as needed; and servicing of trails and access routes, as required. Road and trail maintenance may include regrading or placement of additional gravel on traveled surfaces, correction of erosion problems, clearing drainage ditches and culverts, and trimming vegetation that encroaches upon the path.

1.6 RESPONSIBLE PARTIES

PCWA and Reclamation, as lead agencies, are responsible for implementation of the mitigation measures identified in this Mitigation Plan. CDPR is a responsible agency for the Project and, under CEQA, CDPR will consider the analysis in the Final EIR, prepare Findings of Fact (CEQA Guidelines 15096(h)), and adopt mitigation measures (CEQA Guidelines 15097(d)). CDPR may adopt this Mitigation Plan, and would implement certain measures to minimize impacts associated with the operation of the public river access features. These activities would be specified in the Auburn SRA management agreement between Reclamation and CDPR.

Representatives of each agency are listed below:

U.S. Bureau of Reclamation

Mr. Rod Hall
Environmental Specialist
7794 Folsom Dam Road
Folsom, CA 95630
(916) 988-1707

Mr. Robert Meador
Construction Manager
1140 W. Wood Street
Willows, CA 95988
(530) 934-7066

Placer County Water Agency

Mr. Brent Smith
Project Manager
144 Ferguson Road
Auburn, CA 95604
(530) 823-4886

California Department of Parks and Recreation

Ms. Jill Dampier
Supervisor, Department of State Parks
501 El Dorado Street
Auburn, CA 95603
(530) 885-4527

Mr. Jim Micheaels
Associate Parks and Recreation Specialist
7806 Folsom-Auburn Road
Folsom, CA 95630
(916) 988-0205

2.0 SUMMARY OF ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

Table 1 provides a summary of the environmental protection and mitigation measures described in this Mitigation Plan.

Table 1
Summary of Environmental Protection and Mitigation Measures

Mitigation Measure		Implementing Agency	Timing
FISH RESOURCES AND AQUATIC HABITAT			
3.1-1	Prevent Fish Entrainment and Impingement at the Water Supply Intake/Point of Diversion	Reclamation/ Construction Contractor, PCWA	Phase II Construction/ Operations
3.1-2	Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources	PCWA	Ongoing Project operations
TERRESTRIAL RESOURCES			
3.2-1	Establish Buffer Zone to Avoid Disturbance of and Prevent the Permanent Loss of Riparian, Wetland and Pond Vegetation and Associated Habitat	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.2-2	Minimize Impacts Upon State and Federal Special-Status Species in the Project Area	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.2-3	Measures for Entrapped, Injured or Dead Special-Status Animal Species	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.2-4	Restoration of Permanent Riparian, Wetland and Pond Vegetation/Habitat Loss	Reclamation	Post-construction
WATER QUALITY			
3.3-1	Removal of Construction Litter and Debris	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004), as needed
3.3-2	Construction-Related Water Quality Protection Measures	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.3-3	Project Operation and Maintenance Water Quality Protection	PCWA	Ongoing Project operation and maintenance
3.3-4	Minimize Water Quality Impacts From Increased Public Access	Reclamation	Ongoing during Operation of public access area
RECREATION			
3.4-1	Maintain Public Recreation Trail Access During Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.4-2	Avoid Recreation Trail Closures That Affect the Western States Endurance Run, Tevis Cup Western States Trail Ride or the American River 50-Mile Endurance Run	Reclamation/ Construction Contractor CDPR Event Coordinator	Once annually per event (as needed)
3.4-3	Auburn-to-Cool Trail	California Resources Agency/ CDPR, PCWA	Ongoing

Table 1 (Continued)
Summary of Environmental Protection and Mitigation Measures

Mitigation Measure		Implementing Agency	Timing
RECREATION (CONTINUED)			
3.4-4	Minimize Trail User Conflicts Due to Increased Public Access	Reclamation/CDPR	Ongoing
3.4-5	Minimize Littering at Public River Access Locations	Reclamation/CDPR	Ongoing Project operations
3.4-6	Provide Disabled Access Parking Area	CDPR/Reclamation	Ongoing
VISUAL RESOURCES			
3.5-1	Blend Project Features with Surrounding Landscape	Reclamation/Design Team	Project design
CULTURAL RESOURCES			
3.6-1	Stop Construction Activities if Cultural Resources or Human Remains are Uncovered	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.6-2	Develop and Implement Programmatic Agreement with State Historic Preservation Officer Regarding Potential Impacts at Shasta Reservoir	Reclamation	Project operation
TRAFFIC AND CIRCULATION			
3.7-1	Develop and Implement a Construction Traffic Access Management Plan	Reclamation/ Construction Contractor	Prior to and through all phases of construction (2002 through 2004)
3.7-2	Provide Information Regarding New Public River Access	Reclamation	Prior to and during operation of public river access features
AIR QUALITY			
3.8-1	Minimize Ozone Precursor Emissions During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.8-2	Minimize PM_{10} Emissions During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.8-3	Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
NOISE			
3.9-1	Minimize Noise During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.9-2	Minimize Operational Noise Levels by Enclosing Pumps	Reclamation	One-time design/construction
3.9-3	Minimize Noise Levels Associated With Public Use of River Access Features	CDPR	Ongoing; when public river access facilities are open for use
PUBLIC HEALTH AND WORKER SAFETY			
3.10-1	Minimize the Potential for Increased Erosion and Slope Instability During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)
3.10-2	Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction	Reclamation/ Construction Contractor	All phases of construction (2002 through 2004)

Table 1 (Continued)
Summary of Environmental Protection and Mitigation Measures

Mitigation Measure		Implementing Agency	Timing
PUBLIC HEALTH AND WORKER SAFETY (CONTINUED)			
3.10-3	Remove All Construction-related Materials From Project Site Prior to Opening for Public Use	Reclamation/ Construction Contractor	Upon completion of construction; prior to opening site for public use
3.10-4	Minimize the Risk of Public Exposure to Fire Hazards During Project Operations	Reclamation/CDPR/California Department of Forestry and Fire Protection (CDFFP)	During construction; ongoing once public access is granted
3.10-5	Prevent Vehicular Access in Undesignated Areas	Reclamation	Permanent following installation
3.10-6	Minimize Inappropriate or Illegal Activities at Public River Access Locations	CDPR	Ongoing during use of public river access sites
3.10-7	Limit Public Access to Water Supply Facilities and Structures	PCWA	Post-construction

3.0 ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

This section presents the environmental protection and mitigation measures or standards that have been incorporated into the Project design, construction and management actions. The lead agencies have adopted these measures and incorporated them as part of the Project in compliance with applicable federal, state, and local policies or regulations that apply to the Project activities. These measures will ensure that construction and operation of the Project will minimize or avoid potentially significant environmental impacts, to the extent feasible. These measures include standard engineering, design, construction, and maintenance practices that were developed during the preliminary planning and design phases of the Project, as well as measures incorporated in response to public comments received on the Draft EIS/EIR.

3.1 FISH RESOURCES AND AQUATIC HABITAT

Mitigation Measure 3.1-1: Prevent Fish Entrainment and Impingement at the Water Supply Intake/Point of Diversion

Diversion of water at the intake structure could create conditions resulting in entrainment or impingement of fish. Installation and operation of fish screens will minimize the potential for this impact. CDFG fish screen experts will be involved in the design and inspection of the fish screens.

Commitment: Design, construct, operate and maintain fish screens on the water supply intake in a manner consistent with CDFG-approved design.

Responsible Parties: Reclamation/Construction Contractor - design and construct per CDFG-approved plan
PCWA - operation and maintenance per CDFG-approved procedures
CDFG - design input, review and approval; performance inspection

Location: Project area/river channel - water supply intake structure

Timing: Phase II construction/operations

Monitoring:
Reclamation will require the Construction Contractor to install the fish screens according to CDFG-approved plans.

PCWA will monitor the operation of the fish screens and provide maintenance, as needed, according to specific fish screen design and operational procedures.

Reporting Requirements:
Reclamation will submit final designs to CDFG and will notify CDFG when construction is completed. CDFG may inspect the construction or performance of fish screens at the site.

PCWA will maintain daily records of screen performance on all days pump station is operational. These records will be summarized in quarterly reports to CDFG for the first two years following Project start-up. After that time, PCWA will make records available to CDFG, upon request.

Description of Activities:
Design and Construction
The Project design team will work with CDFG fish screen experts to finalize the design in a manner that meets CDFG requirements for the Project site.

Reclamation will ensure that the Construction Contractor installs the approved fish screens as designed.

Operation and Maintenance
PCWA will operate and maintain the fish screens according to the final approved procedures.

Success Criteria:
Reclamation will document that construction/installation meets CDFG-approved design.

PCWA will document project operation and maintenance compliance with appropriate procedures.

Mitigation Measure 3.1-2: Avoid Impacts Upon Auburn Ravine Fish, Aquatic and Terrestrial (Riparian) Resources

The Project, as described in the Draft EIS/EIR, included an increased release of American River water into Auburn Ravine, in exchange for Yuba/Bear River Drum-Spaulding Project water. Change in water source composition potentially would create conditions that might increase straying of American River salmonids into Auburn Ravine. To avoid any potential for such an impact, PCWA will double-pump the increased diversions of American River water, measured against baseline conditions derived from data reflecting monthly pumping levels in the period from 1998 through 2001, from the Auburn Ravine Tunnel directly to its water supply distribution system, rather than to Auburn Ravine. PCWA will not modify this procedure until further environmental evaluations are conducted to evaluate the potential effects of changing water sources or volume in Auburn Ravine.

Commitment:	Minimize alteration of Auburn Ravine aquatic conditions by double-pumping increased diversions of American River water.
Responsible Party:	PCWA
Location:	Auburn Ravine Tunnel and Pump Station; Auburn Ravine
Timing:	Ongoing project operation
Monitoring:	Record American River water deliveries into Auburn Ravine
Reporting Requirements:	Operation records/reports

Description of Activities:
By double-pumping increased American River diversions, PCWA will operate the pump station such that release of American River water into Auburn Ravine, via the Auburn Ravine Tunnel, will be within the limits of recent historical monthly maximum delivery rates.

Success Criteria:
Documentation of double-pump operations and deliveries of American River water into Auburn Ravine within the limits of recent historical monthly maximum delivery rates.

Other Related Mitigation Measures

Water Quality *and* ***Public Health and Worker Safety*** *include additional measures that will protect fish and aquatic resources in the Project area, during both construction and operation of the Project.*

3.2 TERRESTRIAL RESOURCES

Mitigation Measure 3.2-1: Establish Buffer Zone to Avoid Disturbance of and Prevent the Permanent Loss of Riparian, Wetland and Pond Vegetation and Associated Habitat

Riparian, wetland, and pond vegetation exist at and adjacent to (upstream and downstream) the Project site. Avoidance buffer zones will minimize the extent of habitat disturbance or modification due to Project construction. Ultimately, restoration of the river channel will result in improvements to aquatic habitat conditions at the site, relative to the existing condition.

Commitment:	Establish a 10-foot buffer zone around all riparian and wetland or pond areas to be avoided during construction. Clearly mark the buffer area with temporary fencing, flagging or other suitable material.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Monitoring to ensure temporary buffer markers remain in place
Reporting Requirements:	Daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to identify and create buffer zones around riparian, wetland and pond habitats within and immediately adjacent to the Project area. The Construction Contractor will indicate the buffer zones and avoidance areas with temporary markers and/or fencing.

Success Criteria:
Riparian, wetland and pond habitat buffer zones will remain clearly marked throughout construction and encroachment will be avoided by construction personnel.

Mitigation Measure 3.2-2: Minimize Impacts Upon State and Federal Special-Status Species in the Project Area

Commitment: Protect individuals and habitat for state and federal special-status species from Project construction impacts by performing pre-construction site surveys. Inform Construction Contractor personnel of potential presence of special status species in the Project area and provide procedures for avoidance or relocation, if necessary, to USFWS- or CDFG-designated habitat.

Responsible Parties: Reclamation/Construction Contractor - On-site Monitor

Location: Project area/river channel

Timing: Prior to and during all phases of construction (2002 through 2004)

Monitoring: No specific monitoring requirements

Reporting Requirements: Conduct survey and document results. Construction personnel will indicate participation in education/ informational session by signing participation statements.

Description of Activities:
Reclamation biologists will conduct a site survey to evaluate potential presence of special status species (see **Table 2**) within project construction area. Information regarding the state and federal special-status species that potentially occur within the Project construction area will be included in the Construction Contractor personnel education/information presentations and materials.

Table 2 lists those species which are classified as "species of concern" (SC) by USFWS or as "California species of concern" (CSC) by CDFG, and which may occur in the project area.

Table 2
Federal and State Species of Concern That May Occur in the Project Area

Common Name	Species Name	Status Federal [a]/State [b]
Amphibians		
Foothill Yellow-legged Frog	*Rana boylei*	SC/CSC
Reptiles		
California Horned Lizard	*Phrynosoma coronatum frontale*	SC/CSC
Mammals		
Spotted Bat	*Euderma maculatum*	SC/CSC
Greater Western Mastiff-bat	*Eumops perotis californicus*	SC/--

[a] Federal status: SC = Species of Concern
[b] State status: CSC = California Species of Concern
-- = No listing

Success Criteria:
Document completion of survey and successful avoidance and/or relocation of these species, as needed, in construction compliance reports.

Mitigation Measure 3.2-3: Measures for Entrapped, Injured or Dead Special-Status Animal Species

Commitment: All reasonable efforts will be made to allow any entrapped animals to escape. Any dead or injured animals will be turned over to CDFG or USFWS.
Responsible Parties: Reclamation/Construction Contractor - On-site Monitor
Location: Entire Project area, including staging sites and access routes
Timing: During all phases of construction (2002 through 2004), as needed
Monitoring: No specific monitoring requirement
Reporting Requirements:
A written report detailing the date, time, location, and general description of the circumstances under which an animal was found must be submitted to CDFG and/or USFWS no later than three business days following the incident.

Description of Activities:
Reclamation will require the Construction Contractor to ensure that all injured or killed special-status species are reported to CDFG or USFWS and handled appropriately.

Success Criteria:
All incidents are reported to CDFG or USFWS and handled appropriately. Include documentation in construction compliance reports.

Mitigation Measure 3.2-4: Restoration of Permanent Riparian, Wetland and Pond Vegetation/Habitat Loss

Commitment: Restoration of river channel through Project area will provide enhancement of wetland and riparian habitat such that all construction-related permanent vegetation loss is fully mitigated.
Responsible Party: Reclamation
Location: Project area/river channel
Timing: Post-construction
Monitoring: Monitor re-establishment of wetland, pond, and riparian vegetation associated with the restored river channel
Reporting Requirements: Provide Summary Reports, including photographs of the Project site, with benchmarks prior to construction, and at years 1, 3, 5, and 10 following river restoration

Description of Activities:
Restoration of the North Fork American River channel, including creation of a "naturally functioning" river system will provide overall vegetation and associated habitat enhancement at the Project site. Reclamation will monitor the long-term natural re-establishment of vegetation and habitat areas and report to resources and permitting agencies. In consultation with these agencies, Reclamation may implement an adaptive vegetation restoration strategy, if needed, to supplement natural re-growth at the site.

Success Criteria: Document natural re-establishment of vegetation in Project area.

Other Related Mitigation Measures

Fish Resources and Aquatic Habitat, Mitigation Measure 3.1-2, avoids changes to the flow and water source composition of Auburn Ravine, thereby avoiding any Project-related change to terrestrial (riparian) resources along the Auburn Ravine corridor.

Noise, Mitigation Measure 3.9-2, results in lower operational noise levels in the Project area than under existing conditions, reducing operational noise impacts to wildlife.

Public Health and Worker Safety Mitigation Measure 3.10-5, design of the public river access features includes installation of posts and other barriers to prevent off-road travel, thereby minimizing the impacts of increased vehicular access at the Project site upon individual wildlife species and habitat.

3.3 WATER QUALITY

Mitigation Measure 3.3-1: Removal of Construction Litter and Debris

Commitment: Remove litter and construction debris from the Project area and dispose of at an appropriate site.
Responsible Parties: Reclamation/Construction Contractor - On-site Monitor
Location: Project area
Timing: During all phases of construction (2002 through 2004), as needed
Monitoring: Inspect construction areas for compliance with litter and debris control measures
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require Construction Contractor to keep site clear of construction-related litter and debris; specifically, in areas near the river channel.

Success Criteria: No litter or construction debris is noted in the Project area, on inspection.

Mitigation Measure 3.3-2: Construction-Related Water Quality Protection Measures

Commitment: Stormwater runoff control measures that prevent contaminants, soil or sediment from entering the river shall be implemented, monitored for effectiveness, and maintained throughout construction operations. The specific measures to be implemented for this project will be determined as part of the permitting process prior to construction. Construction specifications will include all required

	measures indicated in permits for erosion control, stormwater runoff control, and dewatering specifics.
Responsible Part ies:	Reclamation/Construction Contractor - On-site Monitor
Location:	Construction areas
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect construction areas for compliance with water quality control measures
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to implement terms and conditions of regulatory permits including all applicable construction Best Management Practices (BMPs) for stormwater runoff and erosion control to minimize the potential for direct release of materials to the river during Project construction.

The Construction Contractor will be responsible to meet the terms of the permit(s). Should monitoring or site inspection indicate unacceptable conditions due to construction, the lead agencies, in consultation with the Regional Water Quality Control Board (RWQCB) or other permitting agencies, will develop and implement additional protective measures to prevent water quality impacts.

The Project water quality protection measures to be required by permitting agencies may include one or more of the following:

- Terms limiting the period or type of construction activities that occur within the ordinary high water line of the American River up- and downstream of the bypass tunnel.
- Restrictions upon storage and stockpiling of construction materials, including vehicles and supplies, and chemicals or other hazardous materials to designated construction staging areas.
- Designation of vehicle/equipment fueling and wash-down areas, away from the floodway and designed to contain potential spills.
- Regular maintenance of construction vehicles and equipment such that leaks of fuels, lubricants and other materials are prevented.
- Removal of construction litter/debris and proper disposal practices at the end of each construction day and particularly prior to the start of the rain season.
- Requirement to minimize near and in-river activities to the extent possible.
- Implementation of post-construction management activities including restoration or improvement of drainage patterns and stabilization of stream banks and hillsides (upland areas) within the construction area; stabilization may include revegetation with a seed mix of plants native to the area, mulch or some other form of protection.

Success Criteria: Document permit compliance in construction compliance report or as required by individual permitting agencies.

Mitigation Measure 3.3-3: Project Operation and Maintenance Water Quality Protection

Commitment: Protect downstream beneficial water uses by incorporating standard BMPs into the operation and maintenance of the Project to avoid water quality impacts.
Responsible Party: PCWA
Location: Project area/river channel
Timing: Project operation and maintenance
Monitoring: As required by permitting agencies
Reporting Requirements: Comply with regulatory permit reporting requirements

Description of Activities:
PCWA will comply with regulatory permit terms and conditions in all short- and long-term maintenance activities for the pump station, intake facilities, and diversion structure.

Success Criteria: Document compliance with regulatory permit terms and conditions.

Mitigation Measure 3.3-4: Minimize Water Quality Impacts From Increased Public Access

Commitment: Reduce the potential for pollutants to enter the river.
Responsible Party: Reclamation
Location: Project area (public river access features)
Timing: Ongoing during operation of public river access
Monitoring: Monitor use of parking areas such that capacity is not exceeded; monitor proper functioning of drainage control structures; and track public sanitation facility maintenance.
Reporting Requirements: No specific reporting requirement.

Description of Activities:
Reclamation will ensure that design of the public river access features limits the number of cars permitted into the Project area and further restricts the proximity of vehicles to the river. Reclamation will ensure that the design incorporates drainage control structures into all access roads, trails and parking areas to reduce direct contribution of pollutants into the river.

Through its Auburn SRA management agreement, Reclamation will require CDPR to maintain the public river access facilities such that trash containers will be emptied and restrooms will be cleaned regularly to avoid accumulation of litter in the Project area.

Success Criteria:
Public river access area is maintained appropriately and water quality/pollution impacts avoided.

3.4 RECREATION

Mitigation Measure 3.4-1: Maintain Public Recreation Trail Access During Construction

Commitment: Provide public recreation trail access to the Project area during construction, to the extent feasible, without compromising public health and safety and Project construction progress.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004); as feasible
Monitoring: Monitor fencing and temporary markers or other posted signs used to indicate areas open for public trail use in Project vicinity during construction.
Reporting Requirements: Record trail access restrictions in daily inspector report

Description of Activities:
Reclamation will require the Construction Contractor to identify, with temporary construction fencing, flagging, and posted signs, all areas of restricted or limited public access. Additionally, Reclamation will provide public notification of such limitations through a Public Outreach and Information Program.

Success Criteria: Appropriate, safe trail access is provided, to extent feasible.

Mitigation Measure 3.4-2: Avoid Recreation Trail Closures That Affect the Western States Endurance Run, Tevis Cup Western States Trail Ride, or the American River 50-Mile Endurance Run Events

Commitment: Project construction scheduling will avoid impacting the route or timing of the Western States Endurance Run, Tevis Cup Western States Trail Ride, and the American River 50-Mile Endurance Run annual events.
Responsible Parties: Reclamation/Construction Contractor and CDPR Event Coordinator
Location: Project area recreation trails
Timing: Once annually per event (as needed)
Monitoring: Indicate event in compliance report
Reporting Requirements: No specific reporting requirements

Description of Activities:
As part of the event permitting process, CDPR will coordinate with event sponsors and Reclamation's Construction Contractor to ensure safe passage along event routes during set-up, operation and breakdown activities through the suspension and elimination of all potentially hazardous construction associated risks during these events.

Success Criteria: Planned annual events and routes are maintained.

Mitigation Measure 3.4-3: Auburn-to-Cool Trail

The Auburn-to-Cool Trail crossing of the dewatered channel North Fork American River will be lost once the bypass tunnel is closed and river flows returned to the natural river channel.

PCWA Commitment:
In order to mitigate PCWA's share of the recreational impact associated with bifurcation of the Auburn-to-Cool Trail, PCWA shall pay a maximum of $500,000 to be used for costs associated with the construction of a new bridge across the North Fork American River or another alternate mitigation program (e.g., the construction of new trail segments). Such money, or some lesser amount if the full amount is not required, shall be made available to CDPR only after all of the following have occurred: (1) CDPR and Reclamation have completed the environmental review necessary to implement such a Project, have chosen to proceed with such a Project, and have obtained all regulatory approvals necessary to proceed with the Project; (2) any litigation over such environmental review or regulatory approvals has been resolved in favor of CDPR and/or Reclamation or other approving agency; and (3) the American River Pump Station Project has obtained all necessary regulatory and/or discretionary approvals necessary for construction, and any litigation over any such approvals has been resolved in favor of PCWA.

PCWA will have met its obligations under this mitigation measure once it has provided payment for costs associated with construction of a bridge or alternate trail.

California Resources Agency Commitment: The State of California has indicated that $1.0 million would be available to apply toward the design, planning and construction of crossing or alternate trail access near the Project site.

Responsible Parties: California Resources Agency, CDPR/PCWA
Location: To be determined by future study
Timing: Ongoing

Description of Activities:
Various trail replacement alternatives are being considered by state and federal agencies to determine the best approach to provide trail access for multiple user groups. Feasibility studies will be performed.

Success Criteria: Lead agencies and CDPR participate in funding and evaluation of providing alternate river crossing or trail access to replace ACT crossing.

Mitigation Measure 3.4-4: Minimize Trail User Conflicts Due to Increased Public Access

Commitment: Design and improve trails to accommodate designated uses and avoid conflicts between multiple user types.

Responsible Parties: Reclamation/CDPR
Location: Project area trails
Timing: Ongoing Project operations
Monitoring: Maintain trail features and posted signs that indicate hours of operation and trail use designation; CDPR park staff and/or volunteers to assist in informing and enforcing trail uses.
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to construct trail and access road improvements from the Auburn Dam batch plant parking area to Oregon Bar and to the North Fork American River turnaround/handicap-accessible parking area with proper width and informational/directional signage.

Through the management agreement for the Auburn SRA, Reclamation will require CDPR to monitor sign conditions, and repair or replace as needed. Additionally, CDPR staff and/or volunteers will provide enforcement of specific trail use rules and regulations in the Project area.

Success Criteria: Trail uses remain clearly demarcated and user conflicts avoided.

Mitigation Measure 3.4-5: Minimize Littering at Public River Access Locations

Commitment: Control litter within the Project area and nearby adjacent areas.
Responsible Parties: Reclamation/CDPR
Location: Project area/Maidu Drive
Timing: Ongoing Project operations
Monitoring: Monitor adequacy of trash containers provided as part of Project; increase number, if needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Through the management agreement for Auburn SRA, Reclamation will require CDPR to provide and maintain animal-proof trash containers at several locations in the public river access areas, including the Maidu Drive entrance, Auburn Dam batch plant parking area, Oregon Bar turnaround (at Cardiac Hill trailhead), near Oregon Bar, and at the riverside turnaround/handicap-accessible parking lot.

CDPR's park staff and volunteer patrols will work to enforce litter control rules.

Success Criteria: Document placement and maintenance of trash containers.

Mitigation Measure 3.4-6: Provide Disabled Access Parking Area

Commitment: CDPR will coordinate with the lead agencies on design specifics to provide disabled river users with parking and river access.
Responsible Parties: CDPR/Reclamation
Location: Project area
Timing: Ongoing Project operations
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to grade and construct three handicap-accessible parking spaces adjacent to the riverside turnaround, including one van accessible space. Design/construction will include placement of base rock and vibra-packing or rolling to provide a firm compact surface.

Reclamation will require the Construction Contractor to install signs indicating "loading zone, no parking" at the turnaround and signs indicating handicap-accessible parking, as appropriate.

Reclamation will require the Construction Contractor to create a short trail meeting American Disabilities Act standards. The trail will consist of compacted gravel will lead from the handicap-accessible parking lot to a location near the river.

Success Criteria: Provision of handicap-accessible river access.

3.5 VISUAL RESOURCES

Mitigation Measure 3.5-1: Blend Project Features with Surrounding Landscape

Commitment: Minimize visual quality impacts by designing Project features to blend with the surrounding landscape, to the extent feasible. Public river access features will be limited and "rustic."
Responsible Party: Reclamation
Location: Project area
Timing: Project design
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will ensure that final project design includes measures to blend the Project features into the surrounding landscape/viewshed. Preliminary Project design elements identified to minimize visual impacts include the following:

- Pump station will be composed of light colored split-face block to avoid introducing new source of glare to area.

- Intake will be designed and constructed to look like a natural component of the river channel.
- Bypass tunnel openings will be enclosed in such a way that the closure blends with the surrounding environment.
- Trails and access roads will be constructed to blend in with surrounding landscape. Limited improvements will be made such that these features are "rustic" in nature, consistent with the Auburn Interim Resources Management Plan.
- Removal of vegetation will be minimized to extent necessary to create trails, roads and fire breaks.

Success Criteria: Completed structures/features blend with surrounding area.

3.6 CULTURAL RESOURCES

Mitigation Measure 3.6-1: Stop Construction Activities if Cultural Resources or Human Remains are Uncovered

Commitment: Protect any undiscovered prehistoric (e.g., arrowheads, mortar, human bones) or historic artifacts (e.g., glass, ceramics, metal, nails) according to CEQA Guidelines and Reclamation's Directives and Standards, LND 07-01. Notify authorities and follow procedures according to Reclamation's Directives and Standards, LND 07-01.
Responsible Parties: Reclamation/Construction Contractor
Location: Entire Project construction area
Timing: During all phases of construction (2002 through 2004)
Monitoring: No specific monitoring requirement
Reporting Requirements: The discoverer of human remains must contact Reclamation's Regional Director/designee (contract officer's representative) immediately by telephone or in person, followed by written confirmation of the discovery within 48 hours.

Description of Activities:
If previously unidentified cultural resources are encountered during Project construction, Reclamation will require the Construction Contractor to stop construction work within 20 meters of the material(s) and the contract officer's representative will be sought immediately and will contact Reclamation's Regional Archaeologist/designee. If human remains are uncovered the Construction Contractor will notify Reclamation immediately.

Success Criteria:
Through communication with construction personnel, provide procedure to respond to uncovering of any discovered prehistoric or historic artifacts.

Mitigation Measure 3.6-2: ***Develop and Implement Programmatic Agreement with State Historic Preservation Officer (SHPO) Regarding Potential Indirect Impacts at Shasta Reservoir***

Commitment: Reclamation will develop a Programmatic Agreement with SHPO that defines what action(s) will be taken, if needed.
Responsible Party: Reclamation
Location: Shasta Reservoir
Timing: Project operation
Monitoring: To be determined in Programmatic Agreement
Reporting Requirements: To be determined in Programmatic Agreement
Description of Activities: To be determined in Programmatic Agreement
Success Criteria: To be determined in Programmatic Agreement

3.7 TRANSPORTATION AND CIRCULATION

Mitigation Measure 3.7-1: ***Develop and Implement a Construction Traffic Management Plan (Traffic Plan)***

Commitment: Prepare and implement a Traffic Plan to promote efficient and safe access to the Project site and reduce Project traffic impacts on local roadways. Ensure coordination with local emergency service providers to avoid impacts on emergency access.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area/adjacent roadways
Timing: Prior to and throughout all phases of construction
Monitoring Type: On-Site Monitor regularly determine compliance with plan
Reporting Requirements: No specific reporting requirement

Description of Activities:
Reclamation will require the Construction Contractor to prepare a Traffic Plan. The Traffic Plan shall include the following elements:

- Identify the ability of access routes to accommodate anticipated level of construction vehicle and truck traffic. Factors would include road width, surface conditions, and vertical clearance.

- Require construction personnel and supply deliveries to limit use of Maidu Drive during the peak school-related travel times, including: morning school drop-off (approximately 7:15 a.m. to 8:15 a.m.) and afternoon school pick-up (2:30 p.m. to 3:30 p.m.) throughout the school year.

- Identify and secure easements necessary for roads and staging areas, including consideration of improvement and maintenance costs, construction traffic signs, restoration activities, and damage provisions, as applicable.

- Encourage Construction Contractor to have construction personnel carpool and/or provide vanpool or bus transport during peak work periods to minimize fuel consumption and reduce total number of vehicle trips.

- Ensure the safety of all people (local residents) potentially affected by construction traffic by making them aware of construction activities. Affected residents would be informed about the expected changes in traffic levels, and reasonable accommodations to help ensure safety (e.g., temporary fencing and slower construction speed limits may be appropriate).

- Coordinate with the City of Auburn to determine the location and timing of other construction activities. The coordination and planning will determine that sufficient public notice and roadway hazard warning systems (signage/detours) are in place for the entire construction period.

- Provide notification to local emergency service providers (police, sheriff, fire, ambulance services) on a regular basis regarding the timing, location, and duration of construction activities.

Success Criteria: Traffic Plan implementation minimizes potential congestion or other safety concerns in study area.

Mitigation Measure 3.7-2: Provide Information Regarding New Public River Access

Commitment: Provide local residents and anticipated recreation user groups with information that will inform interested parties of changes in use at the Project area. Promote courteous use of Project area.
Responsible Parties: Reclamation/CDPR
Location: Project study area/City of Auburn – local neighborhood
Timing: Prior to and during operation of public river access features
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require CDPR to implement a Public Information Program prior to opening the river access sites for public use which will include distribution of materials that detail the location, access routes, capacity and hours of operation. Distribute to local residents and recreation organizations.

CDPR will limit the hours of operation of the public river access features. Generally, hours of operation will correspond to upstream river flow releases that provide suitable boating flow through the Project area. Vehicular access outside of these hours will not be permitted and will be prevented by the locked entrance gate. CDPR staff will ensure that the parking area and access roads are clear of vehicles prior to gate closure.

CDPR will not permit overnight parking or camping within the area.

CDPR, if needed, will post signs along Auburn-Folsom Road on either side of the Maidu Drive intersection to indicate whether the river access parking lot is full as a means of minimizing unnecessary traffic travel along Maidu Drive.

PCWA will pay the City of Auburn a traffic impact mitigation fee commensurate with those collected from a residential development generating the same level of traffic. These fees will be applied to traffic control strategies deemed appropriate and necessary by the City of Auburn.

Success Criteria: Through the management agreement for Auburn SRA, Reclamation will require CDPR to document completion of all activities. PCWA to record payment of mitigation fees to City of Auburn.

3.8 AIR QUALITY

Mitigation Measure 3.8-1: Minimize Ozone Precursor Emissions During Project Construction

Commitment: Implement air emission control measures to reduce amount of ozone precursors, reactive organic gases (ROG) and nitrogen oxides (NO_x), emissions during construction.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004)
Monitoring: Inspect Project area construction activities and indicate compliance with Placer County and El Dorado County Air Pollution Control District (APCD) requirements. APCD representatives may inspect Project site to ensure compliance with measures.
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will ensure that the Construction Contractor implements the following emission-reduction measures to minimize ozone precursor concentrations:

- Use low emission mobile construction equipment allowed for use in Placer and El Dorado counties;
- Maintain stationary and mobile construction equipment engines by keeping them tuned and in proper running order;
- Use only diesel fuel allowed for use by California State Fuel Standards;
- Use low emission on-site stationary equipment;
- Use only fuel allowed for use by California State Fuel Standards for stationary construction equipment;

- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators; and

- Actively coordinate with Placer County and El Dorado County APCDs during construction.

Additionally, where feasible, implement emission control strategies that are considered Best Available Control Technology for diesel-fueled construction equipment.

Success Criteria: Document compliance with requirements. Record APCD inspection dates and results.

Mitigation Measure 3.8-2: Minimize PM_{10} Emissions During Project Construction

Commitment: Implement air emission control measures to reduce level of PM_{10} emissions during construction.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004)
Monitoring: Inspect Project area construction activities and indicate compliance with Placer County and El Dorado County APCD requirements.
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to implement the following measures to reduce PM_{10} emissions during construction:

- Water (sprinklers, water truck spray, other method) construction areas, haul roads, and disturbed soils as often as necessary to keep disturbed areas moist and control fugitive dust emissions.

- Cover any trucks hauling earth and debris to prevent dust emissions and spills onto paved roads, beyond the Project site.

- Sweep paved streets adjacent to the construction site to remove dust and dirt, as needed.

- Limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less.

- Minimize the total active construction area (clearing, earth-moving, or excavation) to the extent practicable.

- Stabilize exposed/disturbed areas as soon as possible following completion of construction.

Success Criteria: Document compliance with requirements. Record APCD inspection results.

Mitigation Measure 3.8-3: Minimize Potential for Disturbance of Asbestos and Exposure of Construction Personnel or General Public During Project Construction

Commitment:	Reclamation will determine the potential for asbestos-containing rock to be encountered at the Project site. Depending upon the likelihood of such, the Construction Contractor will be required to implement air emission control measures to reduce the level of asbestos emissions during construction; as determined appropriate for the Project site and specific earthwork activities.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect Project area and indicate compliance with Placer County APCD, El Dorado County APCD, and California Air Resources Board (CARB) requirements, as applicable.
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will determine the presence of and potential for construction to disturb asbestos-containing rock areas in the Project area. Should the likelihood be determined to be low, Reclamation will require the controls listed below as contingency measures in the construction contract, to be implemented in the event asbestos is encountered during earthwork.

As a precautionary measure, the construction specifications will require the contractor to obtain air samples periodically during earth moving and drilling operations to document whether an asbestos hazard exists.

Reclamation will require the Construction Contractor to meet all applicable requirements of the Placer County APCD, El Dorado County APCD (Ordinance 4548), and CARB for any grading, excavation or other construction that potentially could result in the disturbance of asbestos-containing rock. Provisions that may apply include the following:

- Apply chemical soil stabilizers to inactive construction areas.
- Regularly clean construction equipment.
- Suspend all grading operations when instantaneous wind speeds exceed 25 miles per hour.
- Stabilize exposed or disturbed areas as soon as possible after disturbance.
- If required, implement additional measures required by CARB for Asbestos Control

If asbestos-containing rock areas are determined to occur on site, construction personnel exposure to asbestos will be reduced by the implementation of standard California Occupational, Safety, and Health Administration protective measures including monitoring, awareness training and personal

hygiene. The construction management plan will include practices to reduce public exposure to asbestos fibers. Such practices will include:

- Geotechnical survey of excavation areas to map areas of serpentine rock.
- Public notification regarding blasting and earthwork prior to and throughout construction.
- Closure of site to public access with warning signs alerting the public to potential exposure to asbestos.
- Monitoring of residential and Project site asbestos levels during earthwork and blasting.
- Watering of active construction areas to minimize air dispersal of asbestos and dust.
- Worker education briefings regarding risks and ways to minimize health risks including personal hygiene practices. In addition, minimize worker exposure by implementing an asbestos mitigation plan and by requiring proper protective clothing and respiratory devices if deemed necessary after monitoring asbestos concentrations.

3.9 NOISE

Mitigation Measure 3.9-1: Minimize Noise During Project Construction

Commitment:	Comply with local (El Dorado County, Placer County and City of Auburn) general plan noise ordinance requirements to minimize construction-related noise impacts.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area/City of Auburn (neighborhoods near site)
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Monitor noise levels during periods of peak and/or unusually noisy construction activity
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will enforce Reclamation's Safety and Health Standards regarding noise. Additionally, as specified in local noise ordinances, construction activity will be limited as follows:

- Noise-generating construction activities will be scheduled Monday through Friday (7:00 a.m. to 6:00 p.m.) and Saturday (9:00 a.m. to 5:00 p.m.). Saturday activities will be restricted, however, to be consistent with the City of Auburn Noise Ordinance.

On-site construction practices will include the following:

- Construction activities which generate noise levels above 95 decibels (dB) at 50 feet (e.g., impact pile driving, rock drilling, and blasting) will be limited to the hours of 9:00 a.m. to 5:00 p.m., Monday through Friday, and will not be permitted on Saturday or Sunday.

- All diesel construction equipment will be adequately muffled as recommended by the manufacturer.

- Stationary construction equipment will be located as far as possible from resident boundaries.

Success Criteria: Construction noise levels remain within an acceptable range according to applicable standards and ordinances.

Mitigation Measure 3.9-2: Minimize Operational Noise Levels by Enclosing Pumps

Commitment: Reduce the pump station operational noise levels by enclosing pumps in a structure that reduces noise levels to 45 dB at nearest residences.
Responsible Parties: Reclamation/Design Team
Location: Pump station/adjacent neighborhood
Timing: One-time design/construction
Monitoring: Following construction, monitor noise levels reached within adjacent neighborhoods to ensure compliance with local noise ordinances (i.e., 45 dB at nearest residence).
Reporting Requirements: Indicate noise level reduction achieved

Description of Activities:
Reclamation will require the Construction Contractor to enclose the pumps in a building designed to reduce noise impacts to the surrounding area. The building will reduce noise to 45 dB at the nearest residences to comply with the City of Auburn and Placer County noise level performance standards for residential land uses.

Success Criteria: Document achievement of noise level reduction and compliance with local noise ordinance standards.

Mitigation Measure 3.9-3: Minimize Noise Levels Associated With Public Use of River Access Features

Commitment: Enforce California Code of Regulations (CCR) Title 14, CCR 4320, Peace and Quiet, within the Auburn SRA.
Responsible Parties: Reclamation/CDPR
Location: Public river access areas
Timing: Ongoing; when public river access facilities are open for use
Monitoring: Review records of neighborhood complaints and adjust enforcement level, as needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation, through its Auburn SRA management agreement with CDPR, will require CDPR to enforce hours of use and restrictions upon use of noisy equipment (e.g., radios) per CCR 4320, Peace and Quiet. Through this agreement, CDPR will be responsible for responding to and handling noise-related complaints associated with public use in the area.

Success Criteria: Minimal noise-related concerns or complaints.

3.10 PUBLIC HEALTH AND WORKER SAFETY

Mitigation Measure 3.10-1: Minimize the Potential for Increased Erosion and Slope Instability During Project Construction

Commitment: Implement the best available engineering design standards and grading techniques to reduce the possibility of undue risks to members of the public and/or additional environmental degradation that could be caused by erosion, mass wasting or unstable slope conditions.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: During all phases of construction (2002 through 2004)
Monitoring: Regular on-site inspection of active construction areas
Reporting Requirements: Construction compliance reports/daily inspector reports

Description of Activities:
Reclamation will require the Construction Contractor to perform all grading and excavation operations such that the potential for creating unstable slopes or landslides would be minimized. Potential measures include terracing, reducing slope angles, and reducing the height of cut and fill slopes.

Reclamation will require the Construction Contractor to fence-off or identify with temporary markers, areas of substantial instability in order to prevent unauthorized access.

Success Criteria: Hazardous unstable slope conditions are avoided.

Mitigation Measure 3.10-2: Minimize Potential for Increased Exposure to Hazardous Materials or Fire Risk During Project Construction

Fuel would be stored on-site in an amount that exceeds the storage limit specified in the Placer County right-to-know reporting program, and as a result, a spill prevention and containment plan will be implemented and compliance with chemical storage and use requirements will be followed.

Commitment:	Use potentially hazardous materials according to manufacturers instructions. Minimize potential for fire hazard due to construction activities.
Responsible Parties:	Reclamation/Construction Contractor
Location:	Project area
Timing:	During all phases of construction (2002 through 2004)
Monitoring:	Inspect and record use of hazardous materials
Reporting Requirements:	Construction compliance reports/daily inspector reports

Description of Activities:

Hazardous Materials
Reclamation will require the Construction Contractor to ensure compliance with all applicable hazardous material regulations, including regulations for blasting operations.

Reclamation will require the Construction Contractor to provide evidence of worker training and education on the proper transport, storage, handling, and use of hazardous materials and explosives.

Reclamation will require the Construction Contractor to restrict public access in areas of hazardous material storage or use.

Fire Protection and Prevention
Reclamation will ensure that the Construction Contractor prepare and implement an effective fire protection and prevention program covering all phases of construction under the contract. This plan will be submitted to Reclamation's Construction Engineer for approval prior to construction operations. Construction Contractor will provide and maintain a fire-tool cache and a sufficient number of employees familiar with this equipment will be available at all times when work is in progress.

In the event of a fire resulting from Project operations, the local fire-protection agency will be notified and the contractor shall take immediate control action with all available equipment and manpower.

In areas where a significant fire hazard exists as determined by the Contracting Officer, the contractor shall provide a fire patrol for one hour after the shutdown of construction operations each day during the fire season.

Contractor will establish a firebreak on the uphill side of the Project in areas where natural fuels are present and where existing roads or creek beds will not serve the purpose. The firebreak will be within the right-of-way acquired by Reclamation and will consist of a 10-foot wide strip with flammable material either cleared or covered with mineral soil.

Where normal fire protection services are interrupted by construction operations, the contractor will provide equivalent temporary services including water supplies and access for fire equipment through the Project area.

All construction operations will be in compliance with Reclamation Construction Safety Standards and all applicable state and federal codes.

Success Criteria: Document compliance with all activities.

Mitigation Measure 3.10-3: Remove All Construction-related Materials From Project Site Prior to Opening for Public Use

Commitment: Ensure public safety within the Project area.
Responsible Parties: Reclamation/Construction Contractor
Location: Project area
Timing: Upon completion of construction/prior to opening site for public use
Monitoring: On-site Monitor to inspect site following clean-up efforts and demobilization.
Reporting Requirements: Final construction compliance report

Description of Activities:
Reclamation will require the Construction Contractor to remove all waste materials, rubbish and unused construction materials from the Project site after construction and before public access into the area is granted.

Success Criteria: Document site condition in final construction report.

Mitigation Measure 3.10-4: Minimize the Risk of Public Exposure to Fire Hazards During Project Operations

Reclamation, California Department of Forestry and Fire Protection (CDFFP), and CDPR developed a comprehensive fire management plan for the Auburn Dam and Reservoir lands/Auburn SRA. This activity involved coordination and consultation with the City of Auburn, the American River Watershed Group, and other local organizations including Fire Safe Councils within the Auburn area.

Commitment: Provide fire protection services including fire prevention and suppression.
Responsible Parties: Reclamation/CDPR/CDFFP
Location: Project area/Auburn SRA
Timing: During construction/ongoing once public river access is granted.
Monitoring: No specific monitoring requirements
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will be responsible for ensuring implementation of the Comprehensive Fire Management Plan. Agencies involved in coordination and implementation of the plan include

Reclamation, CDPR, and CDFFP. Additionally, will CDPR enforce the provisions of CCR Title 14, Section 4311 restricting fires and smoking at the public river access locations.

The Fuels Management Plan element of the Comprehensive Fire Management Plan includes establishment and maintenance of shaded fuel breaks adjacent to all public access roads associated with the Project. This includes the main construction road from Maidu Drive to the batch plant, the road from the batch plant to Oregon Bar, and the road from the batch plant to the riverside turnaround and handicap-accessible parking lot (across the river from the existing tunnel outlet). Shaded fuel breaks also will be constructed around the batch plant parking area and both turnarounds.

Additional measures include:

- Implementation of standards set forth in Public Resources Code 4290 to ensure safe passage of fire suppression resources and egress of private vehicles should a wild fire occur in the canyon. These standards address road widths, turnouts, and dead-end turnarounds.

- Placement of distance/mile markers along Project area trails to aid rescuers in emergency situations to locate hikers that may become disabled or lost.

Additionally, a 300-foot wide shaded fuel break is being constructed between the houses adjacent to Auburn SRA and the Maidu Drive/Skyridge neighborhood. Construction of the shaded fuel breaks is being completed separately from the Project in cooperation between CDPR, CDFFP and Reclamation. However, although not part of the Project, this action will serve to benefit the Project area and further reduce potential risk of fire in the study area.

Success Criteria: Placement of shaded fuel breaks. Ongoing agency coordinated protection of area.

Mitigation Measure 3.10-5: Prevent Vehicular Access in Undesignated Areas

Commitment: Restrict vehicular public access to permitted routes only.
Responsible Parties: Reclamation/Construction Contractor and CDPR
Location: Project area roads
Timing: Permanent barriers
Monitoring: Monitoring condition of barriers and provide replacement or repair, as needed
Reporting Requirements: No specific reporting requirements

Description of Activities:
Reclamation will require the Construction Contractor to install large rocks, guard rail posts, or other barriers at all trail or road intersections or termination points where off-road public access is to be restricted.

Reclamation will require CDPR to monitor the condition of these barriers and provide maintenance, repair or replacement, as needed.

Success Criteria: Road barriers remain in place and prevent off-road vehicular use in Project area.

Mitigation Measure 3.10-6: Minimize Inappropriate or Illegal Activities at Public River Access Locations

Commitment: Patrol and enforce state regulations regarding illegal or inappropriate activities.
Responsible Party: CDPR, through management agreement with Reclamation
Location: Project area - public river access features
Timing: Ongoing during use of public river access sites
Monitoring: Record incidents and how they were handled
Reporting Requirements: According to CDPR requirements

Description of Activities:
Reclamation, through the Auburn SRA management agreement, will require CDPR to post the rules and regulations applicable to use of the Project area at the entrance and at each of the parking areas and turnaround locations. The following restrictions are anticipated:

- No alcohol use.
- No open fires or smoking.

A new gate will be installed at the junction of Maidu Drive and the public access road into the canyon. An entrance station is to be constructed near the junction of Maidu Drive and the construction road into the dam site that will be used as the access road; the station will be manned during all hours of operation.

The gated entrance station will limit vehicle access to designated hours.

Mitigation Measure 3.10-7: Limit Public Access to Water Supply Facilities and Structures

Commitment: Protect PCWA's facilities and minimize public safety issues due to misuse of water supply facilities.
Responsible Party: PCWA
Location: Project area/river channel
Timing: Post-construction
Monitoring: Inspect fencing and signs on a regular basis and repair/replace as needed

Reporting Requirements: Record condition of facilities in operations and maintenance log book

Description of Activities:
Prior to opening the site, PCWA's water supply facilities (on land) would be enclosed, to the extent feasible, in order to minimize public access or injury.

Signs indicating PCWA's ownership of the structures/facilities and warning of potential hazards would be posted in strategic locations to discourage unauthorized access.

CDPR's patrolling of the area will provide further management and reduction of potential unauthorized use.

4.0 PUBLIC OUTREACH AND INFORMATION PROGRAM

Several of the mitigation measures include provision of information to the general public regarding construction activities. This section generally outlines the steps to establish the program to implement these activities and the type of information to be provided to the public.

4.1 PROJECT PUBLIC INFORMATION MAILING LIST

PCWA, Reclamation and CDPR will develop and maintain a mailing list of interested parties, nearby landowners and others to receive periodic mail-outs describing different aspects of Project construction activity.

4.2 PROJECT CONSTRUCTION SCHEDULE AND ACTIVITY INFORMATION

Reclamation, as the construction management agency, will develop periodic newsletters or other specific informational pieces and distribute to appropriate mailing list addresses to inform the public of construction activity.

Suggested informational packages include the following:

1. Pre-Construction Information Package
2. Phase I Construction Information Package
3. Phase II Construction Information Package
4. Project Completion Announcement

Mitigation measures indicate provision of the following information:

Recreation

Put up notices/provide mail-out in nearby communities, to recreation groups, the Auburn Recreation District, and sports/recreation shops that indicate the dates of construction and Project area trail restrictions.

Coordination between lead agencies and event sponsors will enable safe passage along event routes during set-up, operation and breakdown activities through the suspension and elimination of all potentially hazardous construction associated risks during these events.

Noise

Provide local residents and recreation organizations with specific information regarding the Project construction schedule and activities. Such information would include the following details:

- Location of the Project
- Indication of restricted access in Project area
- Anticipated dates of construction
- Blasting information
- Expected noise levels and duration
- Name and phone number (or web page/email) for obtaining further information

Fire Prevention

Inform and involve local residents and businesses of resource agency efforts related to fire prevention planning in Project area.

Transportation and Circulation

Inform affected residents about expected construction-related traffic, especially construction mobilization and demobilization and reasonable accommodations to help ensure safety (e.g., temporary fencing and slower construction speed limits may be appropriate). Detail location, access routes, and hours of operation.

Notify local emergency service providers regarding the timing, location, and duration of construction activities. Provide any revisions to these agencies as soon as possible to ensure they have adequate and current details.

All material will include contact names and phone numbers to enable public access to additional information or clarification.

5.0 CONSERVATION MEASURES

PCWA and Reclamation both participate in other activities or programs that serve to protect or enhance the natural environment within their respective project and service areas. These activities include PCWA's involvement in the Placer County habitat conservation and watershed protection programs and Reclamation's oversight/participation in various activities associated with the CVP. These activities are not mitigation for the American River Pump Station Project, but do assist in reducing the impacts related to regional water supplies and land development projects.

5.1 PLACER COUNTY WATER AGENCY

5.1.1 Coordination With U.S. Fish and Wildlife Service

PCWA has participated in several meetings with Reclamation and USFWS representatives regarding the potential loss of habitat within the PCWA service area due to new development. Although PCWA does not have land use decision-making authority, it is recognized that some of the planned future development within Placer County likely would obtain its water supply from the American River pump station. PCWA has agreed to work with and develop a commitment with USFWS such that PCWA would not approve or provide new water supplies to new developments within a certain area, to be designated by USFWS, until USFWS certifies that the development is consistent with the interim strategy of the county's habitat conservation plan or equivalent documentation.

5.1.2 Proposed Auburn Ravine Flow and Water Temperature Monitoring Program

PCWA Commitment to Monitoring in Auburn Ravine

Both NEPA and CEQA require the monitoring of post-project environmental conditions only in limited circumstances. Federal NEPA regulations state that "[a]gencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases." (40 CFR § 1505.3). Under CEQA, state and local lead and responsible agencies need only conduct monitoring in order to ensure that adopted mitigation measures are actually carried out. (See Cal. Pub. Resources code, § 21081.6, subd. (a)(1); CEQA Guidelines, § 15097.)

Despite the absence of any expected adverse significant impact on the aquatic resources of Auburn Ravine from the Project, it became clear as a result of the comment and response process to the Draft EIS/EIR that additional data concerning Auburn Ravine and its resources would be desirable. Accordingly, PCWA proposes to conduct a data collection program in Auburn Ravine. Specifically, PCWA is now proposing that, if their respective decision-makers approve one of the alternatives outlined in the Final EIS/EIR, its actions will include a commitment to undertake certain monitoring efforts in order to amass a database that can be of use for future decision-making involving the American River and Auburn Ravine. The data at issue will be

made available to members of the public and to all state and federal regulatory agencies that have jurisdiction over activities occurring in these two waterways.

The monitoring program in Auburn Ravine will consist of two monitoring techniques: flow monitoring and water temperature monitoring.

Flow Monitoring

The objective of flow monitoring is to enhance the ability to determine water quantities associated with Auburn Ravine. A number of flow monitoring stations are proposed to meet this objective (**Figure 6**). Flow monitoring equipment will be placed at the following locations:

- On the discharge pipeline between the pump station and the Auburn Ravine Tunnel inlet portal;
- On the North Fork American River immediately downstream of the diversion for the pump station;
- Within the Auburn Ravine Tunnel near the tunnel outfall;
- Directly upstream at the Auburn Ravine Tunnel outfall;
- On Auburn Ravine a short distance upstream of the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF);
- On Auburn Ravine a short distance downstream of the Lincoln WWTRF; and
- On Auburn Ravine a short distance upstream of the confluence with the Eastside Canal/Natomas Cross Canal.

Flow rates will be continuously monitored and recorded at 15-minute intervals and transferred to a central computer at least once a month. Monitoring may be terminated by PCWA 10 years after installation of monitoring devices provided a broad spectrum of precipitation year types has been documented.

Water Temperature Monitoring

The objective of the water temperature monitoring will be to quantitatively determine the effects of the activities in the Auburn Ravine drainage on water temperatures. For this reason, water temperature monitoring equipment will be deployed in areas related to the Project (Figure 6). Exact temperature logger locations will follow recommendations by the manufacturer and industry professionals, but the approximate water temperature monitoring locations will include:

- Directly upstream of the Auburn Ravine Tunnel outfall;
- Within the Auburn Ravine Tunnel near the tunnel outfall;

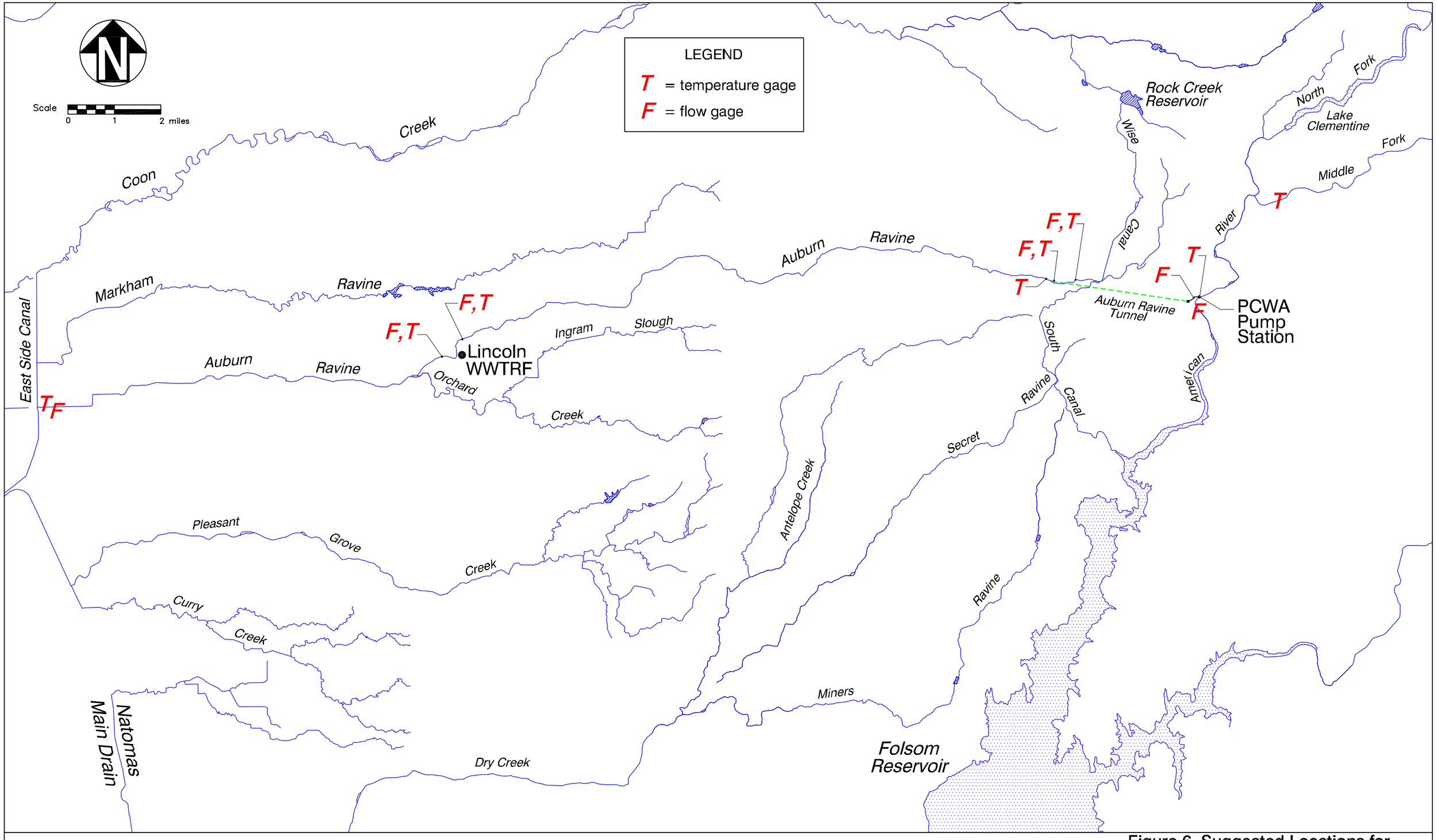


Figure 6 Suggested Locations for Monitoring Flow and Water Temperature, Auburn Ravine

- Downstream of the Auburn Ravine Tunnel outfall after mixing occurs between Auburn Ravine and the Tunnel inflow;
- Directly upstream of the City of Lincoln WWTRF effluent outfall(s);
- Downstream of the City of Lincoln WWTRF effluent outfall(s) after mixing occurs between Auburn Ravine flows and the effluent;
- Directly upstream of the confluence between Auburn Ravine and the East Side Canal;
- Middle Fork American River upstream of the confluence with the North Fork American River; and
- North Fork American River, at the Project site.

Continuously recording loggers will be used to record water temperatures at 15-minute intervals at the monitoring locations. Temperature loggers will be serviced monthly and data will be downloaded to a central computer. More frequent service and data retrieval may be necessary when recorder loss or vandalism is possible. Monitoring may be terminated by PCWA 10 years after installation of monitoring devices provided a broad spectrum of precipitation year types has been documented.

5.2 U. S. BUREAU OF RECLAMATION

Reclamation has numerous programs and policies in place which are designed to assure that special-status species are protected and enhanced. These programs and policies are listed below.

5.2.1 Central Valley Project Improvement Act Programs

The Central Valley Project Conservation Program and the Central Valley Project Improvement Act (CVPIA) Draft Project Plan (b)(1) "Other" Program, described below, apply to the biological resources of Folsom Reservoir, lower American River, and the PCWA service area that could receive CVP water. These programs apply to special-status species and their habitats in areas affected by the CVP. PCWA does not currently receive any CVP water from Reclamation, however PCWA has a contract with Reclamation that allows annual diversion in the future of at least 35,000 AFA from the American River at Auburn or at other mutually agreed upon locations when PCWA fully uses their MFP water supply. The CVP water could be used in conjunction with Placer County's existing water rights in the PCWA service area.

Central Valley Project Conservation Program

The primary goal of the Conservation Program, developed and managed by Reclamation and the USFWS, is to implement an aggressive adaptive management program that will protect, restore, and enhance special-status species and their habitats in areas directly or indirectly affected by the CVP, especially in the Central Valley and in other areas where CVP water is delivered. Implementation of the Conservation Program, by addressing the needs of threatened and

endangered species, should reduce existing threats to special-status species whose historic or current range includes areas that have been affected by the CVP.

Central Valley Project Improvement Act Draft Project Plan (b)(1) "Other" Program

The purpose of the (b)(1) "Other" Program is to protect, restore, and mitigate for past fish and wildlife impacts of the CVP not already addressed by the CVPIA. The geographic boundary and scope of the (b)(1) "Other" Program include the areas and species that were directly or indirectly affected by construction or operation of the CVP, in addition to natural resources which were subject to secondary impacts from the use of CVP water. Direct effects pertain to impacts attributed to CVP facilities such as storage or diversion dams, canals, or pumping plants. Indirect effects are attributed to changes in the ecosystem, which are a result of these structures. Secondary impacts are attributed to alteration in habitat, primarily from development within the area served CVP water.

Regional Wetlands Development Program

The purpose of Reclamation's Wetland Development Program (WDP) is to further Reclamation's mission of managing its water resources in an environmentally sound manner for the benefit of the general public. The WDP was developed to participate, in partnership with others, in wetlands, riparian, and associated upland habitat protection, enhancement, and restoration. In addition, the WDP focuses on educating the public on the values of such habitats, as well as related water and agricultural resources.

Anadromous Fish Restoration Program

Section 3406(b)(1) of the CVPIA of 1992 requires the Secretary of the Department of the Interior to …"*develop within three years of enactment and implement a program which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable, on a long-term basis, at levels not less than twice the average levels attained during the period of 1967 to 1991*…".

Further, Section 3406(b)(1)(A) requires that the program…"*give first priority to measures which protect and restore natural channel and riparian habitat values through habitat restoration actions, modifications to Central Valley Project operations, and implementation of the supporting measures mandated by this subsection…".* Moreover, this section requires that the program *"…shall be reviewed and updated every five years; and shall describe how the Secretary intends to operate the Central Valley Project to meet the fish, wildlife, and habitat restoration goals and requirements set forth in this title and other Project purposes*."

The USFWS and Reclamation are jointly implementing the CVPIA, including Section 3406(b)(1), through development of an Anadromous Fish Restoration Program to address the needs of those species identified for restoration actions in the CVPIA. A total of 172 actions have been identified to meet the intent of the CVPIA, 103 of which are assumed to have a high potential for implementation in the near future. For the American River, eight actions have been identified, with five having a high potential for near-term implementation:

1. Develop and implement a river regulation plan that meets flow objectives by modifying CVP operations, using Section 3406(b)(2) water, and acquiring water from willing sellers as needed.

2. Develop a long-term water allocation plan for the American River watershed.

3. Reduce and control flow fluctuations to avoid and minimize adverse effects on juvenile salmonids.

4. Reconfigure Folsom Dam shutters for improved management of Folsom Reservoir's coldwater pool and better control over the temperature of water released downstream.

5. Replenish spawning gravel and restore existing spawning grounds.

6. Improve the fish screen at the City of Sacramento E.A. Fairbairn Water Treatment Plant.

7. Modify the timing and rate of water diverted from the river annually to reduce entrainment losses of juvenile salmonids.

8. Develop a riparian corridor management plan to improve and protect riparian habitat and instream cover.

5.2.2 Lower American River Operations Working Group

Reclamation participates in the operational working group established for the lower American River. This group, known variously as the Lower American River Operations Group or, American River Operations Group, or Folsom Reservoir Operations Working Group (ROWG) includes representatives from Reclamation, USFWS, CDFG, NMFS, Sacramento Area Flood Control Agency, Water Forum, City of Sacramento, County of Sacramento, Western Area Power Administration, and the Save the American River Association. The group generally convenes monthly, or more frequently, with the purpose of providing input to the management of Folsom Reservoir for fish resources in the lower American River, within the confines of water availability and other operational considerations.

Reclamation provides this group with information, such as flows for the prior several months, reservoir storage, Projected reservoir inflow, water temperature data, and Projected outflows. The ROWG uses this information to plan and develop the annual flow release schedule for Folsom Dam. This takes place on a monthly basis, or more frequently, with the group adapting and refining the Projected flow release schedule for the next month, and making necessary adjustments for the remainder of the year.

The ROWG not only provides input into the flow release schedule for Folsom Dam, but also into the adaptive management of the coldwater pool in Folsom Reservoir. The coldwater pool is influenced by numerous factors, not the least of which are inflow, inflow water temperatures, diversions, storage, and the volume of cooler, hypolimnetic waters in the reservoir. Water temperatures in the lower American River also are influenced by these factors, as well as by decisions about which elevation from which to draw water for release from Folsom Reservoir into the Nimbus Hatchery and down the lower American River. The ROWG provides regular

input regarding how best to manipulate the shutters on the power penstocks at Folsom Dam to most effectively manage the coldwater pool reserves and provide maximum thermal benefit to downstream aquatic resources.

AFA	acre-feet annually
APCD	Air Pollution Control District
BMPs	Best Management Practices
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFFP	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CSC	California species of concern
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
dB	decibel
DWR	California Department of Water Resources
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
ESA	Endangered Species Act (federal)
MFP	Middle Fork Project
Mitigation Plan	Mitigation Monitoring and Reporting Program/Environmental Commitments Plan
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO_X	nitrogen oxides
PCWA	Placer County Water Agency
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter (up to 10 microns in size)
Project	American River Pump Station Project
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SC	species of concern (federal)
SHPO	State Historic Preservation Officer
SRA	State Recreation Area
SWP	State Water Project
Traffic Plan	Construction Traffic Management Plan
USFWS	U.S. Fish and Wildlife Service
WDP	Wetland Development Program
WWTRF	wastewater treatment and reclamation facility