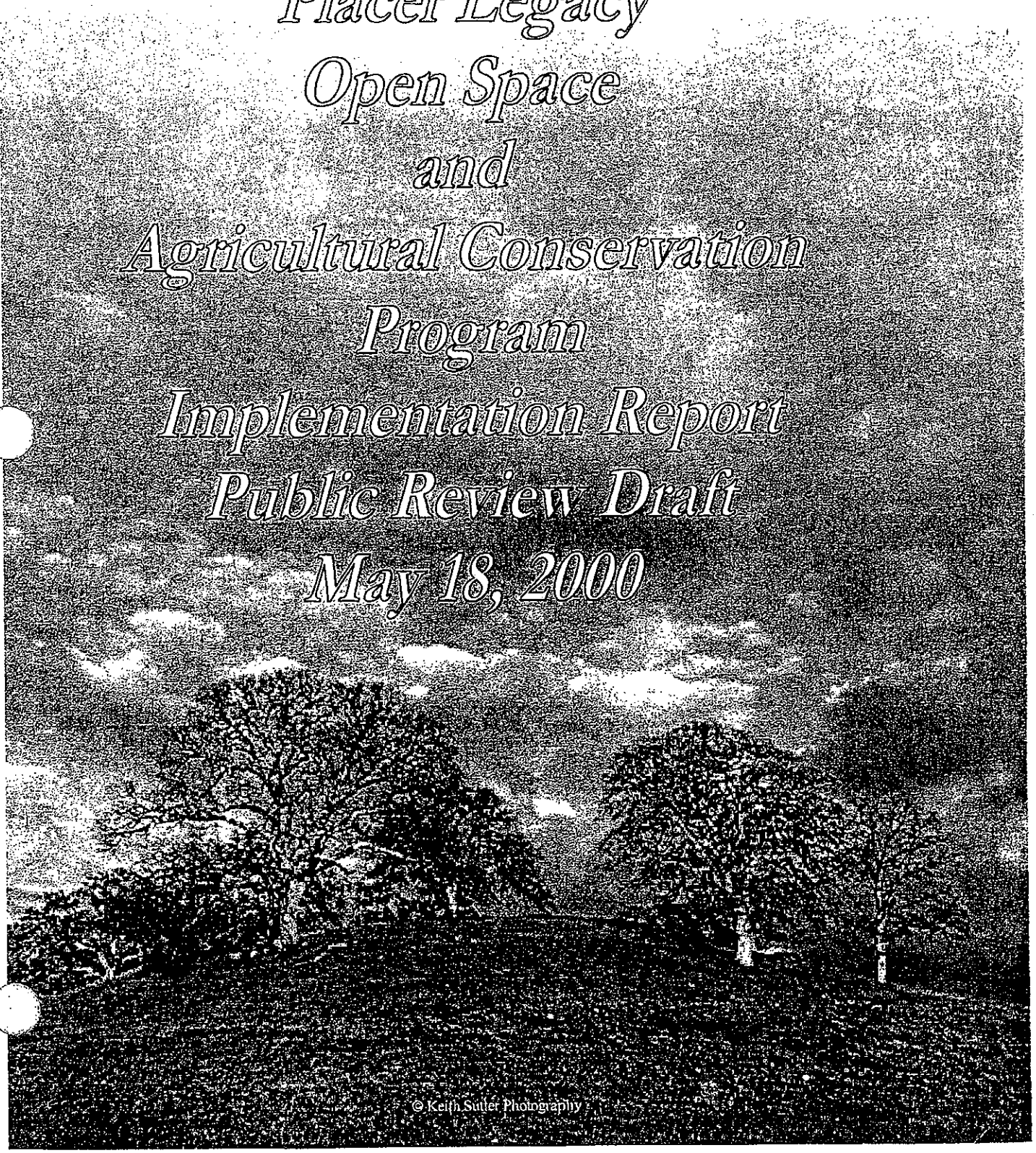
Placer Legacy Open Space and Agricultural Conservation Program Implementation Report Public Review Draft May 18, 2000



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CHAPTER I: INTRODUCTION AND BACKGROUND

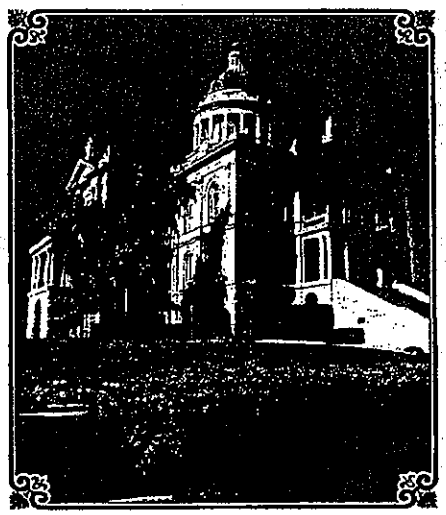
The ***Placer Legacy Open Space and Agricultural Conservation Program*** is a program of the County of Placer to protect and conserve open space and agricultural lands in Placer County. The Program has been developed to implement the goals, policies and programs of the 1994 Placer County General Plan.

Placer County rises from the Sacramento Valley to the spectacular shores of Lake Tahoe. Between the valley and the summit lies one of the signature landscapes of California, the oak woodlands of the Sierra Nevada. This geographic and climatic diversity makes Placer County home to a rich variety of plant and animals species and contributes to the County's reputation as one of the scenic treasures of California. The tremendous diversity of our landscape is evident on Map 14 (Ecoregions of Placer County), and Map 15 (Natural Vegetation Communities with Ecoregions). (All of the maps described in this narrative are located in the Placer Legacy Atlas of Maps found at the back of this report.)

Over the last 150 years, many of the County's once vast grasslands, woodlands, and riparian areas have been converted to urban rural, suburban, industrial, and agricultural uses. These trends are expected to continue for many decades to come. Today, Placer County is one of the fastest growing counties in California. Residents and businesses continue to be attracted by the opportunity to live, work and recreate in a place of such remarkable natural beauty. As population growth continues, however, Placer County risks losing the natural and scenic qualities that distinguish it from other developing regions of the country. By adopting a comprehensive open space and agricultural conservation program to implement the goals established in the County's 1994 General Plan, as well as the Cities' General Plans, Placer County can retain its unique natural heritage, minimize conflicts in achieving conservation and development goals, and enhance the prosperity of current and future residents.

GENERAL PLAN SETTING

In 1994, the Board of Supervisors updated its General Plan by adopting a new *General Plan Policy Document* and *Land Use Diagram*. The 1994 *General Plan Policy Document* contains hundreds of policies which are intended to govern land development and economic development activities for the unincorporated areas of Placer County. The General Plan serves as the community's "constitution" for land use and development.



According to state law a General Plan must be comprised of seven "elements" or chapters addressing a variety of issues including land use, transportation, housing, safety, open space, conservation, and noise. Since 1973 state law has required a General Plan to contain an open space element (Government Code Section 65560 *et. seq.*). The Government Code considers open space land to be "any

parcel or area of land or water which is essentially unimproved and devoted to an open-space use." The law further provides a breakdown by categorizing open space as four distinct types:

- **Open space** for the preservation of natural resources
- **Open space** used for the managed production of resources
- **Open space** for outdoor recreation
- **Open space** for public health and safety

All of the above are considered open space in the Placer County General Plan and consequently are evaluated in this Program for conservation purposes. Additional information on the definition of open space is found in Appendix A, "Commonly Used Terms."
The Placer Legacy Program is further supported by state law where the state legislature declared the following:

(a) That the preservation of open-space land, as defined in this article (i.e., Government Code Section 65560-65570), is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.

(b) That discouraging premature and unnecessary conversion of open-space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the cost of community services to community residents.

(c) That the anticipated increase in the population of the state demands that cities, counties, and the state at the earliest possible date make definite plans for the preservation of valuable open-space land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations as authorized by this chapter or by other appropriate methods.

(d) That in order to assure that the interests of all its people are met in the orderly growth and development of the state and the preservation and conservation of its resources, it is necessary to provide for development by the state, regional agencies, counties and cities, including charter cities, of statewide coordinated plans for the conservation and preservation of open-space lands.

(e) That for these reasons this article is necessary for the promotion of the general welfare and for the protection of the public interest in open-space land.

The Placer Legacy Program does not constitute the open space and conservation elements of the Placer County General Plan. Those elements are already contained in the 1994 *General Plan Policy Document*. However, the Placer Legacy Program does implement those elements by seeking to protect the open space resources described above. It is based upon specific langua contained in the *General Plan Policy Document* that is intended to ensure that a variety of

resources that can be considered "open space" are protected. (Appendix C lists the goals and policies of the General Plan that support the preparation of this Program.) Placer Legacy with its broad spectrum of open space conservation objectives serves as the primary tool through which the open space conservation policies of the General Plan can be implemented.

Under most circumstances the policies contained in the General Plan are applied at such time that land development activities are subject to some level of discretionary review by the County. Individual land development projects are reviewed for consistency with the General Plan in order to ensure that subsequent development activities meet and satisfy local requirements expressed as policies in the General Plan. This represents the **reactive** approach to implementing the General Plan—i.e., apply the policies at such time that a project is brought before you. The *General Plan Policy Document* also provides a significant amount of direction on developing **proactive** programs to implement the General Plan. One of the areas that receives the greatest amount of attention in the General Plan are policies related to the conservation of open space resources in Placer County.

Once suburban and urban land uses are established, they represent a permanent part of the landscape which is very rarely altered to a less intensive use. The same cannot be said for agricultural, timber and open space lands. Such areas are often viewed as lands suitable for development once growth pressures and infrastructure changes make such lands available for conversion to more intensive uses. This Program simply seeks to protect these resources in a manner that is as permanent as the urban and suburban parts of our landscape. It is intended to provide a balance to the changes in our landscape that are anticipated over the next 40-50 years of growth by insuring that certain places in the County, considered valuable because of their open space and natural resources, are to be protected in perpetuity.

In addition to implementing the General Plan, this Program will also supplement existing open space and conservation programs. The County Parks department will continue to develop park and recreation facilities for County residents. The County will still require mitigation for impacts to open space and natural resources in approvals of individual development projects. These and other programs will continue to respond to the changes that are occurring in the County. Placer Legacy complements these existing programs and has the potential to supplement these existing efforts to make them more successful. The Program will further enable the County to achieve compliance with federal and state laws pertaining to endangered species, natural community conservation planning, wetlands and streams. Appendix B is a list of existing programs in the County that will continue to have a relationship to the Placer Legacy Program.

Lastly, the Placer Legacy Program has the potential to provide important resource information that will guide and direct decisions on the preparation of environmental documents for compliance with the California Environmental Quality Act and for discretionary land use projects being examined by County staff and decision-makers. The data collected or generated by this Program and the data received through monitoring efforts is information that heretofore the County has not had. Access to a complete and comprehensive data base including the utility of a computer-based geographic information system will provide decision-makers with a more

complete assessment of natural conditions and the anticipated changes to those conditions wit individual projects.

PROGRAM DEVELOPMENT

In April of 1998, the Board of Supervisors considered and adopted the proposed goals and objectives of Placer Legacy (see Page 1-6). The development and adoption of these objectives was important at the inception of the Program in order to provide the necessary refinement to the County General Plan policies. These statements answered the basic questions about the scope of the Program and provided some focus as to what types of open space were to be evaluated for conservation and for what purpose.

Working Groups

In order to develop a program that covers such a broad range of interests it is necessary to engage and involve the public at many levels. One of the more common methods is to create stakeholder working groups who are intended to represent a variety of interests during the program development phase of the Program. For the Placer Legacy effort three working groups were formed: 1) a Citizens Advisory Committee, 2) an Interagency Working Group and 3) a Scientific Working Group. Additionally, the County formed a partnership with a local, non-profit business association, the Sierra Business Council.

Citizens Advisory Committee

On November 8, 1999 the Board of Supervisors adopted Resolution Number 99-283 (Appendix D) which formed the Placer Legacy Citizens Advisory Committee (CAC). This was an eleven member committee representing a broad spectrum of interests including agriculture, land development, environmental organizations, large and small business, and community organizations. The CAC membership included Joanne Neft (Chair), Larry Welch, Jeff Bordelon, Tim Woodall, Alex Ferriera, Bob Roan, Tom Lumbrazo, Ron Heskett, Sharon Cavallo, Ronald Bakken, and Don Riolo. The CAC has filled a number of roles, including providing a public forum for discussion of the Program, to provide public outreach through their contacts with key constituencies and to provide recommendations to the Board of Supervisors. The CAC role was accomplished upon delivery of the draft Program to the Board of Supervisors on June 20, 2000. One of the key products of the CAC was the recommendation to the Board on a number of implementation options for the Program. These options are discussed elsewhere in the balance of this document. The specific recommendations that were adopted by the Board of Supervisors are included in Appendix D.

Interagency Working Group

In addition to the Citizens Advisory Committee, the County also formed a interagency working group (IWG) to ensure that members of state, federal and local governments who had a stakeholder interest in the Program had a forum for participation. A partial list of IWG members includes natural resource regulatory agencies such as the California Department of Fish and Game and the U.S. Fish and Wildlife Service, land managers,

such as the U.S. Forest Service and the Bureau of Land Management and local government such as the Placer County Water Agency and the Cities of Placer County. The IWG role has been important during program development to ensure that Placer Legacy is consistent with state, federal and local regulations and mandates. The IWG's role will also be important during program implementation due to the regulatory components of the Program that will be pursued (e.g., state and federal endangered species act take permits) and because of the common conservation goals that could include the management of state and federal lands (e.g., the Tahoe National Forest).

Scientific Working Group

Because two of the Program objectives are focused on the protection of biological resources in the County and because certain elements of the Program implementation involve permitting of state and federal resource agencies, the County also formed a scientific working group (SWG). The role of the SWG is to ensure that the biological resources component of the Placer Legacy Program is founded on sound conservation biology principles. The SWG is drawn from a number of disciplines including geography, conservation biology, aquatic resources, and terrestrial ecology. Dr. Peter Brussard from the University of Nevada Reno chairs the SWG. Members include Dr. Ted Case from the University of California, San Diego, Dr. Bruce Pavlik from Mills College, Dr. Frank Davis, from University of California, Santa Barbara and Dr. Don Erman from University of California, Davis.

Sierra Business Council

In addition to the use of the three working groups, Placer County has also established public/private partnership with the Sierra Business Council (SBC). SBC is a non-profit business association located in Truckee, California. The SBC mission is to "secure the long term economic and environmental health of the 12-county Sierra Nevada region." SBC provided assistance in program development, coordination, grant fund raising and public participation. The relationship between Placer County and SBC is an excellent example of what can be accomplished with public/private partnerships where common goals and objectives have been identified and are attainable through cooperation and mutual assistance.

Work Plan

The work plan was presented to the Board of Supervisors in April of 1998. The overall objective was to complete the development of the Program by summer of 2000. The basic elements of the work program were as follows:

- Develop program objectives and the overall scope of the Program
- Form the stakeholder working groups including the Citizens Advisory Committee, the Interagency Working Group and the Scientific Working Group
- Begin data collection and assessment
- Refine the goals and objectives of the Program through citizen participation
- Identify a series of conservation recommendations

- Evaluate the recommendations against the known conditions of the resources as expressed by the data
- Prepare a draft conservation program
- Prepare a draft funding mechanism and examine fiscal impacts
- Provide recommendations on a governance structure
- Obtain additional public input on the draft program
- Board of Supervisors action regarding the conservation program, the funding mechanism and governance structure

CONSERVATION PROGRAM GOALS AND REGULATORY GOALS

From its inception, the Placer Legacy Program has included work program elements to address regulatory requirements associated with biological resources (i.e., state and federal endangered species acts and federal wetland regulatory laws) and the non-regulatory conservation objectives of the Placer County General Plan. The chief regulatory and non-regulatory components of the Program include the following:

Non-Regulatory Program Elements

The non-regulatory elements of the work program are derived from community and social values in Placer County. With this Program the County has a great deal of discretion to determine how these important resources can be protected. Under most circumstances, there is little in the w of local, state or federal regulation or revenue sources to protect these resources. All of these resources are identified in the Placer County General Plan as being worthy of some degree of protection. The Placer Legacy Program will serve as the means by which protection measures can be implemented. The non-regulatory elements of the Program address all of the following objectives:

Placer Legacy Goals and Objectives

GOAL STATEMENT

Placer County has been blessed with extensive and diverse natural resources: woodlands, forests, grasslands, riparian areas, lakes, rivers and an assortment of open spaces. It is the goal of this Program to develop specific, economically viable, implementation programs which will enable the residents of Placer County to preserve a sufficient quantity of these resources to maintain a high quality of life and an abundance of diverse natural habitats while supporting the economic viability of the County and enhancing property values. The Program will further the various open space and natural resource goals of the Placer County General Plan and associated general plans of the six cities in Placer County.

OBJECTIVES

- ***Maintain*** a viable agricultural segment of the economy;

- ***Conserve*** natural features necessary for access to a variety of outdoor recreation opportunities;
- ***Retain*** important scenic and historic areas;
- ***Preserve*** the diversity of plant and animal communities;
- ***Protect*** endangered and other special status plant and animal species;
- ***Separate*** urban areas into distinct communities; and
- ***Ensure*** public safety.

KEY ELEMENTS

The Placer Legacy Program will:

- Provide a wide variety of ownership, preservation, and funding methods to address the diverse circumstances present in the County;
- Benefit the County's economic future by clearly maintaining the County as an outstanding place to live and do business;
- Maintain local land use control by taking a leadership role in the preservation of endangered species and habitat protection;
- Identify open spaces of importance to residents of the cities as well as the unincorporated area;
- Improve certainty in the regulatory process; and
- Design the Program to allow phasing and early opportunities for successful implementation.

MEASURES OF SUCCESS

In developing the Program, priority will be given to ensuring that:

- The process involves all stakeholders and provides meaningful opportunities for public involvement from both unincorporated and incorporated area residents;
- The final Program is scientifically sound, ensures the long-term conservation of important open spaces and natural communities, and includes a financing plan for immediate and ongoing implementation; and
- The effort receives the widespread support of Placer County residents.

Regulatory Program Elements

The Placer Legacy Program will seek a number of state and federal resource permits as a subset of the overall Program objectives. The State and Federal Endangered Species Acts require a permit for certain types of activities that can result in take of listed sensitive plant and animal species. The Federal Clean Water Act requires permits for the discharge of fill

materials in wetlands. In all cases, in Placer County, permits are currently issued on a project-by-project basis. The Placer Legacy Program will seek to obtain regulatory compliance through a comprehensive planning and permitting program in the form of a Natural Communities Conservation Plan (NCCP) and a Habitat Conservation Plan (HCP). Additional information on the regulatory compliance objectives and program are found in Chapter III, Section D. A definition of an NCCP and HCP is found in Appendix A, Commonly Used Terms.

CHAPTER II: LAND USE AND CHANGE IN PLACER COUNTY

This chapter examines population and economic development trends in the county and describes the role of Placer Legacy in this context.

In 1998, the State Department of Finance identified Placer County and San Benito County as the two fastest growing counties in the State of California with a growth rate of 4.0%. The Department of Finance and other entities continue to project significant levels of growth in Placer County for years to come. The Placer Legacy Program seeks to achieve a balance between the growth that is anticipated with conservation of the very resources that are bringing so many new residents and employees to the area. In order to determine how such a balance can be achieved, it is necessary to have an understanding of the status of land use in Placer County today and the changes that are being contemplated for the future.

SECTION A: POPULATION TRENDS

In 1967, the Board of Supervisors adopted the first General Plan for Placer County. Compared to similar plans prepared today throughout California, the Plan provides little in the way of detail and is relatively unsophisticated. But what it lacked in details and sophistication it made up for in its vision. In 1967, the County decided that the unincorporated area was to be largely dominated by agricultural land uses to the west, timberlands to the east, rural residential land uses throughout the foothills (Figure 2-1). The Plan also recognized the existing unincorporated communities throughout Placer County and provided reasonable opportunities for economic development activities to occur in these areas. The 1967 General Plan essentially concluded that significant levels of urban development are to occur in the cities of Colfax, Auburn, Roseville, Rocklin and Lincoln (the Town of Loomis was not incorporated at the time the General Plan was adopted). The vision depicted in that General Plan essentially has held true for some 33 years. Since 1967, the majority of changes in Placer County have taken place in the cities of Placer County and to a lesser extent, unincorporated areas in Granite Bay, Martis Valley and North Auburn.

Placer County has been witness to significant changes since 1967. When the first General Plan was adopted, the entire population of the County was approximately 77,000 persons, almost exactly the population of Roseville in 2000. Since 1940, we have almost doubled our population every 20 years. Even though this growth rate is expected to slow some in the next couple of decades, it is still projected that the County population will more than double in the next 40 years. Figure 2-2 depicts the population of Placer County from 1960 to 2000.

SECTION B: EXISTING POPULATION

According to the Sacramento Area Council of Governments (SACOG), the year 2000 population of Placer County reached 230,060 persons, an increase of 158,000 persons over the 1967 population. The majority of the population resides in the cities of Placer County but the unincorporated area continues to have the largest population under a single governmental entity.

The population is split between unincorporated and incoporated areas as depicted in Figure 2-3.

Maps 5 and 6, Existing Land Use in Western and Eastern Placer County, depict the extent of urban development in Placer County as of 1998. Although these figures do not depict all of t developed land uses in Placer County, they do depict the location of urban land uses or those which have resulted in the greatest amount of change upon the natural landscape. As evidenced in the maps, the majority of changes have occurred in South Placer near Interstate 80 and State Route 65 in the communities of Roseville, Rocklin and Lincoln. In the foothills, the communities of Auburn, Foresthill and Colfax provide some amount of urban development. In the east, the Martis Valley, Squaw Valley, Alpine Meadows and areas near the shores of Lake Tahoe provide additional pockets of urban development.

SECTION C: Population Projections

As mentioned in the previous section, Placer County is expected to receive a significant amount of growth in the next few decades. This determination is based upon a review of population and employment projections for Placer County and the region. Numerous agencies and entities provide these population projections. The SACOG and the State Department of Finance provide two of the most frequently evaluated projections for this region. These projections are based upon a variety of trends and statistics as well as the land uses depicted on the general plans of the County and the Cities.

Map 7 (General Plan for County and Cities) depicts, in simplified form, all of the land uses depicted on the Placer County General Plan, community plans and the general plans of the cities of Placer County. (Maps 8 and 9 depict the General Plan Designations with a higher degree of specificity.) The growth that is anticipated between now and a future buildout date will be accommodated in the areas depicted on theses maps. Amendments to general plans occur in a of the jurisdictions of Placer County over time. They can be initiated by individual landowners or by the jurisdiction. They can affect a single parcel of land or they can apply throughout the boundaries of the jurisdiction. Therefore, the land uses depicted on Map 7 should be viewed as the theoretical buildout condition as depicted on general plans in the year 2000. Future amendments will change the form of development over time.

The land uses depicted on these maps include the following:

Urban - 94,066 acres (Residential at a density greater than 1 dwelling unit/acre, commercial, industrial and professional)

Rural Residential – 113,929 acres (Residential at a density of 1 dwelling unit/acre to 1 dwelling unit/10 acres)

Agricultural – 134,339 acres (Residential densities at no greater than 1 dwelling unit/10 acres)

Open Space - 36,502 acres (Includes parks, recreational areas, riparian corridors, flood plains and other similar protected areas)

Timber – 517,278 acres (Residential densities at no greater than 1 dwelling unit/10 acres)

Figure 2-4 depicts the anticipated changes by jurisdiction between 2000 and 2040 as projected by the State Department of Finance. SACOG has calculated that the collective general plans in Placer County (cities and County) would account for approximately 570,000 persons at a

theoretical buildout at some point of time in the future (post-2040 for residential). Therefore, one can conclude that there are ample opportunities to accommodate economic growth as well as the conservation goals of this Program without competing for land as a finite resource.

A number of factors could change projections over time including changes in demographics, economic development trends, infrastructure constraints, or changes in general plans. Nevertheless, the data does show significant opportunities for growth in Placer County for many years to come. For purposes of this Program it also shows that there are significant opportunities to conserve a wide range of open space and agricultural resources.

SECTION D: Economic Development Trends

In 1997 the County prepared an economic development profile that examined the various factors that affect economic development activities in Placer County. A summary of the findings of this report point to continued and rapid growth in the County for years to come. This economic growth, given the trends in real estate in particular, will alter the landscape of Placer County.

Between 1983 and 1996, the fastest growing employment sectors in Placer County were services, trade, and manufacturing. Mining remained fairly stable while there was some loss of jobs in transportation and public utilities. By 2000, the percent change in employment growth narrowed. Manufacturing added the most jobs. As the manufacturing sector grows and matures, other sectors are gaining momentum and continue to diversify the Placer County economy.

Computer and technology support firms are among the most rapidly expanding businesses in the area. Today, data processing, accounting, law, lobbying, and engineering firms, as well as state associations serve San Francisco Bay Area and Southern California clients from Placer County, keeping labor and living costs down while offering a high quality of life. Consequently, the mix of companies in Placer County has become more regional and national in character.

Several factors make a significant contribution to the real estate activity in the Placer County regional marketplace. One factor is that business expenses are substantially lower than in the San Francisco Bay Area or in Southern California. Commercial rents are generally lower in the region than in other selected cities. In combination with lower labor costs, lower commercial rents are an incentive to companies relocating to the area.

The comparatively low cost of housing in Placer County attracts many new residents to the region. Californians migrate from the more expensive areas of the state to Placer County to seek jobs or retire. Because of its proximity to executive housing, as well as affordable housing, good school systems and excellent infrastructure, the Roseville/Rocklin area continues to attract corporate and professional services tenants. With available land, Roseville/Rocklin should continue to expand and develop as a professional and corporate location and experience low vacancy rates.

SECTION E: The Role of Placer Legacy

Map 11 (Potential Urban and Rural Residential Growth) depicts where urban growth will occur at buildout when compared to the existing extent of urban development as of 1998. Lands

outside of the urban land use boundary are designated for rural residential, open space, agriculture and timber. The last three land uses provide the majority of the "open" lands in Placer County today. Map 11 shows that we are going to accommodate the increment of growth within a relatively compact urban core area—mostly in South Placer. The compact nature of the existing and future growth pattern provides the citizens of the County with the opportunity to insure that lands outside of the urban core area can be protected for the resource values they contain.

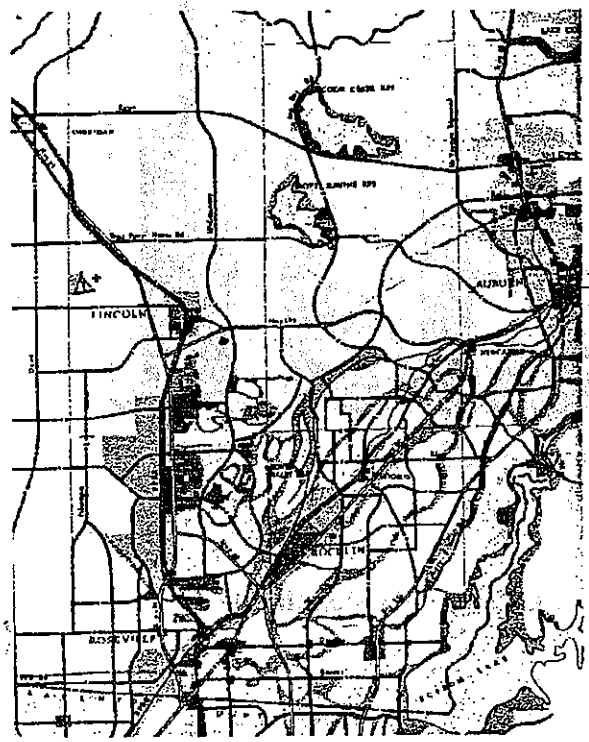
Current protection methods in the County are applied through General Plan policy language and land use ordinances such as the Zoning, Grading and Flood Damage Prevention ordinances. The cities of Placer County provide for similar levels of protection. For agricultural and timberlands, the Williamson Act and Timberland Preservation Zones provide some degree of protection but are not permanent protection tools. None of these tools provide a permanent method of protection. The Placer Legacy Program is being developed to specifically provide permanent mechanisms to protect these resources (Appendix C provides a list of existing programs).

The SACOG buildout figure of 570,000 persons, when examined against the Department of Finance's projection for 522,000 persons in Placer County by the year 2040, shows that there is the potential to accommodate a significant level of economic development activity without having to amend the County and City general plans to accommodate these new residents and employers. This provides an opportunity to examine the current general plans and determine where open space and agricultural lands can be protected in perpetuity without having to reduce or eliminate opportunities for economic growth and expansion.

Figure 2-1. 1967 and 2000 General Plans in South Placer County

That Was Then.....

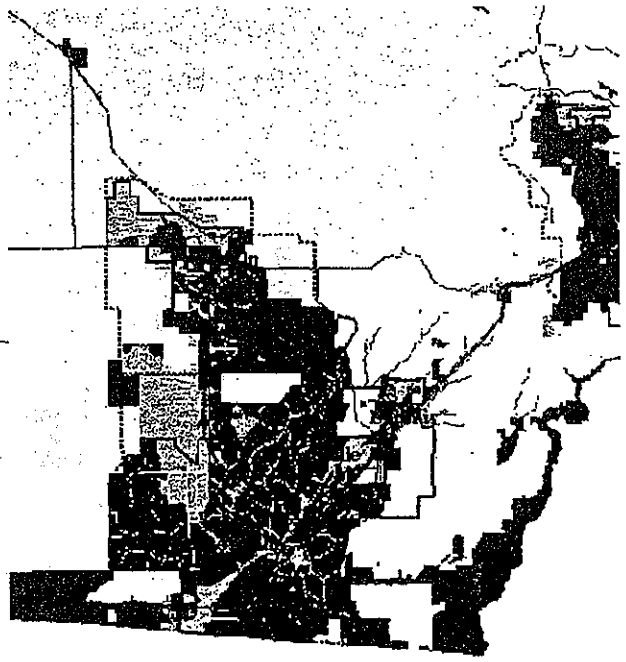
Placer County General Plan in 1967



The 1967 General Plan in South Placer depicting urban development in the Roseville, Rocklin and Lincoln area. The areas in pink and red are urban residential and commercial and professional. Areas in purple are industrial, areas in yellow are rural residential, areas in light green are agricultural and areas in dark green are open space.

....and This is Now

Placer County General Plans 2000



A compilation of the Placer County General Plan Land Use Diagram and the general plan land use diagrams of Auburn, Loomis, Lincoln, Rocklin and Roseville as of 2000. Areas in red are urban land uses including commercial, residential and professional. Areas in purple are industrial, yellow are rural residential, light green is agricultural and dark green is open space.

Figure 2-2. Placer County Population 1960-2000

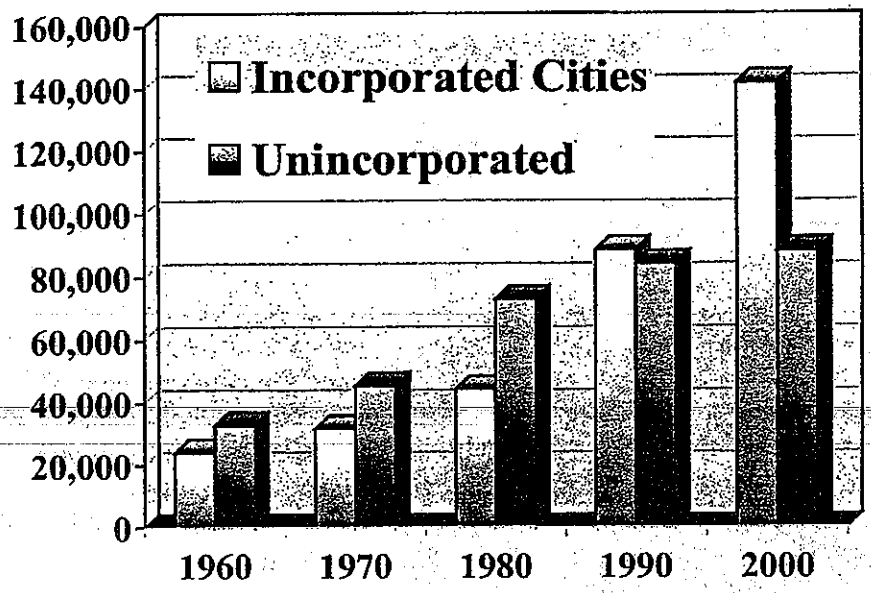


Figure 2-3. Placer County 2000 Population

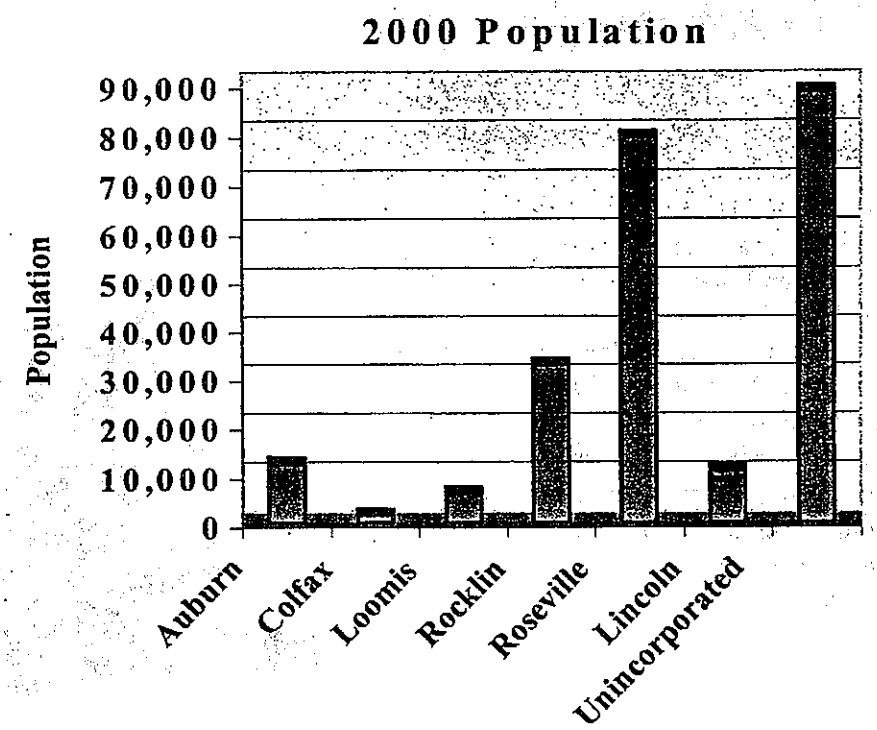
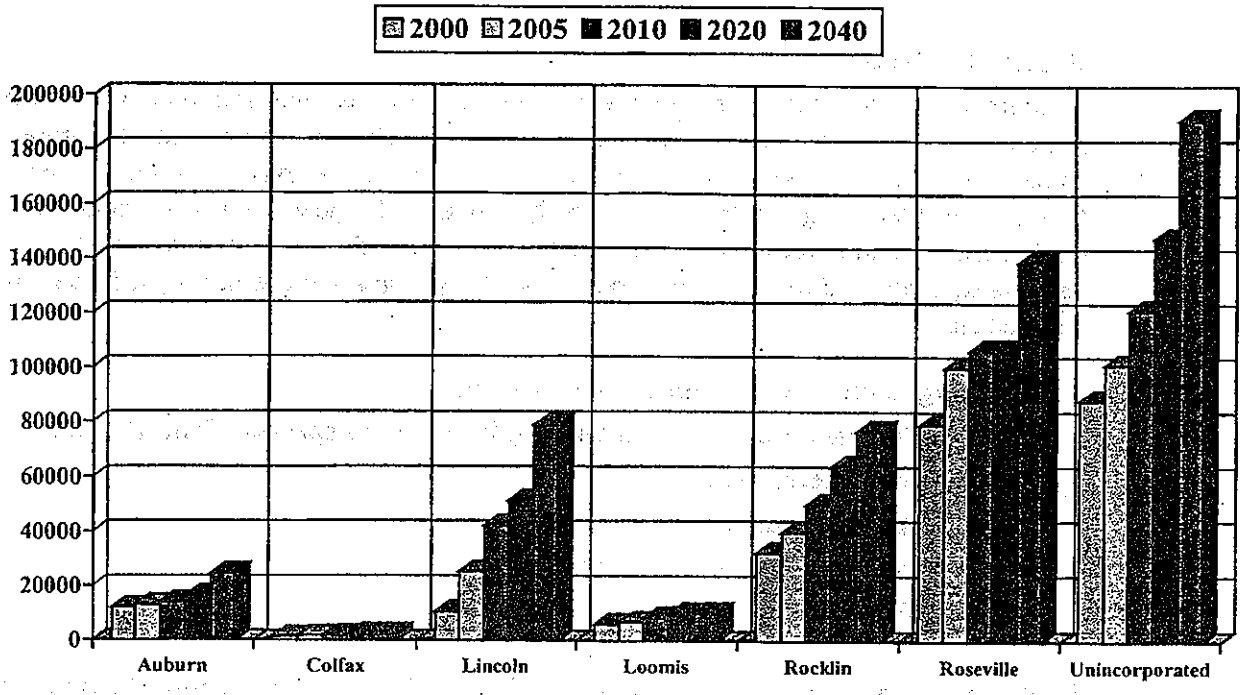


Figure 2-4. Department of Finance Projections For Placer County to 2040



CHAPTER III: COUNTYWIDE OPEN SPACE PRIORITIES AND STRATEGIES

INTRODUCTION

As defined in Chapter II, open space is both a land use in its own right and an attribute of other principal land uses such as agriculture and recreation. Placer County today has great open space value. The goal of Placer Legacy is to assure that most of that existing value will persist in the future. The Placer Legacy Program offers the citizens of Placer County an opportunity to implement a broad range of open space policies found in the County's General Plan, as well as community plans and the cities' general plans. The Program addresses open space resources grouped as:

1. Agriculture and Farmland Preservation
2. Biological Resources, including biodiversity and species of special concern
3. Outdoor Recreation
4. Cultural Resources
5. Scenic Resources/Urban Separators
6. Public Safety

For this Program, practical implementation of General Plan policy requires flexibility to deal with the specific opportunities as they arise. The range of resources to be protected, the approximate scope of protection, and the general forms of stewardship have been identified and are described here.

This Chapter first describes the term ***land management*** to include a range of different tools and a range of entities that can be involved in implementation (Section A). Section B goes on to discuss each of the Placer Legacy elements and possible strategies for meeting open space objectives. Section C addresses how to maximize the open space benefits of the Program, by setting initial priorities for conservation and discussing ways in which multiple objectives can be met. Finally, Section D outlines a process for regulatory compliance based on a Countywide planning effort for biological resources.

SECTION A: IMPLEMENTATION OVERVIEW

The Placer Legacy Program reflects the need, first identified in the 1994 Placer County General Plan, to inventory Placer County's open space resources and plan for their long-range preservation (see Appendix C). This need for stewardship has been translated into a series of specific actions tailored to the various resources to be protected. The success of this Program will depend in part upon the variety of tools used to implement the Program.

1. Land Management

Most of the resources under consideration are land-based. Thus Placer Legacy stewardship of open space resources will entail:

a. Establishing a public interest in land supporting open space resources;

b. Defining the public objectives for that land;

c. Operating on the land to fulfill those objectives; and

d. Monitoring the resources on the land to demonstrate that the objectives are being met and to guide the ongoing management effort.

This Program will use the all-embracing term ***land management*** to refer to the collective activities intended to preserve or protect open space resources.

Establishing a public interest

The most direct way to establish a public interest in land is through fee simple acquisition. Any land acquisition under the Program will be conducted on a willing seller basis. Therefore, in developing an implementation strategy, Placer Legacy is looking for mutually beneficial land management opportunities to attract willing sellers.

In this Program development process, no specific properties have been designated for acquisition. No additional environmental constraints have been added to properties that are not already subject to application of existing County policies, ordinances or zoning, or to state or federal regulation. This document includes maps indicating the distribution of resources in the County (see "Atlas of Placer Legacy Maps") and a discussion of how open space objectives can be met (Sections B and C of this chapter, and Chapter IV), as well as a discussion of initial priorities (Section C of this chapter). In order to carry out the Program, the County and others involved in implementation will need to actively contact landowners with high priority open space resources (as determined by existing and future data sources, including anecdotal information). Landowners to be contacted will be those who are already offering their properties for sale on the open market, and those who have expressed direct interest in participating in the Placer Legacy Program.

Outright fee simple land acquisition is only one tool for protecting open space values. Other tools may be more effective or preferable to the public, and can be applied where needed. Alternatives to acquisition include purchase of an easement on land, which leaves title to the land with the original owner, but conveys certain rights, such as development rights or access, to the public interest (see Appendix A for an explanation of conservation easements). Similar rights can be obtained less permanently through a lease or contract with the landowner to conduct certain practices that maintain the land's open space resources (see Appendix H for guidelines on land acquisition).

The public interest rights that may be acquired can be held by a range of entities including the County, a cooperating city, a special purpose governmental entity (e.g. Open Space District or

Joint Powers Authority), a private non-profit trust or a private for-profit contractor. Due to the range and geographic diversity of open space resources under consideration, it is likely that a combination of many institutional approaches will be used to implement Placer Legacy. (See Chapter VII for a full discussion of government structure options.)

Establishing objectives

The present Program is based on a Countywide geographic analysis, incorporating the best available data on current and future land uses, and a wide range of open space resources. The information currently available and being developed on an ongoing basis, is sufficient to guide Countywide Program decisions.

A specific land management strategy, however, will need more detailed information, with site surveys and site-specific management plans. This is particularly true with a willing seller program, where the initiative for land management comes as much from the landowner as it does from the County. As properties are brought forward for consideration under Placer Legacy, it will be important to prepare a preliminary inventory of open space resources and identify at least the near term (e.g., five-year) management needs and costs. That information will make the partnership between willing seller and the public interest more effective.

Activities

Activities on the land will reflect the open space objectives. In most cases, there will be little need for change from current activities because much of Placer Legacy is directed at preservir the existing quality of the Placer County environment. For example, agricultural land can continue to provide scenic corridor or urban edge definition simply by continuing in any form agriculture. Usually, more specific management will be needed to preserve and enhance biological values, but these too will entail identification of compatible land uses and management intensity. For example, maintenance of oak woodland/savanna or vernal pool grassland would involve an appropriate grazing regime.

Thus, responsibility for operation could range from direct County or public agency activity, to a contract with a third party such as a wetland mitigation bank operator, or a contract with the owner of the property with very little outside involvement.

Monitoring

After the public interest is established and preliminary objectives are set, there will need to be some appropriate level of monitoring. Monitoring will begin by determining baseline conditions and will collect ongoing information directed at specifically measuring the effects of management and the degree to which objectives are being attained. The interplay between objectives, collection of information, and management techniques is termed "adaptive management" and will play a key role in the success of Placer Legacy land stewardship.

2. Program Scope

The Placer Legacy Program has identified open space resource types (see Table 3-5, "Prioritization of Resource Types") and, where possible, mapped their distribution in Placer

County. The Program will determine how extensively the County and others want to undertake active protection of these resources and engage in land management. The scope presented here is very broad. It addresses the protection of special habitats, the establishment of large County parks and maintaining farming as a viable presence in Placer County. It also identifies opportunities for preservation of historic properties and scenic corridors. Table 3-1 identifies the extent that land management will apply to the various Placer Legacy elements.

Actual effort under the Program will depend on the political process and available funding. (A detailed funding assessment is a part of this Program and is included in Chapter VI.) In this Program, it is assumed that substantial, long term public financial support will be available. Extensive funding is needed because land management will require compensation of willing participants and long term responsibility for stewardship and monitoring. Long-term financing is also needed to provide programs and services associated with the effort. Supplemental or alternative funding may come from government or private foundation grants or from development impact mitigation fees or agreements. These alternate sources are likely to have more focused objectives, and different priority setting processes.

Even with a high level of funding support, the Placer Legacy land management Program will be implemented over several decades. New opportunities will arise, changing conditions will lead to changing priorities, and new information will be used to set new objectives and change the way the Program is carried out.

Table 3-1. Land Management Options by Element

Element	*Level of Land Management*	*Type(s) of Management*
Agriculture	Undetermined; little land needs to be managed for farmland/timberland preservation *per se;* involvement with farmland/timberland potentially large for other Program elements.	• Easements to protect farmland • Education and stewardship incentives for landowners • Limited fee title acquisition for biological objectives
Biological Resources	Potentially important role; could involve landowner participation through a regulatory program; could involve federal/private land exchange in Sierra Nevada.	• Fee title acquisition or easements to protect biologically sensitive areas • Public education and stewardship incentives
Outdoor Recreation	Potentially important role.	• Fee title acquisitions for parks • Fee title and easement acquisitions for trails and trail access
Cultural Resources	Specific management of historical properties.	• Fee title acquisition of parcels w identified historic/cultural sites or spcific scenic views
Scenic Resources/ Urban Separators	Uncertain; potentially important role.	• Scenic easements to define urban boundaries and protect scenic views
Public Safety	Limited need; rely on existing regulation.	• Fee title acquisition of specific parcels along floodways, in avalanche zones, or at key locations for fire safety.

SECTION B: PLACER LEGACY PROGRAM ELEMENTS

The Program follows the guidance contained in the Placer County Board of Supervisor's November 8, 1999 resolution on the scope of Placer Legacy (see Appendix D). Table 3-7 is a summary matrix presenting program-oriented items from the November resolution along with a summary of how those items can be implemented. The matrix shows that many of the items represent a variable level of effort and that many items are likely to pose geographic choices.

Table 3-7. Program Implementation Measures

	Mechanism for Implementation	Responsible Dept. or Agency
Agriculture		
Assist Placer County farmers by developing a strong local product identity and by promoting farmers' markets	Include information in County promotional materials. Provide grants and direct funding	Economic Development Legacy Implementing Agency
Assist with the marketing of locally-grown produce	Include information in County promotional materials. Provide grants and direct funding	Agricultural Commissioner Economic Development Legacy Implementing Agency
Educate the public regarding the special values of locally grown crops	Include information in County promotional materials. Provide grants and direct funding	Agricultural Commissioner Legacy Implementing Agency
Utilize the Agricultural Commissioner's office as an agricultural advocate with the Board of Supervisors	Provide support to the Agricultural Commissioner's Office where appropriate. The majority of the effort will be the responsibility of the Agricultural Commissioner's Office.	Agricultural Commissioner
Establish neighborhood agricultural "districts" with specific policies that are locally applicable	Prepare an analysis which determines the location of agricultural districts through an evaluation of geography, water supply, crop type(s) and land use. Develop policies consistent with the common characteristics of the districts.	Planning Department Agricultural Commissioner
Encourage neighboring agricultural landowners & producers to collaborate on easements and land preservation	Evaluate the potential to meet the objectives of the program chiefly for agricultural and biological conservation	Legacy Implementing Agency
Assist farmers with tax and estate planning	Provide professional services to the agricultural community in Placer County.	Legacy Implementing Agency Agricultural Commissioner
Implement and promote the Williamson Act to ensure that the needs of farming operations are protected	Actively promote the the use of the Williamson Act including the Farmland Security Zone provisions. The County may reduce or waive filing and processing fees	Legacy Implementing Agency Agricultural Commissioner
Make the existing Right-To-Farm Ordinance more useful to the farmer by educating the public and by intervening in legal challenges subject to right-to-farm	Provide educational materials on the provisions and purpose of the ordinance. May involve legal intervention on behalf of farmers. Ensure that the ordinance is distributed in a manner consistent with the statute (e.g., as a public disclosure document)	Agricultural Commissioner County Counsel
Work to make water available for agriculture and at a reasonable price	Coordinate with water agencies, the Agricultural Commissioner and local agricultural organizations to determine a means of insuring a long-term and reliable source of agricultural water for western Placer County farmers.	Legacy Implementing Agency Board of Supervisors Planning Department
Develop a program to identify methods to protect agriculturally designated areas from conversion to non-agricultural uses.	Coordinate with the Cities of Placer County and local agricultural organizations to develop methodologies (e.g, buffering techniques and transition areas) and the use of conservation easements to ensure that agricultural areas are permanently protected.	Board of Supervisors Planning Department

Biological Resources		
Organize public education and volunteer participation programs on a small sub-regional, watershed, neighborhood, or community-of-interest	Develop public education and outreach programs. To the extent possible, utilize the existing organizations in the County including CRMP activities, conservancy activities recreational organizations, agricultural organizations and neighborhood or community associations	Legacy Implementing Agency Planning Department
Identify opportunities for Placer County agriculture to participate in protecting biological resources by working directly with the agricultural community	Continue to work with the agricultural community representatives on the implementation of the Placer Legacy effort. Ensure that there is adequate representation on stakeholder groups that assist with the implementation of the program, including the regulatory compliance elements associated with biological resources.	Planning Department Agricultural Commissioner
Involve the public in efforts to identify, fund, protect and enhance biological resources in each of the various social and geographic communities throughout the County	Develop public outreach programs for the valley, foothill and Sierra Nevada ecoregions	Legacy Implementing Agency
Utilize Placer Legacy project's comprehensive, Countywide scope to address conservation opportunities on public and private lands in the Sierra Nevada	Participate in the U.S. Forest Service Sierra Nevada Framework project and other related projects. Participate in the planning and land use decisions made by the Folsom District of the Bureau of Land Management.	Legacy Implementing Agency BLM, USFS and BOR
Utilize the Placer Legacy project's scientific and technical resources to become an active participant in public land planning (U.S. Forest Service and BLM) and to coordinate with other Sierra-wide planning exercises	Actively engage the U.S. Forest Service and the Bureau of Land Management to ensure that Placer Legacy objectives are met. Staff would coodinate on land management decisions, land trades and consolidations and other related planning efforts.	BLM, USFS and BOR
Develop and coordinate policies that enhance the value of public and private forest lands in the Sierra Nevada	Coordinate policy development with the U.S. Forest Service, the Bureau of Land Management and the California Department of Forestry and Fire Protection. Policy development shall directly consider private silvicultural and public recreational interests	Legacy Implementing Agency BLM, USFS and BOR
Identify areas in the Sierra suitable for local government or non-governmental protection	Coordinate with private and public landowners in the Sierra Nevada to identify areas where Placer Legacy conservation objectives can be met. Utilize the data collected through the program to inform decision-making to ensure protection of valuable resources	Legacy Implementing Agency BLM, USFS and BOR
Participate in land exchanges, management agreements or similar programs to facilitate protection of Sierra ecosystems	Actively engage the U.S. Forest Service and the Bureau of Land Management to identify opportunities to trade and consolidate lands that further the objectives of the Placer Legacy effort.	Legacy Implementing Agency BLM, USFS and BOR
Develop a program to monitor trends in the County that will impact open space resources and to evaluate the success of resource protection and management actions	Develop a trend monitoring program and implement management actions in response to findings.	Legacy Implementing Agency
Monitor trends to alert the County to a need for action before a resource is in crisis	Provide general interagency coordination and cooperation and assign staff to specifically monitor trends, state/federal laws, case law and local land use changes in the unincorporated and incorporated areas of Placer County and the region.	Legacy Implementing Agency
Develop long-term objectives and a monitoring program designed to determine whether the objectives are being met and how management may be changed to perform better	Evaluate program objectives and provide further specification on how the particular conservation targets are to be met over time with an identification of measures of success that are measureable and reportable. Monitor the program to ensure that the conservation targets are met and where they are not met, how changes can be made to ensure goals are achieved.	Legacy Implementing Agency

Protect oak woodland areas and included communities of unusual biological diversity, age structure, understory component, landscape linkage, or scenic value by the following means: 1) resident education about oak woodland value, 2) local conservation action, 3) continued application of County policy on discretionary land use entitlements (e.g., the Rural Development Design Guidelines) and 4) through continued implementation of County ordinances	Develop incentive and education based programs to inform the public on the value of oak woodlands and how the conservation of these resources are beneficial as fish and wildlife habitat, aesthetics and property values. Incentive based programs may include financial compensation for the protection of oak woodland resources. Both County community plan and general plan policy would be applied to discretionary projects and the environmental review ordinance (CEQA), grading and tree ordinance would be applied consistent with current practices.	Legacy Implementing Agency Planning Department
Outdoor Recreation		
Encourage, facilitate and evaluate the potential to fund volunteer efforts to provide trail systems, access, or recreational facilities	Initiate the coordination of volunteer organizations to facilitate the development and maintenance of trails and other recreational facilities. Assist existing volunteer and other interest based organizations where possible.	Legacy Implementing Agency Parks Division
Ensure that zoning regulations maintain private recreation facilities asa viable land use	Evaluate the Placer County Zoning Ordinance to ensure that there are adequate opportunities to provide a wide variety of recreational pursuits on private property. Particular emphasis will be placed on evaluating the Timberland Preservation Zone.	Planning Department
Determine whether there are ways for the County to optimize and safeguard river, lake and reservoir recreation.	Analyze current water-based recreational trends and opportunities to determine where there are unmet demands.	Legacy Implementing Agency Parks Division
Cultural Resources		
Provide opportunities to protect and conserve historical resources by providing revenues to identify, evaluate, maintain and where appropriate, acquire historical resources	Evaluate historical resources and development incentive-based programs to protect these resources. Where appropriate identify historical locations and structures that warrant protection and work with property owners and where appropriate, willing sellers to protect these resources.	Legacy Implementing Agency County Museum's Department
Provide revenues to identify, evaluate and where appropriate locate property with cultural resources including Native American archaeological resources or palentological resources.	Evaluate cultural resources and development incentive-based programs to protect these resources. Where appropriate identify cultural locations and structures that warrant protection and work with property owners and where appropriate, willing sellers to protect these resources.	Legacy Implementing Agency County Museum's Department
Scenic Resources/Urban Separators		
Prepare a new scenic highway element of the Placer County General Plan	Review community plans, the previous scenic highways element and data collected from Placer Legacy and prepare a new Scenic Highways Element	Planning Department
Preserve scenic transportation corridors	Engage the public in an effort to identify and inventory scenic transportation corridors Prioritization of conservation activities, including acquisition, should be based upon public input. Project-by-project implementation will be applied to discretionary projects. Where appropriate, acquisitions may also apply.	Planning Department Legacy Implementing Agency
Identify the visual quality objectives for each scenic transportation corridor and evaluate the impact of land use changes within the corridor	Utlilize public input gained from the tasks above and analyze through the use of the GIS where land use changes can be anticipated and the impact of those changes on scenic quality. Use the conclusions of the data to set priorities for conservation activities.	Planning Department Legacy Implementing Agency
Identify ridgelines that contribute to the scenic quality and value of an area	Engage the public in an effort to identify and inventory scenic ridgelines. Prioritization of conservation activities, including acquisition, should be based upon public input.	Legacy Implementing Agency
Identify and inventory significant scenic locations and vistas that are not within a scenic corridor	Engage the public in an effort to identify and inventory scenic locations and vistas. Prioritization of conservation activities, including acquisition, should be based upon public input.	Legacy Implementing Agency

Identify strategic opportunities to protect open space edges and buffers particularly when other open space values are present, e.g., stream corridors, scenic roadways, and sensitive species habitat	Engage the public, the Cities and property owners in an effort to identify edges and buffers. Prioritization of conservation activities, including acquisition, should be based upon public input.	Planning Department Legacy Implementing Agency
Public Safety		
Catalog lands with a public safety constraint and use this as part of the information in screening and ranking lands for open space conservation.	Utilizing existing data sources, including the GIS system, identify public safety lands that have the potential to also meet other open space and agricultural conservation objectives of the program.	Legacy Implementing Agency Flood Control District, Dept. of Public Works and CDF

The discussion of Placer Legacy elements that follows is based on a statement of conditions, objectives and recommendations for action that were developed by the Citizen Advisory Committee (CAC) and the Scientific Working Group during the summer of 1999. The discussion begins with a description of existing conditions followed by a set of recommendations and an outline of actions that can be undertaken. The emphasis here is to show where the Placer Legacy Program can add substantial incremental value to open space and agricultural conservation above that afforded through the discretionary land use process under existing regulation or by present multi-use management of public lands. References to action by "Placer Legacy" means action by some appropriate entity to be determined through the Program implementation process. Usually this will be the County and often the cities, but may be other public or private parties or some future management authority.

1. Agriculture

Setting

Placer County has a robust historical and present-day agricultural economy (see Map 12, "Agriculture in Western Placer, 1994"). More than one third of the productive farmland is owner-operated, a relatively high proportion compared with other Central Valley counties. The farming population is aging, however, and for economic reasons, farmland is increasingly sold for land development or speculation rather than kept in agricultural production by younger generations. Urban growth hastens the rate at which Placer County agricultural lands are converted to non-agricultural uses, especially in Western Placer, where large parcel sizes and proximity to Sacramento has made the area a prime target for new residential development. Land speculation in this area drives up land values and may reduce the economic viability of agricultural production.

There is no obvious geographical aspect to agricultural conservation in Western Placer County because most of the soils are suitable for some type of agriculture (see Map 12, "Agriculture in Western Placer, 1994" and Map 30, "Soils in Western Placer"). In the context of historical farming there is no one type of agriculture that stands out and is dependent on a particular soil association (with the possible exception of rice). The significance of prime soils is that prime soils may be higher producers, which means more favorable economics, but many Placer County crops are grown competitively on non-prime soils. For example, the present diversity of agricultural types and economic productivity on Class IV and lower soils indicates that viable

agricultural production is possible throughout Western Placer County (see Map 31, "Important Farmlands, 1998").

Instead, agriculture in Placer County is dependent upon consistently favorable market conditions and on reliable, reasonably priced water of adequate quality and quantity for agricultural purposes. Water is particularly limiting for agricultural lands in the western part of the County. Three surface water purveyors (Placer County Water Agency, Nevada Irrigation District and South Sutter Irrigation District) provide water for irrigation. Groundwater, though more expensive than surface water, is also pumped in many areas. The edge of the Central Valley aquifer follows the edge of the flat valley plain, roughly along the route of Highway 65 (see Map 13, "Water Source for Existing Agriculture in Western Placer, 1994"). East of that aquifer line, groundwater is available in variable quantities and agriculture relies more heavily on surface water.

The Placer Legacy Program defines agricultural conservation from two perspectives: that of the farmer and that of the public at large.

- For the farmer, preservation of agriculture is almost entirely a matter of economics. Only a viable business can maintain the viability of the land use. The agricultural community also has a social stake in the preservation of farms and ranches. Many families have farmed or ranched for generations; the working landscape and its traditions contribute significantly to the sense of community in rural Placer County.
- For the public at large, agriculture provides productive open space and community identity, as well as wildlife habitat, although the public currently does not pay directly for these values. Placer County agriculture also provides the public with access to fresh, diverse and high quality locally grown food.

Because agriculture in Placer County is widespread, the scope of preservation is potentially very broad. There may not be enough money to preserve a significant percentage of Placer County farmland through agricultural easements. Other conservation mechanisms will be important and easement purchases may need to address values beyond agriculture alone. Creative funding will be essential in establishing easements. This may require some combination of donated easements and easements purchased with the help of outside organizations, matching funds and other incentives. One approach, given the geographic diversity of the County, may be to establish "neighborhoods" of willing sellers who could work together to protect enough land for viable blocks of conservation easements. The formation of such "neighborhoods" would also help strengthen the agricultural sector economically.

Placer Legacy Implementation

A. Placer County can help the farmer by:

- Developing a strong local product identity;
- Providing assistance with marketing of locally grown produce and promoting farmers' markets;

- Assisting in educating the public regarding the special values of locally grown crops (e.g., cherries, strawberries, and flowers);
- Identifying the Agricultural Commissioner's Office as an advocate for the agricultural community with the Board of Supervisors;
- Establishing neighborhood agricultural "districts" with specific policies that are locally applicable;
- Encouraging neighboring agricultural landowners/producers to collaborate on easements/land preservation;
- Assisting farmers with tax and estate planning;
- Continuing to implement and promote the Williamson Act to ensure that the needs of farming operations are protected;
- Making the existing Right-To-Farm Ordinance more useful to the farmer by educating the public and by intervening in legal challenges subject to Right-To-Farm;
- Working to make water available at a reasonable price; and
- Developing a program to identify methods to protect agriculturally-designated areas from conversion to non-agricultural uses.

There are many ways to implement these levels of assistance, examples of which are listed in Appendix G, "Implementation Steps for Agriculture." Some of these measur can be implemented with available resources; others will need new institutional suppo

B. Placer County can help make agricultural conservation valuable to the general public by using agricultural easements as an adjunct to the protection of other land uses (e.g., riparian, recreational or scenic). Easement pricing may reflect this multiple value. The more values that are protected, the greater the value of the easement. The Placer Legacy Program has developed a preliminary framework to guide the prioritization of lands for which purchase of agricultural easements will be considered (see Appendix M, "Setting Acquisition Priorities"). New information and input from the agricultural community will help the Program refine and adjust these priorities as necessary.

2. Biological Resources

Setting

Placer County stretches from the Central Valley to the Sierra Nevada, spanning 9,000 feet of elevation and at least six different ecological zones within three different ecoregions (Map 15, "Natural Vegetation Communities with Ecoregions"). This elevational gradient translates into high habitat diversity, with no fewer than twenty distinct vegetation associations (Figure 3-1, "Placer County Vegetation Composition"). Due to the County's linear shape and east-west orientation, the interface with other jurisdictions (five counties and the State of Nevada) is high, and the integrity of most natural communities found within the County depends, in part, upon conditions found outside of the County (see Map 1, "Placer County Region"). Many natural

communities extend into neighboring counties and, particularly in the foothill region, provide important landscape linkages along the western slope of the Sierra Nevada.

High habitat diversity also results in high species diversity. Given the high rate of change and habitat conversion in the County, many species have experienced large declines since pre-settlement times, and several are thought to be threatened with extinction or local extirpation. More than 100 species have been identified as "sensitive," with some type of special status or recognition assigned by the California Department of Fish and Game (DFG) and/or the U.S. Fish and Wildlife Service (FWS). Appendix F lists sensitive species known to occur in Placer County, or depend upon habitats that are found in the County. This working list, developed with the assistance of the Placer Legacy Scientific Working Group and biological consultants to the County, represents the current state of knowledge that is likely to change as new information is collected and further biological research is conducted throughout the course of this Program. The inclusion of a species in this appendix simply means that the Program has recognized its potential sensitivity and dependence upon Placer County natural communities. It does not necessarily imply that Placer Legacy will (or can) develop specific implementation measures to address the conservation or recovery of that species. Sensitive species identified by the FWS and DFG as high priority for HCP/NCCP planning are presented in bold in the appendix.

Population growth pressures are having significant impacts on several of the County's most biologically rich areas, particularly in western Placer and the eastern slope of the Sierra Nevada (see Map 11, "Potential Urban and Rural Residential Growth"). In western Placer County, biological values are largely remnant and/or human-modified ecosystems that were significantly altered long ago by gold mining and agriculture. These resources now face loss and fragmentation by urbanization. West slope Sierra Nevada ecosystems, which face only minor urbanization threats, have nevertheless experienced significant change over time as a result of timber harvesting and grazing practices, and will need concerted long-term management.

State and federal endangered species laws and federal wetlands regulations affect many areas in the County, but on the whole, most of the biological resource values in Placer County are not adequately protected by the state and federal regulatory processes alone (see Table 3-2, "Existing Regulatory Protection for Placer County Biological Resources," and Appendix B, "Existing Open Space Conservation Programs"). Map 16, "Special Status Species" indicates known occurrences and potential ranges of several species with regulatory status. However, since the majority of Placer County has not been biologically surveyed, much is still unknown about sensitive species' distributions and the potential impacts of urban growth and development on their populations.

The County represents portions of three ecoregions: the Great Valley, Sierra Foothills and Sierra Nevada (see Map 14, "Ecoregions of Placer County"). Within these ecoregions, the natural communities present reflect differences in topographic, soil, elevation, and land use history (see Map 15, "Natural Vegetation Communities with Ecoregions"). For planning purposes, the habitats of Placer County were aggregated into five resource groups: streams, grasslands, vernal pools, oak woodlands and Sierra Nevada ecosystems. Each group is defined broadly and is meant to include local, specialized and unusual habitats geographically associated with the main group. The biological resources of artificial wetlands (e.g. rice fields, drainage ditches), agricultural and urban areas are also considered where appropriate. The current state of scientific

knowledge regarding each of these resources was gleaned from the academic literature by Dr. Peter Brussard, Chair of the Scientific Working Group, and presented in summaries included Appendix A, "A Guide to Placer County Ecological Zones."

Placer Legacy Implementation

The definition of "protection" as it applies to biological resources in Placer County includes habitat management and enhancement. Tools for protection include, but are not limited to, neighborhood action, public education, conservation easements, land acquisition, residential development standards and stewardship incentives.

The work of the Placer Legacy Scientific Working Group (SWG) has led to a draft of a biological conservation strategy, attached as Appendix E. This plan addresses the various habitats described here in more detail and outlines the research that will be needed to implement the biological objectives of the Placer Legacy Program. This plan will lay the groundwork for the regulatory process described in Section D of this chapter.

A. The Placer Legacy Program will develop a programmatic approach to address sensitive species regulations and protect biodiversity. Consequently, the Program will determine: 1) which biological resources are not covered by existing regulations and hence need action to preserve biodiversity or to avoid additional new regulations, and 2) which biological resources are already heavily regulated but could benefit from a regional and coordinated perspective that will improve the conservation of species. This process has been initiated through various priority-setting exercises, including CAC deliberations, public forums, and the prioritization of resource objectives found in Table 3-5. Decisions regarding Program implementation will occur in a deliberative public manner by the management authority.

B. Placer Legacy can take advantage of the social importance of biological resources by assisting in public education and volunteer involvement. This effort would be logically organized on a small subregional, watershed, neighborhood, or community-of-interest basis, through which the public can be involved in efforts to identify, fund, protect and enhance biological resources in each of the various social and geographic communities throughout the County. The development of outdoor education curricula, nature centers and/or interpretive trails centered around unique Placer County ecosystems, can further involve and educate the general public in biological conservation. The Program can also work with the agricultural community to identify specific opportunities for Placer County agriculture to participate in protecting biological resources.

Table 3-2. Existing Regulatory Protection for Placer County Biological Resources

Community Type	Potentially Applicable Regulations	Special Status Species
Vernal pool grasslands (hardpan and Mehrten)	Federal Clean Water Act (Section 404) Fish and Game Code 1600, et. seq. Federal/State Endangered Species Acts	Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Boggs Lake Hedge Hyssop, California Tiger Salamander
Upland grasslands	None	Swainson's Hawk, Burrowing Owl
Valley riparian/aquatic	Federal/State Endangered Species Acts Federal Clean Water Act (Section 404) Fish and Game Code 1600, et. seq. County/City general plan policies and standards County/City tree ordinances Flood damage prevention and zoning ordinances	Swainson's Hawk, Valley Elderberry Longhorn Beetle, Bank Swallow, Giant Garter Snake, Chinook Salmon, Central Valley Steelhead
Freshwater emergent wetlands	Federal Clean Water Act (Section 404) Fish and Game Code 1600, et. seq. County general plan policies Regional Water Quality Control Boards	Black Rail, Giant Garter Snake
Foothill woodlands	County/City tree ordinances	
Foothill riparian	County/City general plan policies and standards Federal Clean Water Act (Section 404) Fish and Game Code 1600, et. seq. County/City tree ordinances Flood damage prevention and zoning ordinances	Foothill Yellow-legged Frog, California Red-legged Frog
Sierra Nevada hardwoods and conifers	State timber harvest regulations	California Spotted Owl, Northern Goshawk
Wet meadows	Federal Clean Water Act Fish and Game Code 1600, et. seq. State timber harvest regulations TRPA regulations Regional Water Quality Control Boards	Willow Flycatcher, Mountain Yellow-legged Frog
Montane riparian	Federal Clean Water Act Fish and Game Code 1600, et. seq. State timber harvest regulations County general plan policy	Willow Flycatcher, Lahontan Cutthroat Trout
Sagebrush	None	

C. Western Placer aquatic and riparian habitat, which has been dramatically reduced in extent and quality from historic conditions, has been identified as an important conservation target for Placer Legacy. In Placer County, stream environments represent some of the greatest remaining biodiversity in the County, yet are not consistently protected by existing regulation. While the riparian zone, narrowly-defined, is currently provided some level of protection by various general plan policies and regulations (see Table 3-2 and Appendix B), permanent protection and enhancement of this resource has great potential to improve wildlife habitat and water quality. Stream-associated resources include all habitats associated with watercourses: riparian, aquatic, wetland and associated upland areas (see Maps 16, 17 and 18). The Placer Legacy Program can help prevent the further decline (and potential listing under state/federal endangered species legislation) of species by acting now to protect and enhance these habitats. The interrelationships between streams and other elements (physical and environmental) within the watershed need to be evaluated and understood when developing strategies for protection.

Two primary strategies have been identified with respect to aquatic and riparian conservation. First, Placer Legacy will work with landowners to conserve and enhance degraded stream segments through streambed alteration, re-vegetation, and, where possible, widening the vegetated zone within the natural floodplain and, where appropriate, increasing the retention of surface water runoff. Secondly, Placer Legacy can play an important role in protecting existing high quality riparian resources and preventing further degradation from urban encroachment, particularly in rural residential and suburban areas.

Placer Legacy will continue to work with the CALFED Bay Delta Program and Coordinated Resource Management Plan (CRMP) watershed groups for each major watershed (Auburn Ravine/Coon Creek, Dry Creek, American River and Bear River) to identify protection and enhancement needs along western Placer creeks, particularly with respect to anadromous fish habitat.

D. Vernal pools, while subject to strict mitigation requirements under federal and state endangered species and wetlands laws, have been greatly reduced, and face further fragmentation and isolation as a result of urban growth in western Placer County. Vernal pool conservation is particularly important from a regional perspective, as a large percent of the region's vernal pools are found in Placer County (see Map 32, "Wetlands and Flooded Agriculture in Western Placer County"). The Program has mapped and identified significant areas of vernal pool grasslands (see Map 19, "Vernal Pool Complexes and Grasslands"), and developed preliminary assessments regarding their relative quality. In the long term, conserving large areas with relatively undisturbed topography and hydrology will be more successful than conserving small areas of high pool density, but small pool complexes at the edge of watersheds, particularly on the rare Mehrten volcanic mudflow formation, are also important for preserving biological diversity among pools. The suitability of these areas for Placer Legacy protection, possibly through a partnership between public and private entities, will be evaluated.

Large-scale conservation of vernal pools and other seasonal and permanent wetlands would likely form the foundation for a regional permitting program.

E. Foothill oak woodlands have little regulatory protection (see Table 3-2) and may present the single greatest opportunity for Placer County to preserve large blocks of wildlife habitat in private ownership. Oak woodlands and associated communities of unusual biological diversity, age structure, understory component, landscape linkage, or scenic value may be appropriate for directed, large-scale acquisition. Large areas of relatively intact oak woodlands are found in the northern, less developed parts of the County's foothill region and are associated with some of the larger river/stream systems (e.g., Bear River, Coon Creek, and Auburn Ravine) (see Map 20, "Foothill Oak Woodland and Grasslands"). These areas are important for maintaining the east-west habitat connectivity necessary for seasonal and annual wildlife migrations, as well as north-south connectivity along the Sierra Nevada foothill belt.

Nearly one half of existing oak woodlands, primarily in the southern part of the County's foothill region, are designated rural residential in the County's General Plan Land Use Diagram (see Map 20, "Foothill Oak Woodland and Grasslands" and Figure 3-3, "Western Placer Vegetation Conversion under General Plan Buildout"). In these areas, it may not be practical to undertake widespread conservation by acquisition due to the fragmented nature of the landscape. Instead, Placer Legacy will work to protect these oak woodlands through resident education about their ecological values, local conservation activities, continued application of County policy on discretionary land use entitlements (e.g., the Rural Development Design Guidelines) and continued implementation of County ordinances.

Two ongoing research efforts will help guide Placer Legacy's conservation planning efforts in the oak woodland region. First, the County initiated a multi-year field research effort to determine the influence of parcel size, land use and various habitat features on bird and butterfly diversity (biological diversity indicators) in the foothill oak woodland region. Secondly, the County partnered with the California Department of Forestry and Fire Protection (CDF) to characterize the existing extent of rural residential development in the oak woodland belt, and model the impact of future urban/rural development on oak woodland connectivity and extent.

F. Although the majority of grasslands in Placer County are grazing lands dominated by non-native annual grasses, they still retain significant biological value, particularly for raptors, other birds, and small mammals. Most of these lands should be protected for their agricultural value as well as their wildlife habitat value. Also, some grasslands will be an important component of vernal pool and oak woodland conservation areas. Grassland areas of unusual biological diversity, native species presence, restoration potential, or scenic/urban separator value are appropriate for specific protection in their own right.

G. For Sierra Nevada ecosystems, the Placer Legacy Program will use its comprehensive, Countywide scope to address the status of biological resources on public and private lands. The Program can use its scientific and technical resources to become an active participant in public land planning (U.S. Forest Service and Bureau of Land Management) and to coordinate with other Sierra-wide planning efforts. The Program will also help develop and coordinate policies that enhance the wildlife value of public and private forestlands. The County will work to identify areas in the Sierra Nevada suitable for local government or non-governmental protection, and opportunities for Placer Legacy to participate in land exchanges, management agreements or similar programs to facilitate these efforts. Small areas with high biological value that are deemed particularly sensitive or contain important sensitive species habitat, such as montane wet meadows and riparian zones, are potential candidates for direct Placer Legacy protection. Larger areas with the potential to improve the connectivity of wildlife habitat at the landscape scale, are more appropriate for federal land agency acquisition and/or management, with the potential assistance of the Placer Legacy Program.

H. To be effective in the long-term, the Program will incorporate a means to monitor trends in the County, evaluate the success of resource protection and management actions, and respond with appropriate changes in management ("adaptive management"). Trend monitoring of some species and of habitat area and quality could alert the community to a need for action before a resource is in crisis. Resource protection under Placer Legacy will have stated objectives and a monitoring program designed to determine whether the objectives are being met and how management may be changed to perform better. A large part of the monitoring program will be incorporated into a Countywide HCP/NC (see "Guidelines for Development of the HCP/NCCP" in Section D of this chapter).

3. Recreation

Setting

Placer County has a large amount of public recreation for its population size. Principal recreational opportunities are those afforded by public lands in the Sierra Nevada and by the relatively high concentration of developed park amenities available in the cities. With the exception of the American River Canyon area, recreational amenities in the lower Sierra and Foothill area are limited, however, creating a geographic gap in recreation opportunities (see Map 21, "Recreation, Trails and Public Land").

Currently lacking is low intensity or passive recreation (e.g., hiking, biking, equestrian) with appropriate support facilities (e.g., access, parking, picnic grounds, rest rooms, and interpretive materials), oriented toward natural open space resources and a broad range of users, including residents, school children, and visitors. However, river, lake and reservoir recreation is particularly well developed in Placer County and deserves recognition.

Placer Legacy Implementation

A. The Placer Legacy Program will enhance recreational opportunities in the County by improving public trail access. This will include the construction of staging areas and

parking lots, as well as the purchase of public access easements on private land to provide connections to public land and city trail networks. Placer Legacy may also develop appropriate trails and passive recreation on lands that have been identified for biological resource reasons.

B. The Placer Legacy Program will also provide regional recreational facilities in the Lower Sierra and Foothill area, supplementing the recreation opportunities provided on the federal lands to the east (primarily Forest Service and Bureau of Land Management lands), the State Park-operated areas (Folsom Lake and the Auburn State Recreation Area) and the municipal park facilities provided by the Cities, special districts and the County. Facilities provided by the Placer Legacy Program would provide a variety of outdoor recreation opportunities with an emphasis on passive enjoyment of natural communities with high biological and scenic value. Residents of South Placer incorporated and unincorporated areas alike would be served by providing one or more large (>300 acres) regional parks in a rural setting with a variety of passive recreation opportunities. Such a park may be connected with larger areas of protected land, providing additional habitat value.

C. Placer Legacy will encourage, facilitate and possibly fund volunteer efforts to provide trail systems, access, or recreational facilities. Private recreational facilities such as campgrounds, ski resorts and hunting clubs will continue to be maintained as a viable land use.

D. Throughout Placer County, across various types of private and public lands, Placer Legacy can take advantage of strategic opportunities to improve and provide access to an interconnected, regional system of trails and parks. Such facilities would provide diverse recreation opportunities in the County, including camping, outdoor education and other forms of active and passive recreation for all residents. The provision of these facilities should not be based solely on a response to growth but instead can be designed to fill unmet needs and to respond to anticipated or emerging recreational trends.

E. Placer Legacy will also determine whether there are ways for the Program to help optimize and safeguard river, lake and reservoir recreation. Rivers, lakes and reservoirs are managed by numerous other entities for multiple uses, including recreation.

4. Cultural Resources

Setting

[Note: In earlier Placer Legacy material, this element included consideration of scenic corridors. That issue has been joined with the associated concerns for community edges and urban separators.]

Placer County has well-developed historical resources, particularly around its trans-Sierra and gold rush era history. Many sites have been recognized (see Map 22, "Historic Sites and Points of Interest"). Other sites lack interpretation, formal status, management or public protection.

Cultural resources have some degree of protection through the California Environmental Quality Act (CEQA) and other state laws, including the oversight of the State Historic Preservation Office. On a project-by-project basis, there is some ability to protect these resources at the time that a discretionary project is being considered. However, the ability of CEQA and the land development review process to afford a high level of protection is limited, and consequently these resources continue to be lost due to a variety of circumstances. For example, cultural resources are often lost to construction or land management activities resulting in the disturbance or loss of the resource. Historical resources can be lost to fire, lack of maintenance or demolition.

Placer Legacy Implementation

A. Placer Legacy can provide opportunities to protect and conserve historical resources by providing funding to identify, evaluate, acquire (where appropriate) and maintain historical resources. Placer Legacy can also provide funding to identify, evaluate and, where appropriate, acquire property with cultural resources (e.g., Native American archaeological resources or paleontological resources). In most instances, a historical or cultural resource could be protected by acquisition due to the presence of other open space resource values on the property. However, due to the rich cultural heritage present in the County, there may be circumstances in which an acquisition solely for the purpose of protecting a unique cultural/historical resource may be appropriate, particularly when that resource is immediately threatened.

5. Scenic Resources/Urban Separators

Setting

[Note: In earlier Placer Legacy material, consideration of Scenic Corridors was included with Cultural Resources; it is included now with the issues of urban separators and community edges.]

With its diversity of setting, ranging from the Great Valley to the High Sierra, Placer County has tremendously valuable scenic resources. Scenic resources can be lost or negatively affected by land management activities, including new construction, vegetative removal and grading activities. Scenic resources may also be negatively affected by airborne pollutants.

The cities of Placer County provide lands and/or funding to establish open space areas within the city that serve that city's population. The locations of these resources are typically based upon function, proximity to users (if any) and costs associated with development and maintenance. More often than not, these areas are not selected to provide an edge or transition between the city and adjacent incorporated or unincorporated land uses. The County and the cities, do however, have an interest in reinforcing clear edges between communities and between cities and the surrounding rural and agricultural landscape to avoid land use conflicts. Existing programs do not provide permanent mechanisms to ensure that such edges and transition areas will exist over time. A different mechanism or program is necessary to identify and permanently delineate transition and buffer areas.

The cities' adopted General Plans have already established a land use pattern around the Highway 65/Interstate 80 corridor area that does not provide for separate distinct urban communities, particularly between Roseville and Rocklin. Based upon existing General Plan land use designations, the urban core area is a single and distinct urban entity that can be separated and buffered from surrounding rural residential and agricultural areas in the unincorporated area of Placer County and the Town of Loomis through the County's General Plan and the Placer Legacy Program.

Placer Legacy Implementation

A. For scenic resources, one of Placer Legacy's important contributions will be to satisfy Implementation Measure 1.4. of the Placer County General Plan. This measure calls for the County to "identify and formally designate and adopt a system of scenic routes." Preparing and completing this program will establish a contemporary perspective on the importance of scenic corridors (see Map 23, "Scenic Corridors"). The preparation of such an element is specifically authorized by state law and could build on existing policies in the General Plan and the various Community Plans. Transportation corridors can be preserved to provide the sense of open space that has motivated people to move to Placer County. Placer Legacy would define the visual quality objectives for each corridor, explicitly address the implications of land use change, and define the types of land use change that would not affect view quality. Within these scenic corridors, Placer Legacy can identify the ridgelines and other dominant geomorphic features and natural communities that contribute to the scenic value and character of the area. These areas would be identified in order to prevent these prominent visual features from being dominated by structures associated with new development. Existing policies and guidelines in the General Plan and implementing programs will provide much of the basis for this element of a visual corridor protection program (as was done in the Auburn/Bowman Community Plan.)

B. Placer Legacy will continue to identify and inventory those particularly significant scenic locations and vistas that are not within a scenic corridor (see Map 23, "Scenic Corridors"). Such areas could be protected through the conservation methods proposed by Placer Legacy, particularly when the scenic resources contain other open space values, e.g., recreational opportunities and cultural resources. However, due to the quality of the scenic values present in the County, there may be circumstances under which acquisition solely for the purpose of protecting a unique scenic resource may be appropriate.

Placer Legacy will identify and permanently protect open space areas that define community edges and create urban separators and transition areas between urban and agricultural land uses, particularly when other open space values are present, e.g., stream corridors, scenic roadways, and sensitive species habitat. Placer Legacy will work with cities to define these transition/buffer areas between the agricultural lands of South and Western Placer County and existing and future urban areas. Placer Legacy can also take advantage of strategic opportunities to establish greenbelts and transition areas between existing and proposed urban areas. Placer Legacy will identify the kinds of land uses and urban designs that would be appropriate in these transition and/or buffer areas.

6. Public Safety

Setting

Principal geographically-oriented public safety hazards in Placer County are flood, fire, and avalanche. The flood hazard is associated with the flatter Western County and the fire with the steep slopes and high fuel of the foothills and lower Sierra, and the avalanche in certain steep high snowfall areas in the Sierra Nevada (see Map 24, "Fire Hazard"). In general, existing local, state, and federal laws (FEMA flood zones) are sufficient to identify and protect public safety. Principal issues relevant to Placer Legacy include the extent to which Placer County can limit development in the floodplain and the ability to require fire defensible space. These policies will overlap with biological conservation objectives for creek and woodland communities.

Placer Legacy Implementation

A. Placer Legacy will continue to catalog lands with public safety constraints and use this information when screening and ranking lands for biological or other resource acquisition. In some areas of particular fire, flood, or avalanche risk, Placer Legacy may acquire residential parcels on which development would pose an undue risk to the public and a burden on public safety services. In the Sierra Nevada, these parcels may also have biological or scenic values. Further research needs to be conducted in order to determine which lands with public safety constraints are not sufficiently protected by other regulations and policies, and which other resource values are present.

B. Placer Legacy may also coordinate with other local and regional programs to protect public safety. One example is the American River Watershed Group's effort to control unsafe fuel loading along the north and middle forks of the American River. In the Valley, there may be opportunities to coordinate with the Central Valley Habitat Joint Venture program, which is implementing the North American Waterfowl Plan, to improve waterfowl habitat in western Placer County.

SECTION C: INTEGRATION AND PRIORITIZATION OF OBJECTIVES

Resource Overlap and Integration of Objectives

Although discussed separately in Section B, the implementation of the Placer Legacy Program will emphasize the geographic, economic and social integration of open space elements. Some of the greatest opportunities for Placer Legacy will be meeting multiple objectives with a single program. Some of that potential is explored in Chapter IV, where each geographic study area is addressed separately.

In general, integration of objectives is essential to the efficiency of open space and agricultural preservation. Each land management opportunity identified for one purpose, such as biological resource preservation, needs to have broad examination to see whether there are companion purposes that can be met as well, such as rangeland or scenic value. This common sense

combination of purposes will make the Placer Legacy Program more efficient and satisfy a broader constituency than would result from a single-objective approach.

In defining multiple objectives, one must identify those objectives that have the greatest constraints and those that have the most exacting land management needs. Those objectives will largely define implementation. Other objectives will provide added value to the implementation program. For convenience, the defining objective will be referred to as the primary objective and the others as secondary objectives. In using these terms, the intent is not to assign a higher social value to one resource or objective over another, only to emphasize the practical process of land management planning.

The Placer Legacy elements that have the most limited distribution will tend to be the primary planning factors: biological resources, cultural resources, and certain recreational needs, such as trails and trail access. Other elements are geographically less specific, such as agriculture and scenic corridors, and others are intermediate, such as regional parks and urban edges.

The potential for overlap is summarized in Table 3-3. Each cell in the table indicates the potential for overlap as high, moderate, or low for the various interactions between open space elements. Each cell also indicates whether land management undertaken primarily for the element in the column heading will likely also serve the element in the row heading. This is often but not always symmetric. For example land management for biological resources will likely have high scenic value, but land managed for scenic purposes may not have biological value, depending on location and land use.

This overlap can be used to formulate possible scenarios for land acreages that meet the objectives of Placer Legacy. Illustrations of such possible scenarios are presented in Table 3-4. Primary objectives requiring larger land areas are outdoor recreation and biology. Without active management, these objectives would be difficult to fulfill. Scenic and agricultural objectives could also entail the acquisition and management of large land areas, but will likely rely on existing County and city departments for preservation and management. Public safety and cultural resources are largely addressed by existing law and established programs, and the incremental management by Placer Legacy will not need to be significant.

Taking into account resource extents, identified objectives, and geographic opportunities, Placer Legacy can set a range of potential land area management efforts. An example of the range of effort is presented in the following table. The acreages listed in Table 3-4 are derived from estimates made by the Planning Department staff and planning consultant, Thomas Reid Associates (TRA) (see Appendix J, "Placer Legacy Quantitative Implementation Scenarios" for specific estimates and methods). They reflect the quantitative geographic inventory of Placer County (see Tables 3-8, 3-9, 3-10 and 4-1, and Appendix M, "Setting Acquisition Priorities"), but are not derived from a map of specific conservation areas or candidate management land parcels. The acreage figures are intended to show a wide range of possible scenarios for Placer Legacy implementation to serve as a basis for the economic analysis. The quantitative scenarios are based on the objectives set by the Citizens Advisory Committee and the Board of Supervisors, interpreted by staff to reflect a general priority of effort from low to high.

In order to provide a complete basis for the economic analysis, the quantitative scenarios establish a series of area estimates by element and by study area for the low, medium, and hig levels of effort. The biology element is derived from estimates of possible conservation for riparian and creeks, foothill woodland, vernal pools and grassland, and Sierra Nevada habitats. The specific estimates and methodology are described in Appendix J, "Placer Legacy Quantitative Implementation Scenarios." The values in Appendix J have been rounded for Table 3-4.

Table 3-3. Objective Overlap Between Elements

H = High Overlap between purposes; M = Moderate Overlap; L = Low Overlap, little mutual benefit.

Ability of this Element / To also serve this Element	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic Resources Urban Separators	Public Safety
Agriculture	–	**M** *Vernal pool and woodland/ grassland are compatible with appropriate grazing. Riparian is well buffered by agriculture*	**L** *Farming is generally incompatible with public access*	**L** *Possibly specific historic locations*	**H** *Farm and range land is prime scenic*	**H** *Flood plains are quality farm land*
Biological Resources	**M** *Depending on practices, can have high value or serve as buffer*	–	**H** *Creates large parcels, parcel on creeks.*	**M** *Preserves biology of setting*	**M** *For creeks, depends on land use.*	**H** *Sets at floodplains, slopes. Compatible fuel management*
Outdoor Recreation	**M** *Limited public access*	**H** *Properly managed public access; education and interpretive value*	–	**H** *Education and interpretive value*	**H** *Location near cities and scenic corridors has high accessibility*	**H** *Flood plains are high value recreation*
Cultural Resources	**H** *Preservation of historical use*	**M** *Preservation of historical use*	**H** *Preservation of historical use and public access*	–	**H** *Preservation of historical use*	**L**
Scenic Resources Urban Separators	**H** *Farm and range land is prime scenic*	**H** *Biological resources have high scenic value*	**H** *Parks are open space and can define cities*	**H** *Preservation of historical resources*	–	**H** *Creeks and floodplains*
Public Safety	**H** *Farm land is low risk to person or property*	**H** *Biological management of high risk creek areas, forest edge*	**M** *Help manage public exposure to risk*	**L**	**L**	–

Table 3-4. Possible Scenarios for Land Management Effort

	Extent of Land Management (acres)		
	Low Involvement	Moderate Involvement	High Involvement
Agriculture	500	13,000	40,000
Biological Resources	5,800	23,100	34,300
Outdoor Recreation	2,600	15,800	19,700
Cultural Resources	0	25	55
Scenic Resources/ Urban Separators	0	7,600	29,200
Public Safety	0	1,700	1,700
Total area managed, taking likely overlap into consideration	8,000	30,000	75,000

Source: Placer County Planning Department, Thomas Reid Associates

The reader is cautioned to bear in mind the purpose of these scenarios: to allow the County to consider a range of possible costs associated with obtaining the public interest and managing the land - these are estimates. The actual areas, and of course the actual location of the land involved, will be based on a process of priority setting, establishment of objectives, and voluntary negotiations with land owners which would stretch over many years. This will be a public deliberative process by the Placer Legacy management authority.

The quantitative scenarios, the discussion of implementation opportunities above, and the specific areas described in Chapter IV focus on the specific role of Placer Legacy in implementing the General Plan policies and do not include public interests in land that have been or will be established outside of the Placer Legacy Program.

The area estimates in the table are wide-ranging because the level of effort sought by Placer County residents is also wide-ranging, and represents varying levels of Placer County General Plan implementation. The low involvement scenario has Placer Legacy essentially targeting high priority biological resources (vernal pool/grasslands and riparian habitats), with minimal effort focused on foothill woodlands or Sierra Nevada habitats. Low involvement would seek to meet high priority park needs, but would not provide benefits beyond the immediate area managed for public use. The moderate level of involvement demonstrates an effort to expand multiple objective preservation in Western Placer agricultural/rangeland areas and establish a foothill oak woodland/regional park-preserve northwest of Auburn. High involvement implies active management of the majority of Western Placer biological resources in conjunction with multiple benefits to outdoor recreation and farmland preservation, as well as significant undertakings in the Sierra Nevada.

The final row of the table estimates the total land area to be under **land management**, taking into account the probable extent of overlap between element objectives. For the low management involvement, overlap is essentially nonexistent—projects are selected to meet narrow objectives

and have limited ability to serve purposes beyond those objectives. For the moderate involvement scenario, it is assumed that most of the objectives fulfilled by large land acquisit would overlap by seventy to ninety percent. Taken as a whole, this would result in a benefit o roughly 2:1 (i.e., the total list of land area objectives could be met in half the area). The upper range is largely undefined, but clearly, as the extent of involvement increases, the overlap between objectives and the efficiency of the Program also increase, although the more extensive farmland preservation in the high involvement scenario has less overlap with biological resources.

Prioritization of Open Space Resource Types

For each of the open space elements discussed in Section B of this chapter (e.g., agriculture, biological resources), the Placer Legacy Program has identified a set of resource types, based on input from the Board of Supervisors, the Citizens Advisory Committee, stakeholder groups and the general public (See Table 3-5, "Prioritization of Resource Types"). All previously-generated CAC recommendations and BOS resolution statements address one or more of these objectives. Thus, this list is simply a distillation of recommendations into the resource objectives upon which they were based. In some cases, resource objectives have been more specifically defined, particularly with respect to unique biological communities.

Given the time and funding limitations that may affect the Program's implementation scope, staff has attempted to assign priorities to the various resource objectives, in order to maximize the benefits of the Program. An objective set of criteria has been developed to guide the prioritization process. These criteria are:

1. **Trend** – Is the resource increasing, remaining stable, decreasing or decreasing rapidly? The rate and extent to which a resource is changing in Placer County was determined to be a key factor in determining its priority. Conserving a unique, but stable resource, would not generally be an efficient allocation of effort for Placer Legacy. The following factors were considered in determining resource trends: General Plan buildout projections (see Table 3-9, Figure 3-3 and Figure 3-4), Williamson Act contract expirations, and other growth and development pressures (see Map 26, "Growth Pressures in Western Placer County").

2. **Private Ownership** – How much of the resource is found on privately-owned lands not currently protected as open space? These areas represent the greatest opportunities for Placer Legacy to contribute additional open space benefits to Placer County. They also represent the areas of greatest uncertainty, with respect to management and future trends. See Table 3-8 and Figure 3-2 for ownership statistics calculated from the County's Assessor's parcel database.

3. **Rarity** – How common is the resource within Placer County? This is more easily quantified for biological and agricultural resources (see Table 3-1, "Placer County Vegetation Composition"), but was also estimated for scenic, cultural and recreational resources. A rarity score was not considered relevant for public safety resources. At this stage, rarity at a larger (e.g., regional) scale was not considered, although it will be an

important factor in the eventual development of an HCP/NCCP for biological conservation.

4. **Protection through Other Programs** – What level of protection is already provided to the resource? In this case, the effectiveness of regulations protecting the resource was also considered. Thus, a resource can be heavily regulated (e.g., under state and federal endangered species laws), but still have a relatively low level of protection. Local, state and federal programs were considered (see Table 3-2 and Appendix B, "Existing Open Space Conservation Programs").

5. **Number of Sensitive Species** – Does the resource support many sensitive species? This criterion is only applicable to biological and agricultural resources, and was not evaluated for other resources. With respect to biological resources, sensitive species were viewed as ecosystem indicators (see Appendix F, "A Guide to Placer County Ecological Zones," and Appendix K, "Sensitive Species List"). Although other species may actually be better indicators, the approximate number of known sensitive species was considered an appropriate proxy for this broad level of analysis.

6. **Multiple Objectives Score** – To what extent does conservation of the resource in question also contribute to the conservation of other open space resources? Multiple objectives were listed, and a score was assigned based on the total overlap potential. For a more in-depth discussion of resource overlap, see Section C in this chapter.

For resources that do not yet exist, such as recreational facilities, the potential to develop or create that resource was evaluated under the above-named criteria. Scores ranging from 1 to 4 were assigned to each resource for each criterion, and an average was obtained for each resource objective.

As indicated in Table 3-5, average scores greater than 3 were obtained for the following resources: valley intensive agriculture, valley rangelands, hardpan and Mehrten vernal pools, valley grasslands, valley riparian/aquatic, valley wetlands, blue oak woodland/savanna, black oak, sagebrush/east slope conifers, montane wet meadows, passive recreation in the valley/foothill area, scenic transportation corridors, scenic vista points, community separators/greenbelts and buffers between urban and agricultural activities. The highest overall scores were given to scenic and urban separator resource objectives, primarily due to the high threat levels that they face, as well as their unique attributes.

The scores obtained from this prioritization exercise will help guide initial implementation of Placer Legacy by focusing acquisition and program development efforts. Since CAC deliberations contributed to the creation of these criteria, the results they provide are generally consistent with CAC-identified priorities. However, priorities will continue to evolve as the Program progresses and the landscape changes. Funding sources and levels will ultimately help determine the scope and level of effort to be undertaken by Placer Legacy. Furthermore, as many unforeseen opportunities may have yet to present themselves, program implementation will necessarily be flexible, with a built-in ability to respond to new situations.

For resource types with a high degree of geographic specificity (primarily biological), the prioritization of potential areas for fee title or easement acquisition will involve objective, geographic analysis and ranking of resource values, combined with opportunistic evaluation of lands offered by willing sellers. Appendix M outlines a preliminary strategy for the prioritization of land-based conservation efforts, which will provide the specificity needed to efficiently pursue conservation opportunities. Table 3-7 provides more detail about the timing and funding for program-based implementation measures.

SECTION D: REGULATORY COMPLIANCE OPPORTUNITIES

Pursuant to the goals and objectives adopted by the Placer County Board of Supervisors on April 7, 1998, the Placer Legacy Open Space and Agricultural Conservation Program will serve as the framework for the development and adoption of a Habitat Conservation Plan (HCP) pursuant to Section 10(a) of the Federal Endangered Species Act and a Natural Communities Conservation Plan (NCCP) pursuant to Chapter 10, Division 3 of the California Fish and Game Code (2800 et. seq.). An HCP/NCCP could help implement the biological conservation goals expressed in the County's General Plan and the Placer Legacy Program objectives.

Placer County can ensure that its Placer Legacy Program achieves key objectives in ways that comply with federal and state laws. Completion of a scientifically sound and adequately funded HCP/NCCP and issuance of applicable permits by federal and state agencies has the potential to enhance the protection of Placer County's biological resources. It will also assist the County and private landowners in meeting their obligations under various laws.

Much of the available land in Placer County is privately held, and a substantial portion of the currently undeveloped private land is already entitled for development. If state or federally listed species are involved, public and private economic activities have to secure incidental take permits from the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), or the California Department of Fish and Game (DFG). If each development project has to negotiate its own take permits, mitigation tends to occur in a piecemeal, time-consuming fashion. However, if Placer County develops an HCP/NCCP, mitigation and conservation can be coordinated as part of a larger plan and a potentially more effective species protection strategy.

With this Program, the County can become the permit issuing authority for compliance with state and federal rules, thus retaining local jurisdiction over public and private development activities. This will add certainty to the development processes and reduce the amount of time normally required to address these issues while at the same time providing a state-of-the-art conservation plan with the potential to preserve the function and value of Placer County's natural communities.

Planning Areas

The Placer Legacy Program will be developing a Countywide HCP/NCCP that is broken down into distinct planning areas and habitat types. Work in each planning area will be generally phased according to immediacy of the threat to species and the amount of scientific information

available (see Appendices E, F and K for more detailed information on species and habitat types). The proposed phasing is identified in Table 3-6.

Table 3-6. Regulatory Phasing

Time Sequence	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 3**
Location	**Western County**	**Foothills** **East Side Sierra Nevada**	**West Side Sierra Nevada**	**East Side Sierra Nevada**
Primary Habitat and/or Species	Vernal pools/grassland	Foothill oak woodland	Public timberlands	Public timberlands
	Valley riparian	Martis Valley/Squaw Valley and Lake Tahoe	Private timberlands	Private timberlands
	Salmonid habitat in streams	Foothill riparian	Wet meadows, old growth conifers	Wet meadows/ montane riparian

Stakeholder Working Group

To develop the HCP/NCCP the Placer County Planning Director will create a stakeholder working group of 11 to 14 members. This working group will ensure that the HCP/NCCP meets the biological objectives of the Placer Legacy Open Space and Agricultural Conservation Program and the Placer County General Plan. The working group's task will be to advise staff and consultants on the development of an HCP/NCCP by reviewing, discussing and providing recommendations on information provided to them by staff. The working group should include people who represent the following interest areas:

- environmental
- developers and land owners
- agricultural and timber
- agency staff
- educators
- representatives from the Scientific Review Team (see below)

Members of the Working Group should be:

- interested in working collaboratively with other interests to develop an HCP/NCCP that meets a set of mutually agreed upon guidelines; and
- available to participate in regular committee meetings and maintain ongoing communication with key contacts in the County.

It is anticipated that smaller task groups comprised of various members of the Working Group will work on an as-needed basis to develop various components of the plan. Cities and special districts within Placer County will also be encouraged to participate to address their specific regulatory compliance issues and assist in the County effort.

Scientific Review Team

Development of an HCP/NCCP will need to include the input from conservation biologists, landscape ecologists, community ecologists and other scientists. Such a group was formed in 1998 to develop the biological resources components of the Placer Legacy Program (Chapters III and IV, Appendix E). By expanding the original group membership to include local biologists familiar with the specific habitats and species of Placer County, the Scientific Review Team will be able to provide both a local as well as national perspective on the development of the compliance program. This newly formed Scientific Review Team will ensure the scientific integrity of the Placer County HCP/NCCP by recommending a set of principles for reserve design, species conservation and adaptive management on which the plan can be based. Some principles that have already been identified include the following:

- Species well-distributed across their native range are less susceptible to extinction than species confined to small portions of their range;
- Large blocks of habitat containing large populations, are better than small blocks with small populations;
- Blocks of habitat close together are better than blocks of habitat farther apart;
- Habitat in contiguous blocks is better than fragmented habitat;
- Interconnected blocks of habitat are better than isolated blocks; and
- Blocks of habitat that are roadless are better habitat bisected by roads.

Guidelines for Development of the HCP/NCCP

In order to ensure that the needs of all interests are addressed, it will be necessary to establish a set of guidelines to measure success. Based on experience from other jurisdictions that have completed successful HCP/ NCCP processes, it is proposed that the guidelines include at least the following concepts:

1. **The plan should be based on the best available science.**

   Best available science means that the Program will:

   - be based on principles of conservation biology, community ecology, landscape ecology, individual species' ecology and other scientific knowledge and thought;
   - be based on thorough surveys of all species of federal, state and local concern on

lands dedicated to conservation or mitigation and lands subject to take activity;
- be reviewed by well-qualified, independent scientists;
- identify and designate biologically sensitive habitat areas for preservation;
- determine the extent of impacts to species from take activity;
- require monitoring of target species on developed, mitigation and other preserved lands for the lifetime of the plan; and
- seek to contribute to the recovery, not just the maintenance, of species covered by the plan.

2. **The plan should be created in an open and transparent manner with input from all concerned citizens.**

   An open and transparent manner means that the Program will:

   - provide for thorough public review and comment;
   - include a citizen working group that will review the plan at every stage of development; and
   - require that negotiations with applicable agencies be conducted in an open manner.

3. **The plan should contain elements that assure that the goals of the plan are actually met.**

   Required elements that will help meet the goals of the plan include:

   - monitoring and review of plan objectives and milestones at defined intervals to assure that they are being met, including the identification of a process to suspend, modify, or revoke permits if there is not sufficient compliance with the agreed upon objectives;
   - adequate funding sources identified up front for habitat preservation and species recovery goals, based on realistic estimates of future land value for the life of the permits;
   - adequate funding for monitoring to determine that plan goals are actually being met;
   - adaptive management and periodic review, with sufficient funding to support changes in take activity and mitigation required to meet the plan's goals;
   - acquisition of required mitigation lands before development proceeds; and
   - performance standards for contributing to species recovery.

Timeline

It is proposed that the Stakeholder Working Group be appointed by December of 2000 and th they begin advising the County on HCP/NCCP development starting in January of 2001. The plan is to proceed along the following timeline:

Phase 1: Western County

December 2001	Complete draft documents for Phase 1, including draft HCP/NCCP and compliance with NEPA and CEQA.
Spring 2002	Administrative and public review of draft documents.
Fall 2002	Issue permits for Phase 1.

Phase 2: Foothills and East Side Sierra Nevada

First half 2001	Start work on Phase 2 documents.
First half 2002	Complete draft documents for Phase 2.
Fall 2002	Administrative and public review.
Second half 2003	Issue permits for Phase 2, as either separate permits or amendments to Phase 1 permits.

Phase 3: West Side and East Side Sierra Nevada

January 2002	Start work on Phase 3 documents.
Fall 2002	Complete draft documents for Phase 3.
Winter 2002-3	Administrative and public review
December 2003	Issue permits for Phase 3, as either separate permits or amendments to Phase 1 and Phase 2 permits.

Table 3-8. Placer County Vegetation/Landcover and Ownership

Community Type	Total Acres	Percent of Total	Public Ownership	Easements	Private and Unprotected
Sagebrush	4,766	0.50%	1,180	0	3,586
Jeffrey Pine/Eastside Pine	6,997	0.73%	3,693	0	3,304
Alpine Dwarf Shrub	191	0.02%	191	0	0
Subalpine Conifer	1,553	0.16%	1,093	0	460
Lodgepole Pine/Red Fir/Aspen	74,853	7.80%	52,281	0	22,572
Sierran Mixed Conifer	214,447	22.34%	152,472	0	61,975
Douglas Fir	26,588	2.77%	9,608	0	16,980
Ponderosa Pine	38,202	3.98%	16,711	0	21,492
Closed Cone Pine-Cypress	85	0.01%	85	0	0
White Fir	110	0.01%	13	0	97
Montane Hardwood/Conifer	26,304	2.74%	7,710	0	18,594
Montane Hardwood	88,777	9.25%	48,826	0	39,950
Montane Chaparral	89,033	9.27%	58,621	0	30,412
Mixed Chaparral	14,148	1.47%	7,944	0	6,204
Wet Meadow	8,921	0.93%	4,455	0	4,466
Montane Riparian	2,761	0.29%	1,713	0	1,047
Blue Oak Woodland/Foothill Pine	62,482	6.51%	4,317	6	58,159
Valley Foothill Riparian	11,522	1.20%	630	53	10,839
Freshwater Emergent Wetland	2,626	0.27%	19	163	2,445
Hardpan Vernal Pool Grassland	16,002	1.67%	433	1,206	14,363
Mehrten Vernal Pool Grassland	2,985	0.31%	125	413	2,447
Non-Vernal Pool Grassland	87,890	9.16%	2,238	394	85,258
Open Water	60,310	6.28%	3,881	5	56,424
Agriculture-Crops	29,660	3.09%	33	459	29,168
Agriculture-Orchard-Vineyard	1,441	0.15%	12	25	1,404
Barren	27,952	2.91%	14,354	271	13,328
Urban	60,549	6.31%	6,655	10	53,883
Total Acreage	**961,156**		**399,292**	**3,005**	**558,858**

Vegetation/landcover acreages derived from composite GIS layer created by Placer County Planning Dept. (100-ft pixel resolution)
Ownership acreages derived from parcel-based analysis of Placer County Assessor's database
Sources:

DFG: Valley Vegetation (1996)
CDF: Foothill/Lower Sierra Vegetation (1999)
USFS: Upper Sierra Vegetation (1990); Wet Meadow Vegetation (1999)
Placer County: Martis Valley Vegetation (1974)
DWR: Urban Areas (1994)
DOC: Urban Areas (1998)
Foothill Associates: Valley/Foothill Riparian Vegetation (1999)
NorthFork Associates: Vernal Pools (1999)

Table 3-9. Placer County Vegetation Conversion under General Plan Buildout

Landcover / Vegetation Type	Total Acres	General Plan Urban	General Plan Rural Residential	General Plan Open Space	Agricu / Timber
Urban	60,549	35,638	14,108	5,756	5,047
Barren / Other	27,952	995	437	1,812	24,709
Open Water	60,310	174	399	585	59,152
Agricultural Crops and Orchards	31,101	1,613	1,488	322	27,678
Annual Grasslands / Pasture	87,890	15,579	17,231	3,607	51,474
Vernal Pool Grassland	18,987	5,662	684	1,268	11,373
Valley Wetlands	2,626	377	34	42	2,174
Valley / Foothill Riparian	11,522	1,138	3,378	1,772	5,234
Foothill Oak Woodland	62,482	2,935	29,968	4,913	24,666
Montane Hardwood Forest	115,081	5,384	20,542	13,057	76,097
Mixed / Chamise Chaparral	14,148	866	2,508	1,791	8,982
Montane Wet Meadow / Riparian	11,682	329	124	1,745	9,483
Montane Chaparral	89,036	1,630	1,237	3,852	82,317
Yellow Pine Forest	286,430	9,999	12,705	11,928	251,798
Lodgepole Pine / Red Fir Forest	74,853	963	510	3,506	69,875
Alpine and Subalpine Forest / Scrub	1,745	0	0	3	1,742
Sagebrush	4,766	950	137	1,309	2,370
Total Acreage	**961,159**	**84,232**	**105,491**	**57,267**	**5[illegible] 67**

Table 3-10. Placer County Agricultural Land Uses (DWR, 1994)

Type	Acres
Alfalfa and alfalfa mixtures	14
Almonds	187
Apples	82
Clover	159
Corn (field and sweet)	562
Dairies	45
Deciduous fruits and nuts	193
Eucalyptus	18
Farmsteads	909
Field crops	62
Figs	15
Flowers, nursery and Christmas tree farms	404
Grain and Hay Crops	5,007
Idle	6,681
Kiwis	33
Livestock feedlots	30
Miscellaneous and mixed grain and hay	1,090
Miscellaneous deciduous	647
Miscellaneous truck	6
Mixed pasture	18,162
Native pasture	176
Olives	81
Oranges	54
Pasture	84
Peaches and nectarines	57
Pears	75
Pistachios	71
Plums	665
Poultry farms	200
Rice	21,362
Sudan	446
Truck, nursery and berry crops	90
Vineyards	96
Walnuts	1,192
Total	**58,957**

Acreages derived from GIS data
Source: DWR (1994)

CHAPTER IV: OPPORTUNITIES FOR INDIVIDUAL STUDY AREAS

INTRODUCTION

This chapter describes the conservation objectives of the Program at a higher level of geographic specificity than the previous chapters. Its purpose is to allow the reader to identify, within a particular region, how the Placer Legacy Program is to be applied. This chapter provides specific information, in both narrative and graphical form, on how Placer Legacy could benefit each area of the County.

The structure of the chapter is based upon a geographic division of the County into ten "study areas" (Map 4) based upon common geographic and political boundaries. They include the following:

- Agricultural Valley
- South Placer Urban
- Loomis Basin
- Sheridan/Garden Bar
- Auburn/Bowman
- American River Canyon
- Foresthill
- Lower Sierra
- West Slope Sierra
- East Slope Sierra

These study areas were created simply to provide focus to implementation efforts. They do not represent geographic prioritization or preferences. Nor do the divisions imply that there is no overlap between geographic areas. Because many Program objectives transcend sociopolitical boundaries, implementation measures will often apply to more than one study area. Examples of conservation targets that span multiple study areas include watershed integrity, wildlife migration corridors and scenic transportation routes.

Each study area discussion contains a physical description of the area, the trends that will affect the area over time, particular stressors and conflicts (including impacts on the physical environment) and a list of recommendations. For a discussion on the criteria to be used in prioritization of conservation objectives and recommendations, please refer to Section B in Chapter III. Due to various characteristics of the Program, most importantly the willing seller requirement and dependence on funding availability, many of the recommendations may be implemented as opportunities arise, rather than according to a predetermined set of priorities.

SECTION A. AGRICULTURAL VALLEY

Physical description

The ***Agricultural Valley*** study area (Map 4a) bounded by Highway 65 to the east and north, Sutter County to the west, and Baseline Road to the south, is characterized by flat (0-100 feet) terrain, poorly-drained clay-dominated soils and broad floodplains (Map 17). Commercial farm operations, dominated by rice, grain and hay crops, and pastureland, are situated at the fringe of the Central Valley's agricultural heartland (Maps 12, 25; Figure 4-3) Many operations are relatively small, owner-operated farms, in contrast to the agribusiness domination of much of the Sacramento and San Joaquin Valley.

Valley grassland is the dominant natural community, with vernal pools forming on hardpan soils (Map 19; Figure 4-1; Table 4-11). Livestock grazing, soil preparation for cultivation (e.g., discing and land leveling), and the introduction of non-native annual grasses have significantly altered the terrain and floristic composition of this community, which nonetheless provides important foraging and breeding habitat for numerous species. Vernal pool complexes have been degraded and fragmented by various agricultural activities and are isolated from vernal pool systems to the south by urban expansion in the Sacramento Metropolitan area.

The two major streams draining Western Placer watersheds are Auburn Ravine and Coon Creek; Markham Ravine, Yankee Slough, King Slough, Orchard Creek, Pleasant Grove Creek and Curry Creek are smaller, intermittent drainages (some are now perennial due to agricultural/urban runoff) that also flow through the agricultural valley (Map 17). The natural flow through some of these channels is supplemented by water conveyed for agricultural use by Placer County Water Agency, Nevada Irrigation District, South Sutter Irrigation District and various point-source wastewater discharges. After leaving Placer County, these creeks feed into the East Side Canal and the Cross Canal, which eventually joins the Sacramento River at the border between Sutter and Yolo Counties (Map 17). Riparian woodlands of varying width and structural complexity line the creeks that drain Western Placer County watersheds (Map 18). In general, this riparian zone has been severely reduced and converted to agricultural uses. Livestock grazing has resulted in streambank erosion and sedimentation, while pesticide runoff may also impact water quality and aquatic habitat.

The Agricultural Valley lies within the Pacific Flyway, an important bird migration corridor through Central California. During the winter months, natural wetlands and flooded rice fields provide important stopover and feeding areas for migratory waterfowl and shorebirds (Map 33). Private duck hunting clubs, as well as pheasant hunting clubs on drier lands, are the primary types of semi-public recreational opportunities in this area.

Trends

The open space and agricultural resources in the ***Agricultural Valley*** area are perhaps the most dynamic in the County, with a burgeoning human population increasingly drawn to the relatively inexpensive urban fringes. The vast majority of land in this area is privately owned without any form of long-term protection (Map 10). Although the agricultural designation in the County's General Plan restricts the subdivision of parcels into less than 80 acres for a majority of the area, future General Plan amendments or annexations by the Cities of Roseville and/or Lincoln could quickly remove this barrier to development (Map 5). Growth pressures abound due to the proximity of urban development adjacent to the farmlands and also due to major infrastructure improvements adjacent to or within the study area (e.g., Placer Parkway or the Highway 65 bypass) (Map 27). Placer County has the second highest rate of non-renewed Williamson Act contracts in the State, with most of the expired contract lands being subdivided once the contract has expired. In other cases, the contracts are expiring due to land speculation that growth pressures will result in lands being converted to non-agricultural uses. Land speculation is particularly intense in the Pleasant Grove watershed west of Roseville, proximity to urban infrastructure and the proposed Placer Parkway extension are serving as potential magnets for new development.

Vernal pool grasslands are most immediately threatened by this growth trend, while creeks and riparian zones would face further degradation of upland habitat and water quality with urbanization of the surrounding watersheds. Commercial agriculture is also in a precarious position, as urban development gradually encroaches upon Placer County's most productive farmlands and speculation drives up land values, making it more difficult for landowners to pass their farms on to the next generation.

Stressors and Conflicts

Agriculture - Agriculture is the predominant land use within the study area. Conflicts between land use types are minimal. Generally, the various types of agricultural operations function well together and the low density of residential land uses reduce conflicts with homeowners, most of whom are farmers or farm employees. Stressors and conflicts are largely generated from outside factors such as increased commuter traffic on local roadways, infrastructure improvements displacing or fragmenting farmlands (e.g., Placer Parkway and the Highway 65 bypass), growth inducing pressures, and land use conflicts with urban land uses in adjoining study areas. In addition to land use conflicts, changes to the local, state or national agricultural economy or changes in weather patterns may have a detrimental impact to the study area's economy. Lastly, the loss of agricultural surface water to other uses, or an increase in the price of agricultural water due to increased pumping or delivery costs, could significantly disrupt farming operations.

Biological Resources - Compared to the condition of these lands prior to agricultural and mining activities, the diversity of biological resources has diminished over time. It is presently presumed that biological resources have reached a dynamic equilibrium within the environment, although changes in individual farm operations may disrupt or enhance fish and wildlife locally. External factors, however, can have detrimental impacts on biological resources within the study

area (e.g., water quality impacts, increased traffic, and fragmentation and disturbance along the urban-agricultural interface).

Under the current land use configuration, no wholesale changes with significant impacts on biological resources are anticipated. However, conversion to non-agricultural land uses following general plan amendments or annexations would cause major disruptions to the biological diversity of the area.

Outdoor Recreation - Recreational activities within this area occur wholly upon private lands. No public recreation lands exist within the study area, although some use of County roads for cycling does occur. The majority of recreational land use is based upon hunting and fishing activities, including waterfowl clubs, pheasant clubs and fishing access. The greatest potential threats to these activities are land use conflicts and reductions in game numbers.

Cultural Resources - Few cultural resources exist within the study area. Some Native American sites are presumed to exist, especially in areas adjacent to riparian corridors where gathering and processing activities likely occurred. Future impacts to these resources under current permitted land use activities will be limited. A small number of privately owned historical farmhouses also exist, though the condition of these historical resources is not known.

Scenic Resources/Urban Separators - The chief threat to the study area is the potential conversion from agriculture to urban and suburban development. The relatively low cost of agricultural land, the potential availability of infrastructure and the proximity to existing services make this an area susceptible to a significant amount of land speculation. To the south, the area will be bordered by proposed urban land uses in the Placer County General Plan. To the west, it may be encroached upon by industrial uses in the Sutter County General Plan. To the east it is facing encroachment by a mix of urban land uses in the County General Plan and the general plans of the City of Roseville and Lincoln. The growth pressures and conflicts associated with this land use pattern could result in the conversion of these lands following successful general plan amendments and/or annexations. The resulting loss of the open character of this area would not only diminish the agricultural economy of Placer County, but would displace a unique scenic resource.

The absence of distinct urban separators and buffers between agricultural lands and growing residential urban core areas are most evident in this study area. Lands designated for agriculture at a density of 1 dwelling unit per 80 acres abut lands designated for 4-6 dwelling units per acre (Map 8). Since 1987, the County has a had a policy to seek a separation of these two conflicting land uses through the establishment of buffers and/or transition areas. Buffers will allow residential areas to develop without the potential nuisance of agricultural operations. Conversely, it allows property that has been designated for agricultural purposes for over 30 years (and in production for over 100 years) to function without the threat of encroachment by incompatible land uses. A permanent separation of the two uses would allow both groups to meet environmental, social and property use expectations.

Higher density land uses in the nearby South Placer Urban area have also generated significantly higher levels of traffic on roads that, until recently, primarily served the agricultural community

and a small amount of local traffic. Today these roads are being used by large volumes of int and intra-County commuter traffic. This increase in traffic creates additional conflicts by disrupting the ability of slow-moving farm equipment to use these roads, and by creating public safety concerns related to the use of roads with minimal improvements for high volumes of traffic.

Public Safety – As in much of Western Placer County, the chief public safety threat is associated with flooding. Thousands of acres in the study area will flood with a 100-year storm event (Map 24). Lesser storm events routinely cause local and even regional flooding in the area. The threat to individuals and property is relatively low when compared to threats in urban areas given several factors: 1) only low density land uses are permitted by zoning; 2) a long history of flooding has resulted in the avoidance of flood prone areas; and 3) the use of land for non-residential agricultural purposes is more compatible with flooding events.

Wildland grass fires are also routine events in this area due to the fast growth of annual grasses, which generates a large amount of fuel during the long dry fire season (typically May to October). Every spring and summer, wildland fires erupt in this area, potentially threatening property and individuals. Most of the fires consume annual upland grass areas though structures and woody vegetation are sometimes threatened. The only significant wooded areas are associated with the riparian zones along the numerous creeks and intermittent drainages. These areas tend to be less threatened than other areas due to the presence of water.

Placer Legacy Program Opportunities

Acquisition/Easement

This is an area in which Placer Legacy can have a significant impact on the future landscape via the acquisition and/or donation of conservation easements and fee title. Because of the importance of agriculture here, multiple-use easements allowing farmers to keep much or most of their land in some type of agricultural production are the most suitable. Outright fee title purchase is more appropriate for non-farmed properties with high-value, relatively undisturbed natural communities. This applies primarily to the areas immediately adjacent to the cities, which are compatible with agricultural uses but currently have more passive management.

One strategy that may be pursued in this area is to purchase for-sale agricultural land, encumber it with a conservation easement, and sell it to a farmer at a reduced cost. This approach saves the Program money and will eliminate management responsibilities. Such an effort may assist in maintaining a viable agricultural sector in Placer County, as it provides opportunities for younger generations to enter into agriculture at a cost that is more consistent with farming revenues. There is little doubt that the best way to preserve agriculture in Placer County is to keep it in private ownership.

Agency Coordination

Some farmers may be eligible for the Natural Resource Conservation Service (NRCS) Wetland Reserve Program (WRP), or floodplain easements administered by the same agency. Placer

County will work with the landowners that have already expressed an interest in the WRP, potentially acting as a sponsor to boost their funding priority. The County will also work with independent land trusts, such as the Placer Land Trust, the American Farmland Trust and the California Rangeland Trust, to identify landowners interested in selling agricultural easements.

The County may also work with the various agencies and organizations associated with the Central Valley Habitat Joint Venture Project and their implementation of the North American Waterfowl Management Plan. The Joint Venture has a number of acquisition and restoration goals throughout the Central Valley, including Placer County as part of a region known as the American Basin. A feasibility study prepared in 1995 determined that it was possible to mix agricultural conservation, flood control, and waterfowl habitat restoration. It is possible that the objectives of that program can be made a part of Placer Legacy if there is local acceptance and an identified funding source for implementation.

Working with team members of the Auburn Ravine/Coon Creek Coordinated Resource Management Plan (CRMP) Placer Legacy will help identify and implement creek restoration projects within these watersheds to improve water quality and enhance habitat for anadromous fish as well as for riparian-associated terrestrial species.

Education/Incentives

The Placer Legacy Program will establish a mechanism for providing tax and estate planning assistance to landowners interested in maintaining agricultural operations on their land. Such assistance could be provided through an employee of the Program or through an outside contract.

Placer Legacy will also work with the County Agricultural Commission, the County Farm Bureau and local growers' organizations to create new markets for Placer County farm products, and bring new farm operations to Placer County. In addition, Placer Legacy will work with local farm organizations, tourism boards, economic development boards and other organizations to promote agro-tourism in the area, and provide financial assistance (through grants and direct funding) to local growers' organizations.

Table 4-1. Agricultural Valley Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AV-1.	Maintain commercially viable agriculture over a large area by promoting the Williamson Act and encouraging the donation of conservation easements, where appropriate.	X			X	X	
AV-2.	Work with local farm organizations to identify districts or regions where agricultural conservation opportunities can be identified and coordinated.	X			X		
AV-3.	Convene a water forum with PCWA, NID and South Sutter Irrigation District to determine how water can be made reliably available for agriculture, as well as habitat conservation and restoration.	X	X		X		
AV-4.	Provide resources to assist farmers and ranchers with tax, estate and easement planning.	X			X		
AV-5.	Support the County's Right-To-Farm Ordinance provisions.	X			X		
AV-6.	Prioritize the acquisition, through purchase of fee title and/or conservation easements, of agricultural property that contains multiple open space resource values.	X	X		X	X	X
AV-7.	Establish a core vernal preserve area by protecting, through a combination of fee title acquisition and conservation easements, several large, biologically diverse vernal pool wetland complexes across the landscape including Mehrten pools if available.	X	X			X	
AV-8.	Preserve small, species-rich vernal pool complexes and surrounding uplands, through a combination of fee title acquisition and conservation easements.		X				
AV-9.	Establish a vernal pool-oriented nature center and interpretive trails.		X	X			
AV-10.	Preserve high quality riparian habitat along Auburn Ravine, Coon Creek, Orchard Creek and Pleasant Grove Creek, through a combination of fee title acquisition and conservation easements.		X			X	

Table 4-1 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AV-11.	Purchase, for enhancement purposes, riparian zones in areas with diminished habitat integrity.		X				
AV-12.	Provide financial incentives for property owners to expand and/or re-vegetate riparian zones and improve connectivity along lower stream reaches. (Coordinate with AR/CC CRMP.)		X			X	X
AV-13.	Work with property owners to remove or modify barriers to anadromous fish passage along Auburn Ravine and Coon Creek.		X				
AV-14.	Encourage the use of rice decomposition water to improve waterfowl and shorebird habitat.		X	X			
AV-15.	Preserve, through fee title acquisition and/or conservation easements, large upland grassland areas that also provide specific scenic, recreational or biological values.	X	X	X		X	
AV-16.	Purchase easements that provide for the restoration of large areas of fresh emergent wetlands as new waterfowl habitat.		X	X			
AV-17.	Work with the Natural Resource Conservation Service to support new Placer County participants in the Wetland Reserve Program (WRP).	X	X				
AV-18.	Create a large regional park near the south Placer Urban area consistent with adjacent agricultural uses (not necessarily in this study area).	X		X			
AV-19.	Allocate discretionary funding for the preservation of historical and cultural resources.				X		
AV-20.	Identify a location for a regional center recognizing the agriculture, history and traditions of Placer County (not necessarily in this study area).	X			X		
AV-21.	Provide certainty to farmers and ranchers concerning the future extent of urban encroachment by coordinating with cities to create permanent greenbelts around urban areas.	X				X	

Table 4-1 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AV-22.	Establish permanent transition areas and buffers between urban/suburban areas and agricultural areas through conservation easements and/or fee title acquisition of lands containing multiple resource values.		X	X	X	X	
AV-23.	Provide incentives for property owners to enhance floodplains by increasing retention/detention capacity and allowing streams to reclaim their natural course.		X				X

SECTION B. SOUTH PLACER URBAN

Physical description

The ***South Placer Urban*** study area is comprised of the cities of Roseville, Rocklin and Lincoln, and County unincorporated areas with urban land use designations in the General Plan. This area forms a cohesive planning unit based on the largely contiguous belt of urban land uses that it contains or will contain at buildout (Map 11). The major population center in Placer County, this area has a current combined population of approximately 122,000 growing to 193,00 by 2022 (source: Sacramento Area Council of Governments). The area is characterized by flat and gently sloping terrain, ranging in elevation from 100-300 feet, and poorly-drained clay-dominated and volcanic soils.

Valley grassland, transitioning into open oak savannah, is the dominant natural community, with vernal pools forming on hardpan and Mehrten volcanic mudflow soils. With a few exceptions, urban growth and development within this area has fragmented remaining vernal pool complexes and surrounding upland grasslands, which occur primarily as habitat islands in the midst of urban development. In some cases, these habitat islands are completely isolated from surrounding natural areas. The largest remaining area of vernal pool grasslands occurs along the Highway 65 corridor, between Lincoln, Rocklin and Roseville (Map 19). A large portion of this area is unincorporated land designated largely for industrial development. The watershed of Orchard Creek, a tributary to Auburn Ravine, is one region that contains more than 1000 acres of protected natural lands including oak savannah, valley grasslands, hardpan and Mehrten vernal pools and riparian areas. The Orchard Creek conservation area has been established largely in response to the mitigation requirements for a number of large projects throughout the region.

Riparian woodlands have been reduced to narrow bands of vegetation, lining creeks that have been channelized and diverted along many reaches (Map 18). Flood control is an important element of creek management, as urbanization of most watersheds has resulted in increased surface flows to the creeks and frequent flood conditions. Canopy closure and structural complexity remains high in most areas, although gaps in riparian connectivity are frequent (Map 18). Discharges from urban wastewater treatment plants and other point sources have altered flow regimes and may negatively affect water quality. Auburn Ravine and Dry Creek, which run through the cities of Lincoln and Roseville, respectively, are the major perennial creeks in this area. Antelope Creek, Secret Ravine, Miners Ravine and Linda Creek are important Dry Creek tributaries, while Orchard Creek, with a largely undeveloped watershed, is the main Auburn Ravine tributary.

Very little active agriculture remains in this study area, with the major exception being the area south of Baseline Road and west of Roseville, which contains pastureland, rice, grain and hay crops, and some small orchard areas. Most of this area is designated for urban development in the County's General Plan. The area around the City of Lincoln also contains significant pastureland, rice fields, and grain and hay crops.

Trends

This study area is expected to continue to experience rapid rates of growth when compared to other regions in Placer County, the Metropolitan Sacramento Area and the rest of the state. The various general plans, specific plans and area plans that have been adopted for this region have resulted in millions of dollars of investment in public infrastructure. Therefore, it is assumed that the large-scale conversions of the natural landscape will continue to occur within areas designated for urban growth (Map 8). Conservation areas will tend to be associated with riparian zones, oak woodlands, some isolated vernal pool reserve areas and urban parks (some containing natural areas). As much as 25 percent of the landscape may be in developed and undeveloped open space in a variety of forms if current trends continue.

Some of the remaining important historical and cultural resources may be protected due to local interest or because of important historical values. Native American sites will continue to be protected pursuant to rules governing these resources. Community edges and buffers will not be established between Roseville and Rocklin, according to those cities' general plans. A buffer will exist between the Sunset Industrial Area and the City of Lincoln along Orchard Creek and to a lesser extent between Rocklin and Lincoln where conservation areas have been established along Highway 65.

Stressors and Conflicts

Agriculture – With the exception of the area south of Baseline and west of Roseville, impacts to agriculture are limited within the boundaries of the study area. Some agricultural conversion anticipated, particularly in the City of Lincoln and its sphere of influence where agricultural operations currently exist. Impacts to adjoining agricultural lands due to land use conflicts and growth-inducing impacts are addressed in the ***Agricultural Valley*** study area.

Biological Resources - The majority of changes to the landscape will result in the displacement of valley grasslands and oak woodlands. Riparian areas may also be modified for flood control purposes and some encroachment by urban land improvements. In some cases, riparian areas may be wholly displaced (e.g., bridge crossings and flood control structures), although the trend to channelize these areas has been significantly reduced in recent years. Intermittent drainages will largely be displaced and channelized or piped and diverted to storm drain systems. In other cases, riparian areas may see lesser or indirect impacts through encroachment into the tree canopy, recreational uses, vegetative clearing, domestic pet predation, and water quality degradation through urban runoff and/or point discharges. The loss of vernal pool habitat are still anticipated even with the protection afforded by the Federal Endangered Species Act, as off-site mitigation is generally permitted. Even when vernal pool habitats are avoided, indirect impacts are anticipated due to human disturbance and fragmentation effects, which include reduced plant and animal dispersal and genetic exchange, insufficient buffer areas to protect pool hydrology and water quality, and insufficient upland habitat for pollinators and vernal pool amphibians. Although once prevalent in the region, Mehrten vernal pools are one of the most threatened of the sensitive resources in the ***South Placer Urban*** study area (Map 19).

Outdoor Recreation - The public will continue to seek outdoor recreation opportunities, both within and outside of the study area. The ability to satisfy local demand for recreational facilities may be restricted due to limitations on available revenues. With a growing population and demand for recreational opportunities, some delay or lack of recreational opportunities may occur. In general, however, cities in South Placer County have been successful in providing a wide range of recreational services in a timely manner. The greater demand may be for passive recreation opportunities (e.g., hiking trails), which are not typically provided within an urban environment.

Cultural Resources – The potential loss of important historical resources in this study area may continue due to redevelopment, conversion to other uses, and inadequate maintenance. Some historical preservation options exist where revenues can be identified, but generally, funding is limited.

Scenic Resources/Urban Separators - The need for urban separators is evident throughout this study area. The most dramatic urban/agricultural edge in Placer County exists between this study area and the ***Agricultural Valley*** study area, particularly along Fiddyment Avenue. Lands designated for agriculture at a density of 1 dwelling unit per 80 acres abut lands designated for 4-6 dwelling units per acre (Map 8). Such a condition will generate a number of land use conflicts and growth-inducing impacts upon agricultural lands. Residential housing and agricultural management activities (e.g., aerial spraying, noise, dust generation) are typically incompatible when adjacent to each other. The expectations of urban/suburban homeowners are often in conflict with the farm/ranch operating requirements resulting in nuisance complaints and other conflicts.

The study area also contains a large industrial-agricultural interface in the Sunset Industrial Area. Fewer conflicts are expected in this region, as agricultural and industrial land management practices are typically more compatible.

When all of these factors are considered together, the potential for farming operations to be disrupted is rapidly increasing as the region grows. Evidence of this impact can be seen in the amount of fallow, non-farmed lands adjacent to urban areas (Map 12) and the withdrawal of these properties from the County's Williamson Act program. These lands are no longer being farmed due to conflicts, land speculation, or uneconomical production levels.

The conversion of the existing agricultural landscape to urban/suburban land uses will arguably reduce the scenic quality of the area if an open landscape is perceived as having a greater aesthetic appeal than a developed landscape. The development of highly-visible hillsides and ridgelines will also have a significant impact on the aesthetic character of the area.

Public Safety – Public safety concerns in this area are chiefly focused on flooding associated with Auburn Ravine, Pleasant Grove Creek and, most importantly, Dry Creek and its tributaries. The region has experienced significant flooding events in recent years and even with recent flood control improvements, additional flooding is possible. Environmental constraints associated with flood control impacts will continue to delay the implementation of a region-wide flood control plan. The majority of the flooding impact is associated with current land uses. New

development projects are designed to avoid encroachment into flood prone areas, based on n and improved hydrologic modeling techniques.

Placer Legacy Program Opportunities

Acquisition/Easement

Due to the predominance of existing and anticipated urban land uses and the consequent high cost of land, acquisition as a conservation tool will be limited. Easements will be used by local government (cities and the County) as a means of encumbering certain lands, such as riparian and wetland areas, where the title to the land remains privately held. In most cases, the use of easements will be associated with portions of discretionary land development projects, rather than large-scale conservation efforts. It should be assumed that the cities in this area will maximize the use of land within their respective city limits and large conservation areas will exist outside the urban boundary.

Agency Coordination

Agency coordination will be important in order to identify opportunities for joint conservation planning efforts, the implementation of a comprehensive regulatory compliance plan for endangered species and wetlands (i.e., HCP/NCCP). For recreational planning, developing trail connections can only occur between cooperating entities in this area (Map 21). One jurisdiction will not be able to implement a comprehensive regional trail plan without the cooperation of adjoining entities. Cooperation could include the South Placer cities as well as Sacramento County and the City of Citrus Heights.

Regional cooperation and coordination for the development of a HCP/NCCP will be necessary if impacts to sensitive species within the incorporated cities could be mitigated on lands in the unincorporated area. A significant amount of local, state and federal assistance and coordination will be required for such a plan to be successfully developed and implemented.

Education/Incentives

Educational programs in this area will focus on encouraging environmental stewardship and fostering an appreciation for the local natural environment among urban dwellers. One way to accomplish this is through the development of an outdoor education program for urban school children, including natural areas both within and outside the study area. Placer Legacy can work with the various school districts to develop curricula for K-8 and high school students, and should take advantage of existing programs already being developed through the Dry Creek CRMP and the Dry Creek Conservancy. Presently teachers and students who seek opportunities to participate in outdoor education opportunities have access to the Placer Nature Center but are otherwise limited. Outdoor education opportunities in Sacramento County are being used to fulfill local demand for such programs.

In addition, promoting local agricultural products and educating the urban-dwelling public about Placer County's rich agricultural heritage will help establish connections between people and

their rural environment, while helping to sustain the economic viability of Placer County agriculture.

Finally, for landowners with larger properties at the urban fringes, educational materials that describe appropriate stewardship of riparian and oak woodland communities can be developed.

Table 4-2. South Placer Urban Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
SP-1.	Work with farmers and ranchers to protect agricultural lands outside of designated development areas through the use of conservation easements.	X			X	X	
SP-2.	Provide certainty to farmers and ranchers concerning the future extent of urban encroachment by coordinating with cities to create permanent greenbelts around urban areas.	X			X	X	
SP-3.	Support the County's Right-To-Farm Ordinance provisions.	X			X		
SP-4.	Promote sales of locally grown produce and help create additional markets for agriculture.	X			X		
SP-5.	Provide resources to assist farmers and ranchers with tax, estate and easement planning.	X			X		
SP-6.	Work with local CRMP groups to restore habitat for salmon, steelhead and amphibians in Auburn Ravine and Dry Creek.		X				
SP-7.	Work with property owners to remove or modify barriers to anadromous fish passage along Auburn Ravine and Dry Creek.		X				
SP-8.	Acquire and manage remaining Mehrten vernal pools in a natural landscape.		X			X	
SP-9.	Acquire and manage high-density vernal pool fields along Highway 65.		X			X	
SP-10.	Protect large remaining expanses of rangeland by promoting the Williamson Act and donation or sale of conservation easements.	X	X			X	
SP-11.	Purchase conservation easements to improve the connectivity and quality of stream zone vegetation to improve wildlife habitat and water quality.		X				
SP-12.	Create regional trail connections and develop new regional trails, consistent with adjacent agricultural uses.			X			

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	F S
SP-13.	Create a multi-use trail crossing of Interstate 80 and the Union Pacific railroad tracks.			X			
SP-14.	Create a Dry Creek parkway trail connection to Gibson Ranch.			X			
SP-15.	Create a nature center and interpretive trails to educate the public about oak woodlands, vernal pools and/or grasslands.		X	X			
SP-16.	Provide discretionary funds to protect historical and cultural resources.				X		
SP-17.	Work with developers and property owners to protect scenic transportation corridors, vistas and ridgelines in the lower foothills.					X	
SP-18.	Identify a location for a regional center recognizing and celebrating the agriculture, history and traditions of Placer County (not necessarily in this study area).	X				X	
SP-19.	Provide certainty to farmers and ranchers concerning the future extent of urban encroachment by coordinating with cities to create greenbelts around urban areas.	X				X	
SP-20.	Establish permanent transition areas and buffers between urban/suburban areas and agricultural areas through conservation easements and/or fee title acquisition of lands containing multiple resource values.	X	X	X	X	X	
SP-21.	Preserve, through fee title acquisition and/or purchase of conservation easements, an open space buffer along Orchard Creek.		X				X
SP-22.	Preserve, through development agreements, a large open space buffer area around the lower end of Dry Creek.		X				X
SP-23.	Provide incentives for property owners to enhance floodplains with a goal of increasing the detention capacity of watersheds (where appropriate) and allowing streams to reclaim their natural course.		X				X
SP-24.	Encourage property owners to reduce the potential for large wildland fires in grasslands and oak woodlands by establishing buffers and managing fuel loads.						X

SECTION C. LOOMIS BASIN

Physical description

The ***Loomis Basin*** study area, bounded by South Placer cities to the west, Folsom Lake and the American River Canyon to the east, and Highway 193 to the north, is situated in the rolling terrain of the lower Sierra Nevada Foothills (Map 4a). The study area includes one incorporated jurisdiction, the Town of Loomis. Ranging in elevation from 300 to 1000 feet, this area is characterized by low-density rural residential development, horse ranches, and small farming operations. Population centers in this area range from the suburban communities of Granite Bay to the historic farming communities of Penryn and Newcastle. The well-drained Andregg soil that predominates is well suited for fruit orchard crops, which covered this area during the first half of the 20th century (Map 30). The population of the area as of 1999 was approximately 33,000 people.

Following the decline of orchard production in the 1940s and 1950s much of this area returned to native blue oak and valley oak woodland/savannah vegetation (Map 20). As a result, the current oak woodland community is comprised primarily of young, even-aged stands of trees. The rural settlement pattern and subdivision of land in this area has led to a patchwork of seminatural oak woodlands interspersed with rural residential and agricultural (primarily orchard and pasture) land uses (Map 12). The oak woodlands vary widely in their habitat value and are largely lacking in both east-west and north-south connectivity.

Except for the American River basin portion of this area, which drains into Folsom Lake, the Loomis Basin forms the upper Dry Creek watershed, containing the headwaters of Antelope and Clover Valley Creeks, Secret and Miners Ravines, and Cirby and Linda Creeks (Map 17). For the most part, creeks in the Loomis Basin have retained a multi-layer riparian zone, with gaps in connectivity more prevalent in the southern part of the basin, near the Sacramento County border (Map 18). Residential and agricultural land uses have reduced the width of the riparian zone and increased surface runoff through urbanization of the watersheds.

Trends

To a large extent, the Loomis Basin is developed at or near General Plan buildout densities, with little additional public works infrastructure or public support for more intensive land uses (Map 8). The greatest percentage of growth will occur in the Town of Loomis which is expected to grow from a population of 5,650 in 1990 to 10,556 in 2022. There are several large developable parcels remaining, however, primarily to the south in the Granite Bay area, but also in other areas. Within the Folsom Lake basin, new development is restricted and much of this land is publicly owned, in association with the Folsom Lake State Recreation Area. Throughout the study area, new development will displace some oak woodlands, some seasonal grasslands and a small amount of agricultural lands.

Recreational opportunities exist in a number of areas within the study area including Folsom Lake and the Loomis Regional Park. Interest in trail development for cycling, hiking and equestrian use has been evident for many years (Map 21). The demand for trails and other types

of recreation will increase as the study area population increases but also as the ***South Placer Urban*** study area increases as well. It is assumed that urban residents will seek opportunities more rural areas to recreate. The proximity of this study area to urban land uses will make it popular for residents of those areas if recreational opportunities are provided.

Stressors and Conflicts

Agriculture - Agricultural lands in the northern Loomis Basin, primarily citrus crops, deciduous orchards and pasture, have been greatly reduced from their original extent, primarily due to market forces and disease, rather than urban encroachment. Rural residential growth largely occurred after the decline of orchard production as farms were subdivided into smaller and smaller units of land. Additional conflicts will be generated as the area continues to grow. A mix of rural residential and small farming uses is interwoven throughout the study area. Different expectations about rural lifestyles and the perceived nuisance of farming operations will continue to cause conflicts in the area for agricultural producers.

Biological Resources - The current patchwork of agricultural, residential and natural areas provide for a variety of potential conflicts and competition for space. The oak woodlands that have taken the place of the historical orchard industry are often fragmented and degraded by surrounding residential and agricultural activities. Preserving and promoting small-scale agriculture while simultaneously preserving and enhancing oak woodlands may be challenging.

Controlling high temperatures, erosion and sedimentation of the tributaries of Dry Creek will be important to aquatic species including sensitive salmonids. Water quality may be further impacted primarily through non-point discharges (i.e., storm drains) associated with urban runoff. The introduction of residential uses will further erode the integrity of the riparian corridors even though displacement may not occur to any great extent. Public use of these areas will increase, and the introduction of domesticated pets will result in increased predation pressures on native wildlife, particularly ground-nesting birds and all terrestrial vertebrates. Other conditions associated with residential land use, such as light and noise, will further disrupt wildlife along these corridors.

The study area also includes a portion of the Sierra College Ridge, a long ridgeline extending from Rocklin to Roseville along Sierra College Blvd. The ridge is comprised of Mehrten Formation volcanic mudflow material that supports a unique type of vernal pool (see Map 19). Much of the Mehrten vernal pools have been lost in the last 10 years to suburban development. The remaining vernal pools have no protection at this time.

Outdoor Recreation – A lack of funding to meet anticipated recreational demands may result in limited services being available to serve a growing population. New recreational development in the area is limited to that which is provided as mitigation for new development. The single largest existing recreational opportunity is the Folsom Lake State Recreation Area with vehicular access at Granite Bay and Rattlesnake Bar. The County also operates the Loomis Regional Park near the Town of Loomis.

Cultural Resources – A cultural/historical survey of this area was conducted in the 1990s. Numerous historical and cultural sites are evident throughout the region, most of them associated with the early days of agriculture in the County. Many structures and sites have been lost or damaged over the years. Paleontological resources are also known to exist in this area of the County and may be threatened by grading activities associated with new development. It is anticipated that the region will continue to lose important historical/cultural sites unless market forces result in renovation activities or funding can be made available.

Scenic Resources/Urban Separators – The scenic resources of this area can be characterized by the pastoral setting of a rural residential landscape intermixed with open pasture, small farms, riparian areas, and oak woodlands. Other scenic areas are the Folsom Lake State Recreation area and the small town character of Loomis. There are also many ridgelines and hills interspersed throughout the area that contribute to the visual quality of the area. Although most of these hills and ridges have some level of development, an open character continues to dominate the landscape. It is not anticipated that the growth and development occurring in this study area, will result in dramatic changes to the landscape. The one exception is the potential for changes to the area known as Boulder Ridge along the edge of the study area near Penryn. This dominant ridgeline is designated for 1 dwelling unit/acre in the Placer County General Plan (Map 8). There is some potential for ridgeline development to be evident if a project is approved and development commences.

The deliberate creation of urban separators is not a priority in this area because of the limited conflicts that exist. Projected buildout of this area will not result in a large regional interface between urban and agricultural land uses. The Loomis Basin presently serves as an urban separator between the urban areas of Rocklin/Roseville/Granite Bay and Auburn to the north.

Public Safety – Public safety stressors in this area are primarily associated with flooding events on tributaries of Dry Creek. Continued encroachment with new development, particularly on the smaller tributaries where less is known about hydrological conditions, will result in additional flooding impacts (see Map 17). Existing conditions already result in significant flooding events, particularly along Miners Ravine in Granite Bay.

Wildland fires are also a potential threat to individuals and property. Although the region has full fire service capabilities through local fire departments and CDF, the amount of woodland habitat intermixed with residential land uses has the potential for significant fire events (see Map 24). Continued encroachment into wooded areas, particularly those that are access-limited, will exacerbate the potential for impacts.

Placer Legacy Program Opportunities

Acquisition/Easement

Opportunities for large-scale acquisitions and conservation easements in the Loomis Basin are limited due to the high level of subdivision activity that has already occurred. However, if willing sellers are present, key easement acquisitions or easements may help preserve the remaining oak woodland matrix and/or preserve high quality riparian habitat. Easements and

some homeowner's association common areas are presently used along the riparian corridors in a few instances the fee-title acquisition of these corridors has occurred. Such easements are typically required as a part of the discretionary approval for a land development project.

Agency Coordination

Because several large parcels in this area are adjacent to the Folsom Lake State Recreation Area, opportunities may exist to facilitate the purchase of some of these properties by the State Parks Department, perhaps using Proposition 12 Park Bond funds. This would further both recreation and oak woodland conservation objectives.

Working with the Dry Creek Coordinated Resource Management Plan group (CRMP), Placer Legacy will also identify potential creek restoration projects, primarily along Secret and Miners Ravines, to enhance habitat for anadromous fish and improve water quality.

Education/Incentives

To help improve wildlife habitat and migration throughout the oak woodland belt and maintain watershed integrity, Placer Legacy will explore non-regulatory mechanisms to encourage landowners to retain oak trees and herbaceous understory plants, and exclude livestock grazing from sensitive areas. To promote oak regeneration and prevent wildfires, controlled burn programs could be established on larger properties with the assistance of the California Department of Forestry and Fire Protection (CDF).

In the agricultural zones near Penryn and Newcastle, the Placer Legacy Program will work with the County Agricultural Commission, the Farm Bureau and local growers' organizations to create new markets for Placer County farm products and bring new farm operations to Placer County. Use of the Williamson Act program may provide additional incentives for new agricultural operations.

Table 4-3. Loomis Basin Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
LB-1.	Work with farmers and ranchers to protect agricultural lands outside of designated development areas through the use of conservation easements.	X			X	X	
LB-2.	Support the County's Right-To-Farm Ordinance provisions.	X			X		
LB-3.	Promote sales of locally grown produce and help create additional markets for agriculture.	X			X		
LB-4.	Provide resources to assist farmers and ranchers with tax, estate and easement planning.	X			X		
LB-5.	Purchase conservation easements to improve the connectivity and quality of stream zone vegetation to improve wildlife habitat and water quality.		X			X	X
LB-6.	Preserve large oak woodland patches along Folsom Lake, primarily through coordination with the State Parks and Recreation Department		X	X		X	
LB-7.	Provide incentives for property owners to enhance fragmented and degraded oak woodlands and riparian zones throughout the rural residential landscape.		X			X	X
LB-8.	Work with property owners to remove or modify barriers to anadromous fish passage along Miners Ravine and Secret Ravine. Develop joint projects with the Dry Creek CRMP team.		X				
LB-9.	Create a large regional park near the south Placer Urban area consistent with adjacent agricultural uses (not necessarily in this study area).		X	X			
LB-10.	Create regional trail connections and develop new regional trails, consistent with adjacent agricultural and residential uses.			X			
LB-11.	Improve trail connections between Folsom Lake and Dry Creek and its major tributaries.			X			
LB-12.	Work with the State Parks and Recreation Department to create new non-motorized recreation opportunities around Folsom Lake.			X			

Table 4-3 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Pu. Safety
LB-13.	Create nature centers and interpretive trails to educate the public about creeks, oak woodlands and grasslands.	X		X			
LB-14.	Provide discretionary funds to protect historical and cultural resources.				X		
LB-15.	Identify a location for a regional center recognizing and celebrating the agriculture, history and traditions of Placer County.	X			X		
LB-16.	Work with community organizations to identify and protect key parcels along the Lincoln Highway.				X	X	
LB-17.	Identify and protect important historic orchards and Penryn palm trees.				X		
LB-18.	Identify strategic opportunities to create green areas between urban, rural residential and agricultural uses.					X	
LB-19.	Work with the County, cities and proposed new development along urban edges to create permanent buffers or separators between incompatible uses.	X	X			X	
LB-20.	Protect scenic vistas and ridgelines in the lower foothills.					X	
LB-21.	Identify and protect scenic corridors including Auburn-Folsom Road, Sierra College Blvd., Indian Hill Road, and Interstate 80.					X	
LB-22.	Encourage property owners to reduce the potential for large wildland fires in grasslands and oak woodlands by establishing buffers and managing fuel loads.		X				X
LB-23.	Work with property owners to enhance flood plains by increasing retention capacity and allowing streams to reclaim their natural course.		X				X
LB-24.	Work with Dry Creek CRMP to restore salmon and steelhead habitat in Miners Ravine and Secret Ravine.		X				
LB-25.	Work with landowners to preserve an open space buffer between Roseville and Granite Bay along Sierra College Blvd.		X			X	
LB-26.	Acquire and manage Mehrten vernal pools in their natural location on Sierra College Ridge.		X			X	
LB-27.	Educate landowners about the impacts of		X				

urban runoff on water quality and provide guidelines for reducing toxic runoff on private property.	

SECTION D. SHERIDAN/GARDEN BAR

Physical description

The ***Sheridan/Garden Bar*** study area, bounded by the Nevada County line (Bear River) to the north, Highway 65 to the west, South Placer Cities and the Loomis Basin to the south, and the greater Auburn area to the east, spans the Great Valley and Sierra Nevada Foothill ecoregions, ranging in elevation from 0 to 1000 feet. This area, sparsely-populated and relatively isolated from the rapidly urbanizing areas of South Placer, is dominated by rangeland and wildlands but also contains the County's largest area of deciduous orchards along the lower Bear River. The area also produces citrus, grain, rice and hay crops in the fertile floodplain of lower Coon Creek (Map 12).

Blue oak woodlands, interspersed with patches of canyon and interior live oak in canyons and depressions, occur naturally above 300 feet. Much of this woodland has grown back within the last 50 years, after the retreat of mining operations and the cessation of fuel wood harvesting (Map 20). Due to large parcel sizes, particularly in the Garden Bar area along the Nevada County border, oak woodlands are relatively intact and unfragmented, presumably facilitating wildlife movement and migration. Valley grassland occurs at lower elevations, with vernal pools forming on hardpan soils (Map 19). Although this area has a long grazing history, most of its grassland terrain has not been severely disturbed by discing or other intensive soil manipulation. Vernal pool complexes tend to be fragmented, but less disturbed than in the ***Agricultural Valley*** area.

This area is bisected by Coon Creek and contains portions of the Bear River watershed (including the river itself) to the north and the Auburn Ravine watershed to the south. The lower Bear River historically contained the most significant riparian floodplain forest in the County, but much has been replaced by agricultural and mining activities. Nevertheless, large tracts of Valley Oak and riparian woodlands still exist along certain stretches of the river. The Bear River is impounded at the Camp Far West Reservoir by the South Sutter Irrigation District for agricultural water deliveries. This impoundment prevents anadramous fish from spawning upstream. Coon Creek is also sparsely vegetated along its lower reaches, where the floodplain's prime soils have been farmed and grazed. The upper reaches of the Bear River and Coon Creek exhibit more natural conditions, with relatively intact riparian zones and largely undeveloped upland habitat (Maps 18 and 20).

Trends

The ***Sheridan/Garden Bar*** study area is dominated by agricultural and rural residential land uses. One small urban area exists in the unincorporated community of Sheridan where residential, commercial and industrial land uses are present. Sheridan was originally established in the late 1800s along a rail line serving the region. Although a community plan was prepared in 1976 that would allow for a significant amount of new development around the townsite, infrastructure constraints for public sewer and water limit the potential to accommodate the urban levels of development contemplated by the community plan. Consequently, no growth is occurring. Within the foreseeable future, development in the town will continue to be

constrained, as there are no capital improvement or finance plans being developed to design and fund new infrastructure for the town. The nearest available sewage treatment opportunity is in the City of Lincoln to the southeast.

In addition to rice, pasture, orchards and poultry (Map 12), the growing of wine grapes appears to be a small but growing segment of the agricultural economy in this area. In general, the availability of surface water delivery enhances productivity levels and provides greater future security for agriculture.

Stressors and Conflicts

Agriculture - Most of this area is zoned "Farm" with minimum parcel sizes as large as 160 acres in the Garden Bar area (Map 8). Thus subdivision potential is generally low under current general plan designations. Outside of the townsite of Sheridan, it is somewhat higher, with 10- and 20-acre parcel sizes. Although land speculation in this area does not approach the intensity seen in the area west of the Cities of Roseville and Lincoln, non-renewal and expiration of Williamson Act contracts are fairly high throughout. This indicates an interest in rural residential subdivisions, some level of expectation about future development opportunities, or a lack of confidence in the viability of the agricultural land over time.

In 2000 a large aggregate mining operation is removing and processing sand and gravel from the Bear River to the west of Camp Far West Reservoir. A large source of aggregate has also been identified near Coon Creek east of Highway 65. If the Coon Creek aggregate source is developed, the extraction of the resource will disrupt farming activities onsite and potentially impact adjoining operations. It will also displace a large amount of prime farmland. Expanded operations on the Bear River may also impact agricultural operations.

Biological Resources – As mentioned above, a large source of aggregate has been identified within the floodplain of Coon Creek east of Highway 65 and is currently being evaluated for extraction and production. If this material is removed, a number of conflicts may be introduced on anadromous fish, wetlands, riparian habitat, and grasslands. Vernal pool grasslands and oak woodlands are probably the most threatened open space resources in this area.

Anadromous fish (i.e., salmon and steelhead) are also known to exist within the Coon Creek watershed, although the numbers are quite low compared to historical estimates. Several factors contribute to the decline of these species, but locally, the lack of quality habitat and fish passage constraints are the most obvious. Lower Coon Creek also has significant sedimentation problems, which result in the loss of valuable anadromous fish habitat. Sediment loading of the stream will be evaluated in 2000/2001 through efforts sponsored by CALFED Bay-Delta Program. Because the sediment loading is expected to be associated with contributions from a large region, it may be difficult to implement a successful restoration plan without a region-wide cooperative effort.

Outdoor Recreation – There are few if any stressors or conflicts associated with outdoor recreation. Even though no park and recreation facilities are provided in the area, demand for such facilities is low compared to the more urban areas of the County. Camp Far West Reservoir

provides some seasonal recreation and the Spenceville Wildlife Area, in Yuba County, also provides public open space that is reasonably close to this area (see Map 21a).

Cultural Resources – Cultural resources are scattered throughout the region (Map 22). They include historical resources from mining and early farming as well as important Native American resources. The degree to which growth and development will impact these resources is largely unknown because impacts occur without the general knowledge of local government. There are some well-known historical structures in the area, including a commercial building from the 1880s in Sheridan. There is a constant threat that these resources will be lost to land development or a lack of repair/maintenance.

Scenic Resources/Urban Separators – The study area is one of the most scenic areas of the County due to its pastoral setting, a heavily wooded landscape intermixed with open grasslands, farming operations, and rolling terrain bordered by the foothills of the Sierra Nevada. Rural residential land uses are evident throughout the area but do not significantly detract from the visual quality of the region, due primarily to the predominance of large parcel sizes. Buildout of this area will continue to introduce residential land uses but the low-density designations of the General Plan will not result in a significant change over time.

Public Safety - Public safety stressors in this area are primarily associated with flooding events on Coon Creek and its tributaries. Continued encroachment with new development, particularly on the smaller tributaries where less information is known about hydrological conditions, will result in additional flooding impacts. The continued sedimentation of Coon Creek (i.e., aggradation of the streambed) may also contribute to flooding events.

Wildland fires are also a potential threat to individuals and property. Although the region has volunteer fire service capabilities through local fire departments and CDF, the amount of woodland habitat intermixed with residential land uses has the potential for significant fire events (see Map 21). Continued encroachment into wooded areas, especially where access is restricted, will exacerbate the potential for impacts. Grassland fires are also a common occurrence in the study area.

Placer Legacy Program Opportunities

Acquisition/Easement

Given the large parcel sizes and consequent limits on urban/suburban subdivision activities in this area, as well as lack of infrastructure for development, open space and agricultural lands should be relatively inexpensive (compared to land values for example in the ***South Placer Urban*** study area) and easy to acquire if sufficient willing sellers can be identified. The majority of the land management activities would be associated with the purchase of conservation easements. Due to lower land values, vernal pool grasslands in this area would be protected through the use of conservation easements and some fee title acquisition, given the intensive monitoring that will be required under an HCP/NCCP. Riparian conservation and enhancement, as well as oak woodland preservation, could be achieved through conservation easements,

though the establishment of a regional park would require outright purchase of land. Parking facilities, picnic areas, restrooms and trails would also need to be established.

Agency Coordination

In the valley portion of this area, farmers may be eligible for the Natural Resource Conservation Service Wetland Reserve Program (WRP) or floodplain easements administered by the same agency. Placer County will work with landowners who have already expressed an interest in the WRP, possibly acting as a sponsor to boost their funding priority. The County will also work with independent land trusts, such as the American Farmland Trust and the California Rangeland Trust, to identify landowners interested in selling agricultural easements.

Working with the Auburn Ravine/Coon Creek CRMP, the Placer Legacy Program will help identify and implement creek restoration projects along Coon Creek, to enhance habitat for anadromous fish and to improve water quality. Projects may be as simple as the installation of fish screens and the construction of small fish ladders or as ambitious as developing fish passage improvements around the Camp Far West Reservoir dam.

Along the Nevada County line, Placer County will attempt to coordinate with Nevada County's emerging open space conservation program to protect adjacent large areas of blue oak and interior live oak around the Bear River.

Education/Incentives

The Placer Legacy Program will work with the County Agricultural Commission, the Farm Bureau, and local growers' organizations to create new markets for Placer County farm products, and bring new farm operations to Placer County. The Placer Legacy Program may also work with local farm organizations, tourism boards, economic development boards and other organizations to promote agro-tourism in the area, and provide financial assistance (through grants and direct funding) to PlacerGrown, the Foothills Farmers Market Association, and other similar local programs.

In addition, educational materials can be developed describing appropriate land stewardship for riparian areas, vernal pool complexes and blue oak woodlands communities.

Table 4-4. Sheridan/Garden Bar Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Safety
SG-1.	Work with farmers and ranchers to protect agricultural lands outside of designated development areas through the use of conservation easements and by promoting the Williamson Act.	X			X	X	
SG-2.	Promote sales of locally grown produce and help create additional markets for agriculture.	X			X		
SG-3.	Coordinate with PCWA, NID, and South Sutter Irrigation District to ensure that water is available for agriculture as well as for habitat conservation and restoration. One option is to initiate a water forum discussion with the area's stakeholders.	X					
SG-4.	Provide resources to assist farmers and ranchers with tax, estate and easement planning.	X					
SG-5.	Prioritize the acquisition of agricultural property that contains multiple conservation values.	X	X	X	X	X	X
SG-6.	Preserve, through a combination of conservation easements and fee title acquisition, large areas of blue oak and interior live oak woodland in the upper Bear River and/or Coon Creek watersheds.		X	X		X	
SG-7.	Protect extensive areas of grazing lands through conservation easements.	X	X			X	
SG-8.	Enhance fragmented and degraded oak woodlands and riparian zones through property owner incentives and education.		X			X	
SG-9.	Acquire and manage vernal pool grasslands in large complexes near Sheridan.	X	X			X	
SG-10.	Encourage the use of rice decomposition water to improve waterfowl habitat.		X				
SG-11.	Preserve high quality riparian habitat, through conservation easements and fee title acquisition, along Coon Creek and the Bear River.		X			X	

Table 4-4 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
SG-12.	Work with property owners to enhance stream channels and remove or modify barriers to anadromous fish passage along Auburn Ravine and Coon Creek. Coordinate efforts with the Auburn Ravine/Coon Creek CRMP organization.		X				
SG-13.	Purchase conservation easements to improve the connectivity and quality of stream zone vegetation on lower Coon Creek. Coordinate efforts with the Auburn Ravine/Coon Creek CRMP organization.		X				
SG-14.	Provide discretionary funds to protect historical and cultural resources.				X		
SG-15.	Identify a location for a regional center recognizing and celebrating the agriculture, history and traditions of Placer County.	X			X		
SG-16.	Work with the City of Lincoln to create permanent buffers or separators between incompatible agricultural and urban land uses.	X				X	
SG-17.	Identify and protect vistas in the lower foothills north of Lincoln and east of Rocklin.		X			X	
SG-18.	Identify and protect vistas of the Sutter Buttes, valley floor and coastal range.		X			X	
SG-19.	Create nature centers and interpretive trails to educate the public about agricultural operations, oak woodlands, vernal pools, creeks and grasslands.		X	X			
SG-20.	Work with landowners to ensure that private recreation facilities (e.g., hunting clubs and public equestrian facilities) continue to be a viable land use.			X			
SG-21.	Work with property owners to enhance floodplains by increasing retention capacity and allowing streams to reclaim their natural courses.		X			X	X

SECTION E. AUBURN/BOWMAN

Physical description

The ***Auburn/Bowman*** study area, which is delineated by the boundaries of the community plan, includes the City of Auburn, as well as the communities of North Auburn, Bowman, and Christian Valley (Map 4). This area is in the heart of the Sierra Nevada Foothill region, situated in rolling hills between 1000 and 1800 feet elevation, and characterized by a transition zone from oak woodlands to conifers (Map 20). Auburn, the County seat, with a long history of human settlement, is a major urban center in the County. At the same time, it preserves a rural character, with rings of rural residential land uses around its urban core. Its location at the crossroads of I-80 and Highway 49 has also influenced its development, with traveler/tourist facilities featured prominently.

Although it contains primarily shallow, silt-dominated Auburn soils (Map30), this area nevertheless has an important agricultural history, with orchards and specialty crops still thriving on small acreages, primarily along Mt. Vernon Road, west of Auburn (Map 12). Many former orchards have returned to a seminatural, blue oak woodland community, with canyon and interior live oak occurring in ravines and canyons, and foothill pine becoming more predominant at higher elevations. For the most part, these oak woodlands are highly fragmented and juxtaposed with other land uses, such as rural ranchettes, hobby farms and horse ranches. While connectivity and wildlife movement potential may exist, the quality of the habitat to sustain a diversity of plants and animals is presumed to be low. These woodlands also tend to be dominated by younger, even-age stands, although small patches of larger oaks do occur, primarily north of Dry Creek Road and southwest of Auburn, where they are mixed with footh. pine (Map 20).

This area contains tributaries of Coon Creek (including Dry Creek and Orr Creek) and Auburn Ravine (Map 17). The majority of the study area drains into one of these two watersheds. The southeast portion of Auburn is part of the American River drainage basin, while the Auburn Valley near Bell Road and Lone Star Road drains into the Bear. Auburn Ravine has been channelized and diverted through this urban area, while the Dry Creek watershed remains somewhat natural, with high canopy cover and structural diversity (Map 18).

Trends

The ***Auburn/Bowman*** area will continue to grow and expand due to the growth potential available on adopted general plans, the availability of infrastructure and a strong market place for residential and commercial land uses. The cities and County general plans allow for urban development, primarily in the southern part of the City of Auburn, in North Auburn along the Highway 49 corridor, and to a lesser extent in Christian Valley (Map 8). Urban/suburban and rural residential subdivision potential throughout the City and surrounding unincorporated area is high, especially in the rural residential zone west of Highway 49, and west and south of Auburn-Folsom Road along Baltimore Ravine in the south (Map 8).

SACOG projects that the region will grow from a population of approximately 37,000 persons in 1990 to 67,000 persons in 2022. Contrary to trends elsewhere in the County, most of this growth will occur in the unincorporated area of North Auburn where urban and suburban land use designations are noted on the community plan. (The City of Auburn will grow by 7,000 persons between 1990 and 2022 compared to the unincorporated increment of 37,000 persons for the same time frame).

Stressors and Conflicts

Agriculture – Auburn was once a significant contributor to Placer County's agricultural economy, particularly during the peak of orchard production in the early 20th century. Fruits grown from the foothills of Placer County were distributed throughout the United States from rail distribution points in the region. With the decline of production mid-century due to disease and competition with the establishment of productive Central Valley farms, the area began to be converted to rural residential land uses. The County's General Plan in 1967 recognized this change and accommodated it by allowing for land uses typically in a range of one dwelling unit per 2.3 to 10 acres. As lands subdivided, fragmentation occurred and the viability of land to produce agricultural products at a competitive level diminished. The increased occupancy of land for residential purposes created additional land use conflicts with ongoing agricultural operations. Over the course of 40 years or so, the area was essentially converted from an area dominated by agriculture to a mix of open space, agriculture, rural residential and urban land uses evident today.

Agricultural production is still viable in the area and is evident throughout (Map 12). Most of the farming represents a second source of income or is for hobby purposes. The emergence of local farmers' markets, the continued availability of agricultural surface water and the productivity of the area's soils will insure that farming operations continue to exist. In fact, the trend appears to point to a reemergence of agriculture in the foothills, though at a smaller scale than seen in the past. If agricultural activities do increase over time, the conflicts between rural residential and agricultural lands will also increase.

Biological Resources - The greater Auburn area has experienced rapid growth in recent years, though at a slower pace than in the ***South Placer Urban*** study area. Most threatened by new growth and fragmentation by subdivision activity is the oak woodland community, which is already highly fragmented, and faces further degradation and loss of connectivity with additional urbanization (Map 20). Creekside vegetation has also been significantly reduced. Auburn Ravine, once the major riparian corridor through the City of Auburn, is largely unknown to residents because of its channelization and, in some cases, elimination (i.e., piped under a parking lot in a commercial center and under Highway 49). Encroachment upon riparian zones in the upper Auburn Ravine and Coon Creek watersheds, in both urban and rural residential portions of unincorporated North Auburn, has also occurred (Map 18). The extent to which farming and rural residential uses have altered the riparian zone is largely unknown due to a lack of information about resource conditions on these properties.

Outdoor Recreation – Recreational facilities and services is provided by the Auburn Recrea District for this area. ARD provides recreational facilities for the incorporated and unincorporated areas. Available funding is limited and the ability to find additional funding is difficult. Recently, the District was initially successful at establishing a Lighting and Landscape District to raise revenues for new capital facilities. A recall campaign was launched and the funding source was subsequently eliminated. If the population continues to grow at a rapid pace and parklands cannot be acquired and developed to keep pace with demand, the need for adequate services may be threatened.

The Auburn State Recreation Area at the confluence of the north and middle forks of the American River provides an alternative form of recreation for study area residents. This region is located in the ***American River Canyon*** study area and is discussed in more detail in the next section (Section F).

Cultural Resources – The Auburn area probably contains the single largest assemblage of historical resources in Placer County (Map 22). The County courthouse is arguably the most obvious and prominent historical structure in the County. Throughout the City of Auburn there are historical homes and commercial properties dating back as far as the 1860s when permanent housing and commercial enterprises began to emerge in the area as the economy began to stabilize.

As in many other areas, funds to protect these historical resources are limited. The pressure to remove old buildings to construct more efficient and modern buildings continues. Numerous older buildings have been lost to demolition associated with redevelopment activities or elimination of unsafe structures. The County does not have a regulatory cultural resource protection ordinance. The majority of protection activities are associated with the processing of environmental impact documentation pursuant to the California Environmental Quality Act for discretionary projects. The City of Auburn provides a degree of limited protection for historical resources. Because of market forces, however, many of the older homes and commercial areas are being maintained and occupied.

The area contains important Native American resources as well. Key areas are often associated with the riparian zones where collection and production of food was common. A complete inventory of Native American resources is not available, and typically such resources are not identified by local government until a discretionary land use entitlement is proposed.

Scenic Resources/Urban Separators – The scenic character of the area is associated with many unique features, including the pastoral rural residential and farming landscape of the foothills, views of the American River Canyon and the Sierra Nevada range, and various architectural features. As growth continues in the area, impacts to these resources will occur, although to a lesser extent than in the ***South Placer Urban*** study area to the south.

Urban separators are largely present and established in the area today. The developed urban areas of the City of Auburn and unincorporated North Auburn are surrounded by either the canyon lands of the American River to the east or by rural residential and agricultural land uses to the north, west and south (Map 8). The retention of these low-density land uses around th

urban core, particularly south of Auburn, will ensure that the Auburn area is permanently separated from other urban areas.

Public Safety – Public safety concerns are largely associated with fires, particularly those initiated within the American River Canyon. Residential neighborhoods along the ridge above the south-facing slope of the canyon are in an extremely high fire hazard area according to the California Department of Forestry and Fire Protection (Map 24). There are many homes in this neighborhood, and numerous canyon fires have occurred over the years. Rural residential neighborhoods north and west of Auburn are also at risk, particularly where fuel load accumulations have built up over the years.

Flooding impacts tend to be localized, unlike in Western Placer County, where flooding hazards can be severe (Map 17).

Placer Legacy Program Opportunities

Acquisition/Easement

Except along the Bear River, opportunities to preserve large areas of oak woodland in the Auburn/Bowman area are limited, due to the high level of parcel fragmentation that has already occurred. However, in areas where trail connectivity or trailhead development can be provided, particularly adjacent to the Auburn State Recreation Area, Placer Legacy may make small, strategic acquisitions, or purchase trail easements. Other multiple benefits possibly provided by smaller parcels include the protection of scenic corridors, community separators, high fire risk areas, and high quality riparian corridors.

Agency Coordination

Along the Nevada County line, Placer County will attempt to coordinate with Nevada County's emerging open space program to protect adjacent large areas of blue oak and interior live oak around the Bear River. To the extent that it is locally applicable, the development of an HCP/NCCP for the study area will require the coordination of the local government and state and federal regulatory agencies. The Placer Legacy Program will also coordinate with the Bureau of Reclamation and/or the State Parks Department and a local trail advisory group to identify opportunities for developing trail connections and/or trailheads associated with the Auburn State Recreation Area.

Education/Incentives

Placer Legacy will work with the County Agricultural Commission, the Farm Bureau and local growers' organizations to create new markets for Placer County farm products and bring new farm operations to Placer County. Placer Legacy may also work with local farm organizations, tourism boards, economic development boards, and other organizations to promote agro-tourism in the area, and provide financial assistance (through grants and direct funding) to PlacerGrown, the Foothills Farmers Market Association, and other similar local programs.

Placer Legacy can work with the Placer Nature Center in Christian Valley to expand the curriculum being provided. The Placer Nature Center is one of the few locations where environmental education is provided outside of the classroom in Placer County.

Table 4-5. Auburn/Bowman Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AB-1.	Promote sales of locally grown produce and help create additional local markets for agriculture by financially supporting farmers' markets and agro-tourism programs.	X			X	X	
AB-2.	Work with farmers in the foothills to protect agricultural lands outside of designated development areas by promoting the Williamson Act and use of conservation easements.	X				X	
AB-3.	Identify a location for a regional center recognizing and celebrating the agricultural tradition of Placer County (not necessarily in this study area).	X			X	X	
AB-4.	Protect high quality riparian habitat through conservation easements.		X			X	
AB-5.	Work with property owners and the Auburn Ravine/Coon Creek CRMP to restore habitat for trout, salmon, steelhead and amphibians in Auburn Ravine and Coon Creek.		X			X	
AB-6.	Protect expansive areas of blue oak and interior live oak woodland habitat along the Bear River.		X	X		X	
AB-7.	Provide incentives and information for property owners to enhance fragmented and degraded oak woodlands and riparian throughout the area.		X				
AB-8.	Work with property owners and the Auburn Ravine/Coon Creek CRMP to improve the connectivity and quality of foothill stream zone vegetation for wildlife habitat and water quality.		X				X
AB-9.	Work with willing sellers to identify portions of Baltimore Ravine to develop as a recreational resource and biological resource conservation area.		X	X		X	

Table 4-5 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Pu. Safety
AB-10.	Support the Placer Nature Center and interpretive trails to educate the public about blue oak woodlands and other foothill habitats.		X	X			
AB-11.	Work with willing sellers and the Auburn Recreation District to establish trailheads, create regional trail connections, and build new regional trails.			X			
AB-12.	Provide discretionary funds to protect historical and cultural resources in the Auburn area.				X	X	
AB-13.	Identify important vista points and scenic corridors including Indian Hill Road, Baltimore Ravine, Bowman views of the Sierra Nevada, the American River corridor, Bell Road, I-80, and local views of historic architecture. If necessary, protect these areas through acquisition or easements.				X	X	
AB-14.	Work with the City of Auburn to select strategic opportunities to create greenbelts around urban areas (e.g., Baltimore Ravine).	X	X	X		X	
AB-15.	Work with the City of Auburn and proposed new development along urban edges to create permanent buffers or separators between urban and agricultural land uses.	X	X			X	
AB-16.	Maintain community separators north and south of Auburn through selected acquisitions and/or conservation easements.	X	X			X	
AB-17.	Work with property owners to reduce flood potential by increasing watershed retention in the Auburn Ravine and Coon Creek watersheds.						X
AB-18.	Protect high fire hazard areas from development through the project planning process.						X
AB-19.	Work in partnership with CDF and local CRMP groups to reduce wildland fire risks throughout the rural residential area.		X				X
AB-20.	Acquire fee title or conservation easements on high fire hazard areas with multiple open space values.		X	X		X	X

SECTION F. AMERICAN RIVER CANYON

Physical description

The ***American River Canyon*** study area, which consists of the Placer County portion of the Auburn State Recreation Area, is an unique and iconic feature in Placer County, with its steep canyons, awe-inspiring rapids and scenic beauty. The discovery of gold at Sutter's Mill on the South Fork of the American River in El Dorado County helped change the course of history in the United States. One hundred fifty years after the gold rush days that made it famous, the American River is now considered as a recreation magnet for a wide variety of outdoor enthusiasts, including cyclists, horseback riders, hikers, rafters, kayakers, off-road vehicle users, and bathers, as well as recreational gold miners (Map 17).

The American River is dammed downstream of the confluence of the North and South Forks at Folsom Lake and at Nimbus Dam. Consequently, the anadromous fish that once spawned in its gravel beds are now excluded. Placer County contains three reservoir dams upstream of the confluence, along the Middle Fork of the American River: Hell Hole, French Meadows and Oxbow Reservoirs. (The first two are not contained within this study area.) Flows along the north fork, obstructed only by the Lake Clementine debris dam/spillway just north of the confluence, are still largely natural, though only 38.3 miles of the upper North Fork (outside of this study area) has earned a wild and scenic designation from the National Park Service. The Middle Fork, though its flows are regulated, is a candidate for the wild and scenic designation, currently under study.

Vegetation in this area varies largely according to slope, aspect and elevation, with chamise and mixed chaparral occurring on south-facing slopes, Douglas-fir and ponderosa pine on north-facing slopes, interior and canyon live oak on steep slopes, and black oak on flat ridge top mesas. Blue oak is also found throughout this area, though it constitutes the upper end of this species' elevation range. The American River Canyon area serves as a northern range limit for chamise chaparral (Map 15).

Trends

Most of this land is publicly owned, purchased by the Bureau of Reclamation (BOR) for the proposed Auburn Dam project and is now managed by the State of California as the Auburn State Recreation Area (ASRA) (Map 10). The ASRA also includes private in-holdings that were condemned for the dam project but never purchased, as well as BLM-owned land. Thus almost the entire area is presently protected from development, despite the urban land use designations featured in the General Plan, which are carried over from the time of the dam project.

The American River Canyon will continue to serve as a valuable recreational resource for the local population as well as outside individuals and organizations (Map 21). It is expected that the popularity of the canyon area for a wide range of users will grow as the population of nearby population centers continues to grow. Rural residential encroachment into the American River watershed will also continue as roads and utilities are expanded out from existing populated centers to the canyon edge.

Stressors and Conflicts

Agriculture – No agricultural land uses are present in the area although they may have existed in the past.

Biological Resources – The potential for conflicts between recreational interests (e.g., mountain biking, off-road vehicle, and equestrian use) and wildlife is already apparent today. As Placer County's human population grows, increased recreational use will further stress the natural communities in the area. The disruption of wildlife foraging and nesting areas, a general diminishment of habitat values, conversion of habitats, increased erosion, and potential wildland fires, are just a few examples of how the popularity of this area impacts its ability to serve as an important wildlife corridor and natural community for a wide diversity of plants an animals.

The Auburn State Recreation Area is the only State Park in California to allow mining and dredging activities within its boundaries. Over the years, mining-related activities have undoubtedly had an impact on the river and natural vegetation communities in this area, though to what extent is uncertain. These activities are not likely to increase in the future, however.

The construction of the Auburn Dam, ~~if it were to occur,~~ would ~~inundate thousands of acres of canyon lands~~ displac~~e~~ing the existing natural communities with seasonally impounded water.

Outdoor Recreation – The greatest potential for conflict is associated with the multiple stakeholder expectations about how the canyon is to be used for outdoor recreation. Numerous conflicts already exist, including cycling versus equestrian interests, **and** off-road vehicle use versus non-motorized recreationists., ~~and those seeking the construction of a multi-purpose c for lake recreation versus whitewater and river enthusiasts.~~

Cultural Resources – Historical sites and the remains of past construction activities are evident throughout the study area. Old railroad beds, bridge abutments, and trails are scattered throughout the region. "No Hands Bridge," crossing the North Fork of the American River just below its confluence with the Middle Fork, was once a railroad bridge that is being rehabilitated so that it can become a permanent part of the trail system managed by the State Parks and Recreation Department. (However, it needs to be noted that the current agreement with BOR states that the bridge can be closed to public use at any time, if an Auburn Dam project was to commence.)

The rich diversity and importance of the historical character of the study area is the responsibility of the State Parks Department and the Bureau of Reclamation. The challenge of protecting these resources while allowing public access and use of these lands will continue to be borne by those agencies.

Scenic Resources/Urban Separators – The greatest ~~potential conflict with~~ **impact on** the scenic quality of the canyon is the area around the dam construction site for the Auburn Dam project. This area has been heavily disturbed due to the initiation of dam construction, including the construction of the foundation. ~~The river is diverted through a tunnel in order to de-water the dam construction site. Remediation of this site would improve the scenic quality of the area and~~

~~increase river-oriented recreation opportunities.~~ **Completion of the dam or remediation of the site would improve the scenic quality of this portion of the canyon.** Other conflicts are associated with ridgeline development and road construction, which also detract from the visual quality of the canyon area.

Urban separator conflicts are not relevant to this study area.

Public Safety – In recent years, numerous wildland fires have erupted from activities occurring within the ASRA. Without proper fuel load management planning, such fires have the potential to be catastrophic to the canyon and to surrounding communities. Flooding is also known to occur, but impacts are limited to inundation of roads, causing temporary road closures.

Placer Legacy Program Opportunities

Acquisition/Easement

Due to the high percentage of public ownership in this area, acquisitions and easements need not be a priority for Placer Legacy. Opportunities to add lands to the present federal holdings may present themselves, and Placer Legacy may play some role in facilitating a transfer of ownership in these areas. Properties containing important riparian and aquatic habitat for special status amphibians (i.e., Foothill yellow-legged frog or California red-legged frog), or relatively uncommon vegetation communities, such as black oak or chamise chaparral, would be the primary targets for such land transfers.

Agency Coordination

Placer Legacy can work with the land stewardship agencies (Tahoe National Forest, Bureau of Land Management and Bureau of Reclamation) to support the acquisition of high value private inholdings along the river to fill in the ownership gaps and increase access to the area's extensive trail network.

Placer Legacy can also work with the Auburn State Recreation Area as well as the Auburn Recreation District (ARD) and the American River Watershed Group (ARWG) to identify new trail and other recreational opportunities, while protecting sensitive areas.

~~At present, a portion of the American River south of the confluence of the North and Middle Forks is closed to recreational activities because of safety concerns at the Auburn Dam construction site and the diversion of the river through the Auburn tunnel. In 2000 an evaluation was initiated to determine whether or not the tunnel is to be closed and the river restored to its natural course. If the Auburn tunnel is closed, Placer Legacy can play a supportive role in the development of recreational opportunities along the restored river course. Activities such as hiking, cycling and whitewater rafting/kayaking may be reintroduced to the area if the tunnel is closed and restoration has been completed. Coordination with resource agencies, the American River Watershed Group, Protect the American River Canyon (PARC), and other organizations could result in joint venture projects to improve the disturbed areas.~~

Table 4-6. American River Canyon Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AR-1.	Coordinate with the Auburn State Recreation Area (ASRA) to preserve and manage for wildlife large expanses of Chamise chaparral, black oak, and other unique vegetation communities.		X			X	
AR-2.	Coordinate with the ASRA to protect and manage aquatic and riparian habitat for special status amphibians. Facilitate acquisition of private lands if necessary.		X				
AR-3.	Work with local, state and federal agencies to protect wildlife corridors in the region that provide connectivity to adjacent areas.		X				
AR-4.	Help facilitate land transfers from private to public lands in areas where the goals of Placer Legacy Program are met.		X	X	X	X	X
AR-5.							
AR-6.	Work with local, state and federal agencies to protect petroglyphs and other native American cultural and archeological resources.				X		
AR-7.	Provide discretionary funds to protect historical and cultural resources, such as bridge abutments, abandoned gold mining sites and Native American sites.				X		
AR-8.	Work with the ASRA to preserve the scenic transportation corridors and ridgelines that contribute to the quality and value of the entire region.					X	
AR-9.	Preserve canyon views from Interstate 80, through acquisition if necessary.					X	
AR-10.	Protect No Hands Bridge as an important cultural, scenic, and recreational resource.			X	X	X	
AR-11.	Work with the ASRA to improve access to and connections within a Countywide trail system, including the Western States Trail, the Stevens' Trail, Stage Coach Trail, and other trails throughout the area.			X			

Table 4-6 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
AR-12.	Provide support and assistance to the ASRA's CanyonKeepers docent program to educate the public about the American River's rich natural and cultural history.		X	X	X		
AR-13.	Work with the ASRA to maintain and improve recreational opportunities in the American River Canyon.~~rafting and kayaking.~~			X			
AR-14.							
AR-15.	Reduce the potential for wildland fires by working with CDF and the ASRA to establish buffers and manage fuel loads.		X				X

SECTION G. FORESTHILL

Physical description

The study area is dominated by the Foresthill Divide, a large ridge separating the Middle and North Forks of the American River. The Divide is a flat mesa-like feature containing a mix of small townships, rural residential development, public and private timberlands, and steep canyon areas. The area is well suited for timber production and harvest due to the relatively flat character of the area and its productive soils. Population centers include Foresthill, with a current population of approximately 4,000 people, as well as the smaller communities of Yankee Jim, Todd Valley, Iowa Hill, and Michigan Bluff.

The study area ranges in elevation from 1500 feet in the American River canyon to 4000 feet at the eastern end of the study area boundary. A significant amount of land is owned by federal land stewardship agencies including the Bureau of Land Management and the Bureau of Reclamation. The U.S. Forest Service also manages the Tahoe National Forest, which spills into the eastern end of the study area (Map 10).

There are a variety of natural communities within the study area. The yellow pine coniferous forest belt dominates the area, which contains mostly ponderosa pine and Douglas fir. Black oak is also found along the top of Foresthill Divide. In addition, a lesser amount of canyon live oak can be found in canyons and ravines. Older stands of trees are found in and around Shirttail Canyon to the west of the Divide.

Trends

The existing Foresthill Community Plan provides for a significant amount of new rural residential development. In 2000, a new Community Plan is being prepared which is evaluating the holding capacity for the area. The community planning process may result in a reduction in holding capacity from the existing land use diagram. The ultimate holding capacity will be determined by a number of environmental characteristics, including slope, soil stability, public infrastructure availability, access, wildland fire potential, and suitability of soils for septic systems. The trend within the Foresthill community to reduce holding capacity is opposite from the direction of land use updates occurring elsewhere in the County, where holding capacities are typically increased or held constant.

With or without a reduction in holding capacity, the ***Foresthill*** study area will see significant changes, since the completion of the Foresthill Road improvement project will improve access to the Divide and shorten commute distances. SACOG estimates that the Foresthill area will experience a population increase from 3,400 people in 1990 to 6,309 in 2022. This represents a rate of growth significantly lower than that expected in urban parts of the County but is nevertheless a significant change for the region.

Stressors and Conflicts

Agriculture – Agricultural production for food products is limited to a few orchard crops and localized hobby farming (Map 6). Christmas tree farms and timber production are the chief agricultural products produced in the study area. Timber production occurs on public lands managed by the U.S. Forest Service and Bureau of Land Management and on small and large private landholdings. Seasonal grazing may occur as well.

The rural residential interface with lands being managed for timber production creates conflicts among landowner expectations, especially on lands managed by the private sector. The rural residential owner may perceive the timberlands as part of an aesthetic landscape. Because the lands may be managed for 40+ years to allow the for a mature and valuable forest crop, such lands inevitably become part of a community's landscape. The harvesting of this resource is often perceived as a loss of visual character for the viewshed. The actual harvesting operation may also create perceived conflicts due to the level of activity associated with such operations.

Biological Resources - The majority of conflicts will be associated with the continued expansion of rural residential land uses in the study area and the resulting fragmentation and replacement of wildlife habitat. Timber harvesting operations and timber management practices (e.g., even-aged stands) will also continue to affect the viability of the natural landscape and may influence the survival of old growth-dependent species such as the California spotted owl, which is known to nest within the study area. An increase in demand for black oak has resulted in this particular hardwood species being logged quickly. The fragmented public/private ownership pattern in forested areas, with varying management practices, may contribute to diminished environmental conditions for plant and animal species, especially mammals with large ranges, such as the Pacific fisher and Pine marten.

Mining operations will also have an impact on aquatic habitats, though at a scale significantly less than that which occurred 100 years ago. Potentially affected species include sensitive amphibians such as the Foothill yellow-legged frog.

Outdoor Recreation - Recreational opportunities will continue to be in high demand in the area with limited revenues available to meet anticipated demands. Users from outside of the study area generate much of the demand. Hiking and river recreation are among the more popular activities. River and/or public land access often conflicts with private ownership on lands adjacent to access points. Many of the roads in this area are privately owned and maintained and are generally not available for public use.

Cultural Resources – Historical resources are generally associated with the town site of Foresthill, the smaller towns scattered throughout the study area and historical mining and timber harvesting sites. The quality of these resources is variable throughout the region. In the town sites, many of the historical structures are occupied and maintained as residences and commercial businesses. Similar to other areas of the County, such structures and sites will continue to be lost unless market forces and/or direct financial assistance are introduced to insure that these resources are protected over time.

Scenic Resources/Urban Separators – Stressors upon the scenic quality of the area are chief associated with the conversion or modification of natural communities through continued residential development and impacts associated with timber extraction. See the above discussion regarding timber harvest impacts on scenic resources.

Urban separators are not a relevant consideration for this plan area. The town of Foresthill is surrounded by rural residential lands and timberlands and is effectively separated from the nearest urban community - Auburn - by 12 miles of land, much of which is publicly-owned.

Public Safety

The continued expansion of rural residential communities adjacent to or within the forested landscape increases the potential for harm to individuals and property due to wildland fires (Map 24). Active fuel-load management programs are being implemented to control understory growth in the study area. Continued coordination with CDF, BLM and the Forest Service will be necessary to reduce the fire threat over time. This will be increasingly important as the region continues to grow.

Placer Legacy Program Opportunities

Acquisition/Easement

Acquisition activities will be mostly limited to land exchanges and acquisitions in support of state and federal conservation programs that are consistent with the objectives of Placer Legacy. A limited amount of conservation easement acquisitions may be used to protect riparian zones (especially where special status amphibians are present), old growth coniferous forests, black oak, and chamise chaparral. Acquisition and/or easements may also be used to develop recreational areas, trailheads and trails. Timberland Production Zones (TPZ) and to a lesser extent the County's Williamson Act will be promoted to protect agricultural lands and timber production areas.

Agency Coordination

It will be important to coordinate with the Bureau of Land Management and U.S. Forest Service for land acquisition and transfers within the study area, as they further the objectives of Placer Legacy and the local community. Coordination with the Bureau of Reclamation, State Parks and the U.S. Forest Service will be necessary to establish and improve trails, and trailheads.

Placer Legacy may also coordinate with the American River Watershed Group's activities within the watershed, including fuel load management and watershed management efforts. Coordination with CDF on the development of appropriate separators and buffers between timber areas and to assist with the development of fuel load management programs is important.

To the extent that the regulatory coverage is to be obtained for this area, it will be necessary to coordinate with the regulatory resource agencies on the development of an HCP/NCCP.

Education/Incentives

Placer Legacy will work with CDF and the American River Watershed Group to develop fuel load management guidelines and to implement fuel load management programs that protect property from wildland fires. Such efforts should also consider ecological factors and balance the impacts to the forest and the watershed with the need to protect property and lives.

Table 4-7. Foresthill Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Pub. Safety
FH-1.	Promote and encourage sustainable forestry practices that strengthen small timber companies.	X			X	X	
FH-2.	Work with timber interests in the Western County to create additional outside markets for Placer County products.	X			X		
FH-3.	Work with timber interests in the foothills and Sierra Nevada to protect sustainable forest resources outside of designated development areas.	X	X			X	
FH-4.	Create more land use flexibility in timberland preservation zone (TPZ) regulations.	X		X			
FH-5.	Protect expansive areas of old growth black oak woodland, through conservation easements and agency land trades.		X				
FH-6.	Protect, through conservation easements and agency land trades, important remaining areas of wetlands, mountain meadow and riparian areas as habitat for special status amphibians.		X			X	
FH-7.	Provide incentives for property owners to enhance stream zone vegetation for wildlife habitat and water quality.		X				
FH-8.	Work with local, state and federal agencies to protect important wildlife corridors and migration routes.		X				
FH-9.	Work with the Bureau of Land Management and Forest Service on appropriate land transfers that further the conservation objectives of Placer Legacy and are responsive to local community concerns.		X	X	X	X	X
FH-10.	Work with the Bureau of Land Management, Forest Service, and Bureau of Reclamation to improve access to an interconnected Countywide system of trails and parks.			X			
FH-11.	Identify, develop and improve appropriate river access points and other important trailheads.			X			
FH-12.	Designate and protect scenic transportation corridors along Foresthill Road, Colfax-Iowa Hill Road, and Mosquito Ridge Road.		X			X	

Table 4-7 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
FH-13.	Provide discretionary funds to protect historical and cultural resources in Foresthill, Michigan Bluff, and other areas.				X		
FH-14.	Preserve scenic transportation corridors and ridgelines that contribute to the quality and value of the region.		X			X	
FH-15.	Create buffers and separators between large timber operations and rural residential use.	X				X	
FH-16.	Reduce the potential for wildland fires by working with other agencies to establish buffers and mange fuel loads.						X

SECTION H. LOWER SIERRA

Physical description

The ***Lower Sierra*** study area is bounded by the Bear River to the west, the north fork of the American River to the east, the north end of the Baxter/Alta areas to the north and the southerly boundary of the Meadow Vista community to the south (Map 4). In the Dutch Flat and Gold Run area, placer mining activities forever changed the landscape. Large tracts of lands were hydraulically mined for gold; the sediments washed into the American River and ultimately into the Sacramento River/Delta system. Evidence of this mining activity is found throughout the study area.

The area is dominated by rural residential land uses and one incorporated community, the City of Colfax. Unincorporated communities include Meadow Vista, Applegate, Weimar, Cape Horn, Gold Run, Dutch Flat, Alta, and Baxter (Maps 8 and 9). There are small pockets of urban land uses scattered throughout the region. The single largest urban area is in the City of Colfax, where public infrastructure is provided. Small urban areas also exist in Meadow Vista, Applegate and Dutch Flat as well as some limited highway commercial areas. The area ranges in elevation from 1800 feet near Meadow Vista to 4000 feet along Moody Ridge east of Baxter.

The majority of land is in the private sector. The only large-scale mining operation today is a hard rock mining site on the Bear River at the eastern end of Combie Lake in Meadow Vista. A small amount of agricultural development is present, including Christmas tree farms, some orchard crops, and grazing. The region was once an important contributor to the County's agricultural economy as evidenced by the now defunct operation of the Colfax Fruit Growers Association. Agricultural water deliveries are available to some properties via ditch conveyance facilities owned and managed by the Placer County Water Agency and other water agencies.

The southern end of the study area is a transition between the blue oak woodland belt of the foothills and the yellow pine forest belt of the Sierra Nevadas. Black oaks are also known to exist throughout this study area. One large black oak on Moody Ridge is reputed to be the largest black oak in the state.

Trends

The area will continue to accommodate additional growth throughout the range of the study area. For the City of Colfax and the unincorporated areas, growth rates are significantly slower than growth rates in the more urban areas to the south. Due to a lack of public infrastructure, no urban development is anticipated outside the City limits of Colfax. Nevertheless, there is a significant holding capacity remaining on the lands within the study area and the popularity of the area will continue to result in new development activity. The majority of new development will be rural residential with parcel sizes ranging between 1 and 10 acres in size.

With the potential widening of Interstate 80 and the acceptability of rail as a commute method, the area will increasingly be seen as a bedroom community for employment centers in South Placer and Sacramento.

The area will also continue to be a key staging and ingress/egress point for whitewater river rafting and kayaking and hiking on the North Fork of the American River.

Stressors and Conflicts

Agriculture – Agricultural land uses still remaining in the area will continue to face conflicts with residential land uses. Most of these conflicts are localized neighborhood disputes. With lot sizes typically ranging between 1 acre to 10 acres/dwelling unit, lands in the study area are being subdivided and the fragmentation reduces the viability of the land for agricultural production. Large-scale farm operations are non-existent in the area and are unlikely to return given the current land use configuration.

Biological Resources – The study area lies in a transition between the Sierra Foothills, dominated by oak woodland forests and grasslands, and the yellow pine forest of the west slope. The majority of the study area has been fragmented by road construction and the subdivision of property for rural residential land uses. The Bear River borders the study area on the west side. Fisheries have been impacted by past mining activities and the presence of dams at Camp Far West, Combie Lake and Rollins Reservoir.

Outdoor Recreation – The plan area has access to the American River Canyon via a number of roads and trails, including Iowa Hill Road, Yankee Jim Road, the Stevens' Trail and others. The river canyon provides a significant amount of public recreation through Spring and Fall. The area is relatively undeveloped for recreational purposes and numerous trails and access points are informal and poorly marked. Many of the parking and staging areas are also informal and are in need of restroom facilities and other amenities. The Giant Gap area long the North Fork of the American River is arguably one of the most dramatic landscapes in Placer County and the region. Due to limited public access to this area, few know of the value of this scenic resource. Within the City of Colfax, recreational opportunities are limited. With an increasing population, recreational demands will increase over time.

Cultural Resources – For the most part, cultural resources are associated with the historic structures in the City of Colfax, old farm buildings, and remnants of historic mining activities. The area has a rich cultural history and prehistory, but much has been lost over time. It is anticipated that losses will continue to occur without the development of incentive or regulatory programs. It is not anticipated that a regulatory program will be established in the foreseeable future.

Scenic Resources/Urban Separators – The area abounds in scenic resources. The pastoral setting of the rural residential environment with oak woodlands mixed with coniferous forests are one reason for the region's popularity. Continued growth and development will impact scenic resources along transportation corridors such as Interstate 80 and Placer Hills Road. Most

impacts will be associated with tree removal, construction activities and road cuts. The continued fragmentation of the landscape will also detract from the scenic qualities of the are.

Public Safety – The primary conflict or stressor for public safety is associated with the rural residential mix in the forested region. Similar to other regions of Placer County, there exists a potential for wildland fires to be catastrophic because of fuel load build-up and the close proximity of housing to the forested environment. In addition, the proximity of the area to fires initiated within the American River Canyon could also cause harm to individuals and property. It is estimated that a fire starting in the bottom of the canyon can reach the top of the ridge within approximately 30 minutes. The area immediately to the west of the canyon is populated with residential densities between 1 and 10 acres per dwelling unit. Evacuation from this area and access for emergency vehicles is difficult because of the terrain and numerous private roads.

Placer Legacy Program Opportunities

Acquisition/Easement

The use of conservation easements and outright acquisition will not be a priority for Placer Legacy in this study area. However, easements, and to a lesser degree acquisition, may be used in a limited capacity to enhance recreational opportunities (e.g., trailhead construction and trail development) and to protect scenic vistas. The protection of large tracts of land through acquisition will be limited because of the fragmentation that already exists and because there are few sensitive species present. If acquisition for biological resource values does occur, it will be associated with the protection of sensitive habitats, including riparian corridors and possibly mixed conifer and black oak woodland habitats, if willing sellers are available.

Agency Coordination

Placer Legacy will need to cooperate with the City of Colfax and the Colfax Park and Recreation Commission to establish priorities for joint projects in the region (e.g., establishment of a Stevens Trail trailhead). If comprehensive regulatory coverage is provided for this area through an HCP/NCCP, it will be necessary to cooperate with state and federal regulatory resource agencies (e.g., California Department of Fish and Game and the U.S. Fish and Wildlife Service). Coordination with CDF regarding fuel load management plans may also be warranted where public safety concerns are being evaluated and joint planning can satisfy the objectives of Placer Legacy. Placer Legacy will also coordinate its activities with the implementation of watershed management plans where such efforts further the objectives of the Program.

Education/Incentives

Placer Legacy may provide an incentive to owners of historical structures to rehabilitate their properties. Direct funding or financial assistance may be provided to insure that important historical structures are protected (e.g., Dutch Flat Hotel).

Placer Legacy also will work with CDF to develop fuel load management guidelines and to implement fuel load management programs that protect property from wildland fires. Such

efforts should also consider ecological factors and balance the impacts to the forest and the watershed with the need to protect property and lives.

Table 4-8. Lower Sierra Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
LS-1.	Promote and encourage sustainable forestry practices that strengthen small timber companies.	X			X		
LS-2.	Work with timber interests in the Western County to create additional outside markets for Placer County products.	X			X		
LS-3.	Work with timber interests in the foothills and Sierra Nevada to protect sustainable forest resources outside of designated development areas.		X	X		X	
LS-4.	Identify and protect areas of old growth black oak woodland.		X			X	
LS-5.	Protect important remaining areas of wetlands, mountain meadow and riparian habitat.		X			X	
LS-6.	Improve connectivity and quality of stream zone vegetation for wildlife habitat and water quality.		X				
LS-7.	Work with local, state and federal agencies to protect wildlife corridors in the region that provide connectivity to adjacent areas.		X				
LS-8.	Work with the Bureau of Land Management on appropriate land transfers that further the conservation objectives of the Program.		X	X	X	X	
LS-9.	Work with the BLM, USFS and BOR to improve access to an interconnected Countywide system of trails and parks throughout all of Placer County.			X			
LS-10.	Work with the BLM to establish a permanent trailhead for the Stevens' Trail near Colfax.			X			
LS-11.	Provide additional improvements to Placer County's Bear River campground facilities.			X			
LS-12.	Identify, develop, and improve appropriate river access points and other important trailheads.			X			
LS-13.	Protect historic structures in the towns of Gold Run, Dutch Flat and Alta and in the City of Colfax.				X	X	
LS-14.	Protect scenic resources on the I-80 corridor between Clipper Gap and Crystal Springs.		X			X	

Table 4-8 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
LS-15.	Preserve scenic transportation corridors and ridgelines that contribute to the quality and value of the region.		X			X	
LS-16.	Reduce the potential for wild land fires by working with other agencies to establish buffers and manage fuel loads.						X

SECTION I. WEST SLOPE SIERRA

Physical description

The ***West Slope Sierra*** study area, consisting of the upper western slope of the Sierra Nevada portion of Placer County, is a resource-rich, sparsely populated part of the County. Of all the study areas, it is the largest and least impacted by development. Although it contains as many vegetation communities as the other study areas combined, it is considered to be one study area due to the small human population and because recommendations tend to be broad in scale and scope. The small population centers in this area are clustered around the I-80 corridor and include Nyack, Emigrant Gap, Cisco Grove, and Serene Lakes.

The area spans over 7,000 feet in elevation, from 1,500 feet in the lower reaches of the American River Canyon, to 9,006 feet at Granite Chief peak, the highest point in the County. This topographic variation produces several distinct vegetation belts, ranging from foothill woodland/chaparral in the river canyons, to westside yellow pine (which includes ponderosa pine, black oak, live/interior oak, Douglas-fir, closed-cone pine, and white fir), Lodgepole pine-red fir (above 6,000 feet), subalpine conifers (above 7,000 feet) and small areas of fragile alpine dwarf shrub communities above 8000 feet.

The river canyons allow the penetration of low-elevation vegetation communities far into the Sierra Nevada, resulting in greater ecological diversity. The North Fork of the American River is not impounded until Lake Clementine, in the Auburn State Recreation Area, earning its upper portion a "wild and scenic" designation (Map 28). The upper north fork, which contains several private inholdings, is part of the largest roadless area in Placer County, all of which have been targeted for conservation by the U.S. Forest Service.

The landscape of the western Sierra Nevada in Placer County, as in other counties, is strongly characterized by the checkerboard ownership pattern resulting from the federal government's deeding of alternate sections to the railroads in the 1860s (Map 10). The Tahoe and Eldorado National Forests manage most of the public land in this area, while the Bureau of Land Management (BLM) also manages several parcels along the lower North Fork of the American River. Both the Tahoe National Forest and BLM have increased their management base in Placer County in recent years, through land swaps and outright purchase. Most of this area is managed for timber. Sierra Pacific Industries and numerous smaller timber operators also own land throughout the region.

This area contains several roadless areas larger than 5,000 acres, which are now given increased management/conservation attention through a roadless area management plan recently issued by the Forest Service (Map 28). Isolated stands of old growth forest are scattered throughout the study area, though most of the area has been logged several times. Remaining old growth conifer forests provide important nesting habitat for the California spotted owl, recently petitioned for listing under the Federal Endangered Species Act, as well as the Northern goshawk and a diversity of other species. Mammals with large area requirements, such as the Pine marten, have been greatly reduced in numbers, as their habitat has been fragmented and altered by roads, timber harvest, and grazing activities. Three formerly widespread special status

mammals, the bighorn sheep, wolverine and Sierra Nevada red fox, are no longer known to occur in Placer County.

Trends

A number of trends will affect the ***West Slope Sierra*** study area. The cost of housing in this portion of the study area is less than other regions of Placer County and consequently retirees and other limited-income individuals are continuing to move into the region. The I-80 corridor remains a popular outdoor recreation destination, with easy access to numerous hiking trails and ski areas, as well as a major conduit for Lake Tahoe, Reno and other interstate traffic.

The value of lumber and the age of timber stands will affect how private forest lands are managed and the pace at which harvesting is to occur. The U.S. Forest Service's Sierra Nevada framework planning program will set new standards and practices for timber management in the region, and may have a significant impact on harvesting. The Draft Environmental Impact Statement was released in May of 2000 to examine the environmental effects of a range of possible future management scenarios for the Modoc, Lassen, Plumas, Tahoe, Eldorado, Stanislaus, Sierra, Inyo and Sequoia National Forests (NF), the Lake Tahoe Basin Management Unit and the portion of the Humboldt-Toiyabe NF in the Sierra Nevada. The EIS will not affect private land.

Stressors and Conflicts

Agriculture – A chief stressor/conflict in this area is associated with seasonal grazing of sheep and cattle in the Sierra Nevada. In this case it is the agricultural activity which is causing the stress upon the environment. Livestock are doing less damage to the Sierra Nevada than occurred earlier in the 1900s when grazing was effectively unregulated. Cattle grazing, if well managed, can assist with fuel load management and thus reduce wildfire hazard. Overgrazing, however, can cause significant damage to sensitive soils and plants, while attracting weedy species. Cattle grazing in the riparian zone also has the potential to create harm to this sensitive resource.

Silvicultural activities also create impacts to the study area. The management of the forest for timber production creates a number of conflicts with the natural communities in the Sierra Nevada. Even-aged forests managed for timber production are not as biologically diverse as the forests that existed before the landscape was modified for production purposes. The construction of roads for logging purposes has also significantly fragmented the landscape affecting wildlife movement and causing erosion. In some areas, impacts to riparian zones have been severe, including sedimentation associated with erosion.

Biological Resources – There are many stressors and conflicts that impact Sierra Nevada ecosystems. Virtually the entire study area is managed for timber production or for multiple use, including grazing, off-road vehicle use, hunting and fishing, mining, hiking, cycling, horseback riding, and camping. In addition to fostering these uses, the Forest Service is also charged with managing the forest for its conservation values. These conflicting management goals result in

highly variable conditions throughout the forest. In general, most natural communities have been disturbed to some degree by human activity.

With the exception of new or expanded ski resort areas along I-80, this area faces little new development threat. The major activity influencing natural communities is timber harvesting, which is occurring on both private and public lands. Impacts from logging operations have the potential to threaten a number of sensitive species. Two of these are being monitored by resource agencies. The California spotted owl, an old-growth dependent species, was recently petitioned for listing under the Federal Endangered Species Act. The Northern goshawk is also being closely monitored in order to determine whether a listing is warranted.

Outdoor Recreation – The use of the public lands in this study area are important locally and nationally as a recreational resource. Numerous nationally recognized recreational events occur here, including the Tevis Cup and the Western States 100-mile Run. Trails such as the Pacific Crest trail for hiking and backpacking and the Rubicon Trail for off-road vehicles draw individuals from afar (see Map 21b). The popularity of these trails for day or multi-day trips may result in conflicts between recreational users, and continues to stress its resources, as do many other uses.

Cultural Resources – The U.S. Forest Service has the chief responsibility to protect cultural resources in the study area. Forest Service archaeologists have evaluated significant tracts of lands and have a data base of historical and pre-historical resources. Impacts to these resources will largely be evaluated by the Forest Service for mitigation requirements.

Scenic Resources/Urban Separators – Like so many other areas of Placer County, scenic resources abound throughout the study area. River canyons, large expanses of coniferous forests, alpine peaks, wet meadows, and riparian woodlands are all found in the area. Most of the land is accessible via County or Forest Service roads (see Map 21); consequently the public has wide-ranging access to the scenic qualities of the area. Impacts to this scenic quality are generally associated with logging practices or fire events, both of which can remove the forest canopy and expose large tracts of open lands. Fire is the more serious of the two. A limited amount of development and mining activity also may create minor impacts.

Urban separators are not a relevant issue in this study area in that no urban land uses exist.

Public Safety – Public safety is associated with the threat of large-scale forest fires. Very few permanent residences exist in the study area; consequently, the threat is mostly directed towards the plants and animals that are harmed by intense canopy fires.

Placer Legacy Program Opportunities

Acquisition/Easement

While there may be opportunities for acquisition in this area, it is not necessarily the best use of Placer Legacy funds. Rather, the U.S. Forest Service should be encouraged to acquire environmentally-sensitive lands and to promote more environmentally-sound logging practices. However, there may be opportunities for the County to acquire small parcels with high habit

value for sensitive species, such as the Foothill or Mountain yellow-legged frog, or important nesting areas for the California spotted owl.

Agency Coordination

Coordination with land management agencies, including the Forest Service and the Bureau of Land Management is extremely important, particularly regarding new land acquisitions. Oftentimes, the support of local government can give higher priority to an acquisition, providing an advantage over other projects competing for funding. In addition, Placer Legacy has been encouraged to participate in the review of the Sierra Nevada Framework for Conservation and Collaboration, and thus may have opportunities to encourage the management of Sierra Nevada forests to maximize biological diversity and preserve other open space resources.

Education/Incentives

Placer Legacy will work with CDF and the American River Watershed Group to develop fuel load management guidelines and to implement fuel load management programs that protect property from wildland fires. Such efforts should also consider ecological factors and balance the impacts to the forest and the watershed with the need to protect property and lives. The County may also provide incentives to private timber operators to preserve or selectively log tracts of old-growth forests.

Table 4-9. West Slope Sierra Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
WS-1.	Promote and encourage sustainable forestry practices that strengthen small timber companies.	X			X		
WS-2.	Work with timber interests in the County to create additional outside markets for Placer County products.	X					
WS-3.	Work with timber interests in the foothills and Sierra Nevada to protect sustainable forest resources outside of designated development areas.	X	X			X	
WS-4.	Identify and protect areas of old growth conifers and black oak.		X			X	
WS-5.	Protect important remaining areas of wetlands, wet meadows, mountain meadow and riparian habitat.		X			X	
WS-6.	Work with local, state and federal agencies to protect wildlife corridors that provide connectivity to adjacent areas.		X				
WS-7.	Work with the Bureau of Land Management and U.S. Forest Service on appropriate land transfers that further the conservation objectives of Placer Legacy.		X	X	X	X	X
WS-8.	Work with the BLM, USFS and BOR to improve access to an interconnected Countywide system of trails and parks throughout all of Placer County.			X			
WS-9.	Provide trailheads and acquire trail easements through private land to connect existing public land trail networks.			X			
WS-10.	Identify, develop and improve appropriate river access points and other important trailheads.			X			
WS-11.	Work with landowners to ensure that private ski resorts and other recreation facilities are managed in an environmentally sound manner.			X			
WS-12.	Provide discretionary funds to protect cultural resources and historic structures and sites.				X		

Table 4-9 (Continued)

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
WS-13.	Identify and protect sections of the historic Lincoln Highway through easements and/or landowner agreements.					X	
WS-14.	Identify and protect remaining sections of the Emigrant Trail through easements and/or landowner agreements.				X		
WS-15.	Protect scenic resources on the I-80 corridor.		X			X	
WS-16.	Protect scenic vistas and points at Emigrant Gap, the Yuba Gap, Royal Gorge and Shirley Canyon.		X			X	
WS-17.	Protect scenic corridors along Old Highway 40 and Soda Springs Road.					X	
WS-18.	Preserve the wild and scenic river and roadless area along the upper portion of the North Fork of the American River.		X			X	
WS-19.	Reduce the potential for wildland fires by working with other agencies to establish buffers and mange fuel loads.						X
WS-20.	Reduce risks to individuals and property in areas prone to avalanche.						X

J. EAST SLOPE SIERRA

Physical description

The ***East Slope Sierra*** study area lies east of the Sierra Nevada crest and contains the Tahoe Basin and Truckee River watershed portions of Placer County. Precipitation in this area is significantly lower than on the west slope due to the rain shadow effect. Consequently, vegetation patterns are different than those on the west slope. Elevations range from 5,800 feet in Martis Valley to 8,900 feet near the Nevada State border.

The region has many unique natural communities for its relatively small geographic area. These communities include a large alpine lake (Lake Tahoe), a riverine corridor (Truckee River), a broad open sagebrush scrub and mixed conifer community (Martis Valley), montane wet meadows and montane riparian zones, alpine scrub, and subalpine mixed conifer forests.

This diversity of natural communities brings with it a diversity of plants and animals, including numerous sensitive species (e.g., Tahoe yellow cress, willow flycatcher, and the Lahontan cutthroat trout). Many of these communities are fragile and are highly susceptible to change from human-induced or natural events (e.g., fire). Because of the highly modified nature of the environment and because of competition for the landscape between humans and plants/animals, threats to biodiversity in this area may be nearly as high as in parts of Western Placer County where growth and development impacts prevail.

The first recorded sighting of Lake Tahoe by a non-Native American was by John C. Fremo February of 1844. In 1848 Kit Carson carved a trail over what is now called the Carson Pass. This trail became the main east/west route from Utah to California and was known as the Mormon-Emigrant Trail.

In 1859 the Comstock Lode was discovered in Virginia City, Nevada. During the 1860s, this region became the center of a lively commerce involving the silver mines in Virginia City and the Central Pacific Railroad, which was pushing over the Sierra toward the town of Truckee. Wood was needed to supply the mines, the new boomtowns and the railroad. An extensive logging empire was established on the east shore of Lake Tahoe from Incline Village to Glenbrook. The loggers clear-cut the entire shoreline until both the silver mines and the demand for timber declined in the late 1870s to early 1880s. By the 1890s, Lake Tahoe had become a popular retreat for the wealthy from San Francisco, Sacramento and Virginia City.

Today the Lake Tahoe Basin remains an unparalleled outdoor recreation magnet, drawing large numbers of weekend visitors, mostly from the San Francisco Bay area and other parts of California. Summer crowds are drawn primarily to aquatic activities on Lake Tahoe, such as boating and swimming, as well as camping, hiking and cycling. In the winter, Placer County's numerous ski resorts host thousands of skiers, snowboarders and other winter vacationers. These wide-ranging and numerous outdoor recreation opportunities have resulted in large, fluctuating populations of seasonal residents, including both homeowners and seasonal employees. The shore of Lake Tahoe is developed around almost the entire west shore, along Highway 89 (Map 6).

Trends

The trends in this study area vary widely from region to region. In the Tahoe Basin, the Tahoe Regional Planning Agency (TRPA) imposes development restrictions over and above those imposed by local government. The TRPA was formed to protect the water quality of Lake Tahoe and has local land use authority to try to limit the impact of new development upon the quality of the lake and streams that feed the lake. Among other restrictions, there has been a limit on new commercial construction in Placer County since the late 1980s. No more than a total of 150,000 new square feet was allowed to be built, of which 35,000 square feet remains unallocated in 2000. Once this remaining 35,000 square feet is built, no new commercial construction will be authorized unless an equal area is removed. Residential construction is limited to 88 dwelling units per year in Placer County. A number of other restrictions to maintain or improve the water quality of Lake Tahoe and to maintain the scenic qualities of the Basin apply.

The situation in the Martis Valley area is much different. With the availability of public infrastructure and without the regulation of the TRPA, development constraints are significantly less than in the Tahoe Basin. In the Placer County portion of Martis Valley, there are approximately 2,200 dwelling units. The Valley has the potential for an additional 11,758 dwelling units under the existing Community Plan designations (Map 9), and the market demand for new construction is increasing. The housing is occupied by permanent residents employed locally or in the Reno/Sparks/Carson City area, as well as by individuals purchasing a second or retirement home. The TRPA does not have jurisdiction over the Martis Valley, so market forces have a greater opportunity to impact the region's growth potential.

The Squaw Valley and Alpine Meadows areas are expected to continue to grow as well. Their combined holding capacity is much lower, but new development opportunities still exist in the community plans for the area (Map 9). Squaw Valley in particular will see significant changes with the introduction of a residential and commercial "village" on the ski area parking lot. The Truckee River corridor is constrained from significant new development because of the flooding potential, limited access and a lack of public infrastructure.

Stressors and Conflicts

Agriculture – Other than some seasonal cattle grazing, no significant agricultural production exists in the study area. The majority of the lands being managed for timber production occur in the ***West Slope Sierra*** study area.

Biological Resources - Many portions of this region contain sensitive natural communities. The water quality of Lake Tahoe has been very susceptible to degradation and eutrophication, due to erosion, sedimentation and high nutrient flows. Earlier use of septic systems also contributed to the degraded water quality. Martis Creek, Pole Creek, and Truckee River tributaries are important to Lahontan cutthroat trout. Squaw Valley contains one of the largest alpine wet meadows in the state.

All of these natural communities are impacted by activities occurring in the study area, which contains no fewer than five large alpine ski resorts in just Placer County (including Homewood,

Northstar, Alpine Meadows, Squaw Valley, and Sugar Bowl). Residential and commercial construction also continues to alter the landscape.

Impacts are not only associated with construction activities. The study area provides significant amenities and services for recreationists and travelers to the region. Golf courses have been constructed in Squaw Valley, Martis Valley (Lahontan project), Northstar and along the shores of Lake Tahoe. Hiking, backpacking and cross-country skiing are popular in the backcountry. Rafting is a popular activity during summer months on the Truckee River between Tahoe City and Alpine Meadows. Off-road vehicle use is popular in areas outside of the Tahoe Basin. All of these activities generate impacts on the natural communities in the region, many of which are very fragile and susceptible to impacts even from passive recreation activities.

Outdoor Recreation – The study area provides a tremendous diversity of outdoor recreation opportunities. As Placer County grows and growth continues to occur in Sacramento and the Bay Area, this area of Placer County will continue to see a growing demand for outdoor recreation. Market forces will respond to this demand for recreation by providing additional opportunities. Increased traffic and crowded weekend conditions at major ski resorts and trailheads are problematic impacts of this increase in demand.

Cultural Resources – Cultural resources, including Native American pre-historical resources, are found throughout the study area. Most cultural resources are congregated in the Lake Tahoe region. The Lake has been important for thousands of years, first for Native Americans, then for timber and then, starting in the 1890s, as a resort. The transformation of the area into a resort community over the past century has left many historical resources in varying states. Some have been protected as important public resources, others continue to be occupied as homes and commercial businesses.

The discovery of stone artifacts and projectile points confirms the presence of the Washoe Indians several thousand years ago. They migrated each summer from the Carson Valley area seeking the cooler temperatures, abundant fish, and plentiful game of Lake Tahoe. The Donner State Park (mostly in Nevada County) recognizes the plight of the Donner Party in the winter of 1846/7. Remaining structures and facilities from the 1960 Squaw Valley Winter Olympics represent more contemporary history. Some of the area's resources are protected. Much of what represented "Old Tahoe" unfortunately has been lost to redevelopment, lack of maintenance or calamitous events. It is anticipated that impacts to cultural resources will continue to occur, particularly in the Tahoe Basin.

Scenic Resources/Urban Separators - The area also contains some of the most significant scenic resources in the County and state including Lake Tahoe, Donner Lake (mostly in Nevada County), the Sierra Nevada crest, Squaw Valley, Granite Chief Wilderness and Martis Valley. Continued growth and development will impact air and water quality, scenic vistas, and sensitive species. Balancing growth and tourism demands with the protection of sensitive resources will continue to be a real challenge for this area.

Public Safety – Numerous public safety stressors exist in the area. Many portions of the study area are susceptible to avalanches including Squaw Valley, Alpine Meadows, Ward Valley,

portions of the Truckee River Corridor, and Schallenberger Ridge above Donner Lake. Some avalanche events in the past, e.g., Alpine Meadows, have been catastrophic.

Placer Legacy Program Opportunities

Acquisition/Easement

It is not anticipated that Placer Legacy will play a significant role within the Tahoe Basin where acquisition and other conservation activities already occur through the Tahoe Regional Planning Agency, the Tahoe Conservancy and the U.S. Forest Service. Efforts will be concentrated outside the Basin through coordination and cooperation with the Truckee/Donner Land Trust or other conservation organizations, including the Trust for Public Land.

Agency Coordination

In the Martis Valley area, Placer Legacy can work with the Town of Truckee and Nevada County to coordinate trail connections and other passive recreation opportunities, maintain mutually beneficial scenic corridors and landscapes, and preserve biological resources that cross the County line. To improve water quality within various creeks draining to the Truckee River, Placer Legacy can coordinate with the Lahontan Regional Water Quality Control Board. Coordination on the development of an HCP/NCCP throughout the eastern region will require the cooperation of the County, the Lahontan Water Quality Control Board, and state and federal resource regulatory agencies.

Education/Incentives

Education and incentives will not be a high priority for Placer Legacy in the ***East Slope Sierra*** study area. Numerous conservation, tourism and regulatory programs already exist. Program emphasis will be placed upon regulatory coordination to protect open space, habitat restoration, and joint open space acquisition efforts.

Table 4-10. East Slope Sierra Implementation Measures

		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
ES-1.	Promote and encourage sustainable forestry practices that strengthen small timber companies.	X					
ES-2.	Promote sales of locally grown produce and agricultural products by supporting farmers markets.	X					
ES-3.	Coordinate with the Forest Service to take advantage of opportunities for land swaps that achieve Placer Legacy goals.		X	X	X	X	X
ES-4.	Protect and restore, through conservation easements and/or interagency coordination, habitat for endangered and threatened species including Lahontan cutthroat trout and the Mountain yellow-legged frog.		X	X		X	
ES-5.	Protect important remaining areas of wetlands, mountain meadow, wet meadow and riparian habitat through conservation easements and/or interagency coordination.		X			X	
ES-6.	Unless otherwise protected by other means, protect wet meadow areas in the Martis Valley and Olympic Valley from incompatible adjacent development through the use of conservation easements and fee title acquisition.		X			X	
ES-7.	Protect river and stream corridors, specifically the Truckee River, Martis Creek, Coldstream Creek and Pole Creek from incompatible development.		X			X	
ES-8.	Work with local, state and federal agencies to protect wildlife corridors between major habitat areas.		X				
ES-9.	Develop trailheads and trail connections that improve public access to an interconnected County- and region-wide system of trails and parks.			X			
ES-10.	Create nature centers and interpretive trails to educate the public about the natural history of the region.			X	X		
ES-11.	Work with landowners to insure that private recreation facilities are managed in an environmentally responsible manner.			X			

Table 4-10 (Continued)

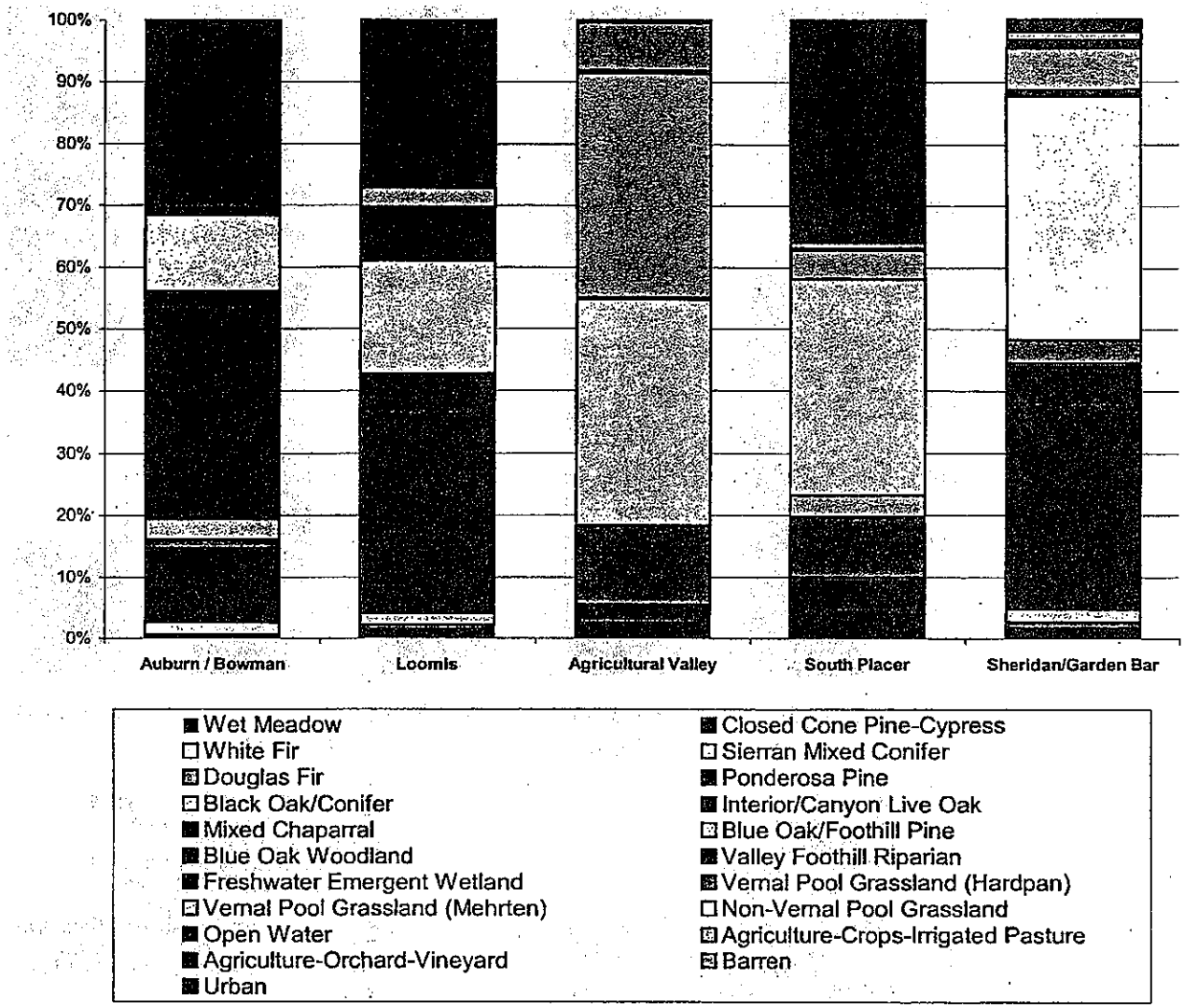
		Agri-culture	Bio-logy	Rec-reation	Cul-tural	Scenic	Public Safety
ES-12.	Work with local, state and federal agencies to protect petroglyphs and other Native American cultural and archeological resources.				X		
ES-13.	Provide discretionary funds to protect historical buildings and old Tahoe landmarks.				X	X	
ES-14.	Identify and preserve scenic transportation corridors and ridgelines that contribute to the quality and value of the region.					X	
ES-15.	Enhance watershed retention and diminish the effects of flooding where possible.						X
ES-16.	Reduce the potential for wildland fires by working with other agencies to establish buffers and reduce fuel loads.						X
ES-17.	Reduce risks to individuals and private property in areas prone to avalanche.						X

Table 4-11. Vegetation Summary by Study Area.

Community Type	Western Placer County					Eastern Placer County				
	Auburn / Bowman	Loomis Basin	Agri-cultural Valley	South Placer Urban	Sheridan/ Garden Bar	West Slope Sierra	East Slope Sierra	Lower Sierra	American River Canyon	Forest-hill
Sagebrush	0	0	0	0	0	17	4,741	0	0	0
Jeffrey Pine/Eastside Pine	0	0	0	0	0	743	6,240	0	0	0
Alpine Dwarf Shrub	0	0	0	0	0	191	0	0	0	0
Subalpine Conifer	0	0	0	0	0	1,245	307	0	0	0
Lodgepole Pine/Red Fir/Aspen	0	0	0	0	0	58,004	16,818	0	0	0
Montane Chaparral	0	0	0	0	0	70,615	18,324	0	0	66
Montane Riparian	0	0	0	0	0	2,241	515	0	0	0
Wet Meadow	0	0	0	0	0	5,243	3,176	0	0	0
Closed Cone Pine-Cypress	0	0	0	0	0	85	0	0	0	0
White Fir	0	0	0	0	0	0	110	0	0	0
Sierran Mixed Conifer	0	0	0	0	0	168,286	45,303	463	0	323
Douglas Fir	124	27	0	0	21	10,563	0	7,988	2,021	5,795
Ponderosa Pine	54	23	0	0	0	24,722	0	3,529	1,662	8,149
Black Oak/Conifer	534	8	0	0	50	7,308	3,544	7,507	4,498	6,369
Interior/Canyon Live Oak	3,389	626	0	0	1,227	48,632	0	12,167	11,634	7,191
Mixed Chaparral	402	300	0	3	759	6,655	0	1,410	3,487	[illegible]
Blue Oak/Foothill Pine	924	846	0	34	1,501	10	0	462	2,332	25
Blue Oak Woodland	9,666	15,030	100	3,500	24,936	1	0	2,493	225	76
Valley Foothill Riparian	575	2,538	1,296	2,760	4,281	0	0	4	0	0
Freshwater Emergent Wetland	0	2	1,677	475	455	0	9	0	0	0
Vernal Pool Grassland (Hardpan)	0	0	7,182	6,605	2,771	0	0	0	0	0
Vernal Pool Grassland (Mehrten)	0	78	0	2,316	1	0	0	0	0	0
Non-Vernal Pool Grassland	3,443	8,277	20,387	23,568	29,428	687	1	1,491	321	298
Open Water	167	4,006	180	68	824	4,015	49,880	615	245	8
Agriculture-Crops-Irrigated Pasture	85	1,383	20,420	3,202	4,885	0	0	5	0	0
Agriculture-Orchard-Vineyard	0	0	262	187	973	0	0	0	0	0
Barren	71	92	4,316	624	946	17,604	3,596	245	300	77
Urban	8,553	12,285	230	24,345	1,465	1,705	6,524	3,978	15	1,350
TOTAL	**27,987**	**45,521**	**56,051**	**67,687**	**74,523**	**428,572**	**159,088**	**42,357**	**26,739**	**31,015**

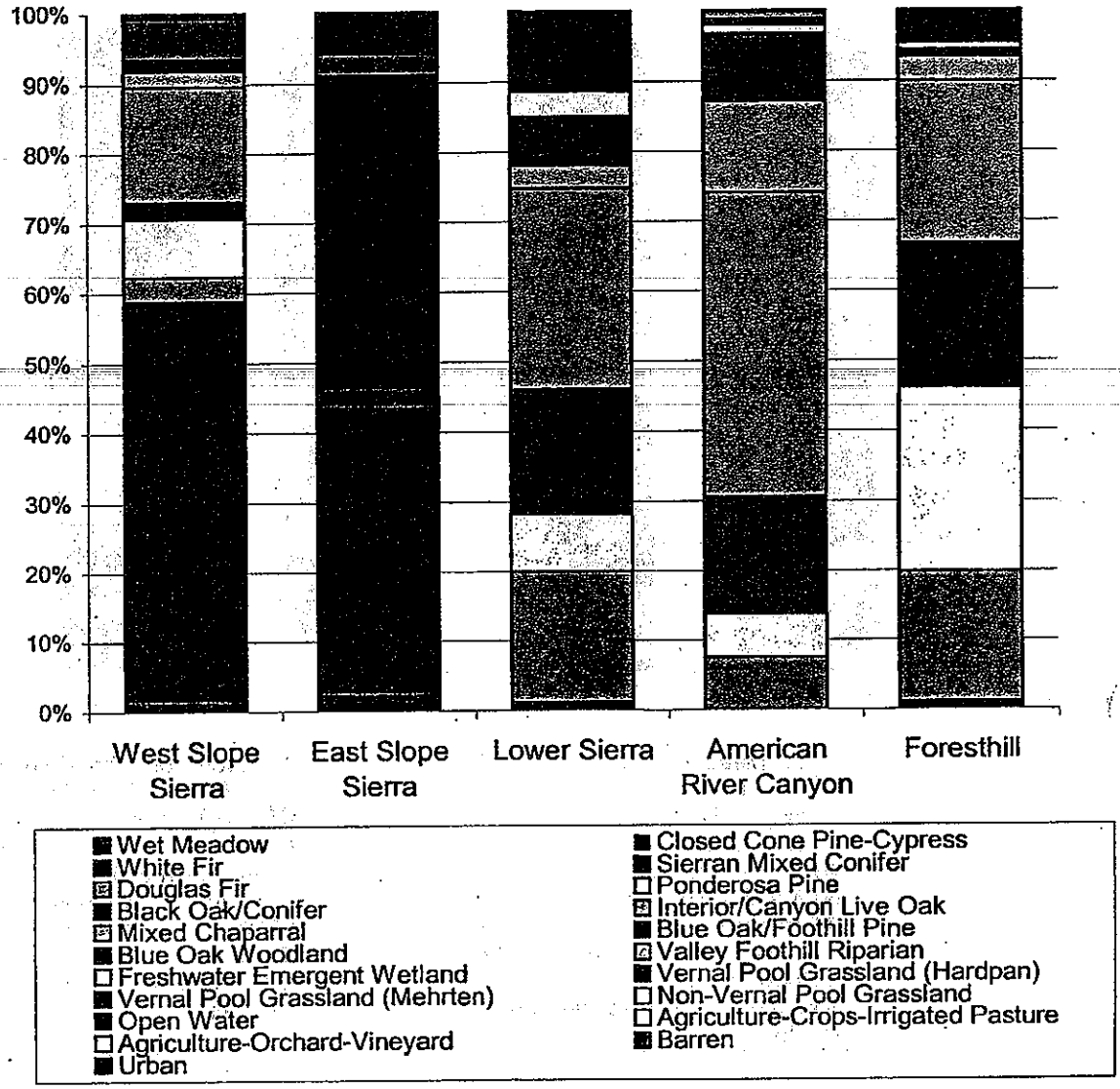
Vegetation/landcover acreages derived from composite GIS layer created by Placer County Planning Dept. (100-ft pixel resolution)
Sources:
DFG: Valley Vegetation (1996), CDF: Foothill/Lower Sierra Vegetation (1999), USFS: Upper Sierra Vegetation (1990); Wet Meadow Vegetation (1999), Placer County: Martis Valley Vegetation (1974), DWR: Urban Areas (1994), DOC: Urban Areas (1998), Foothill Associates: Valley/Foothill Riparian Vegetation (1999), NorthFork Associates: Vernal Pools (1999)

Figure 4-1. Western Placer Vegetation by Study Area



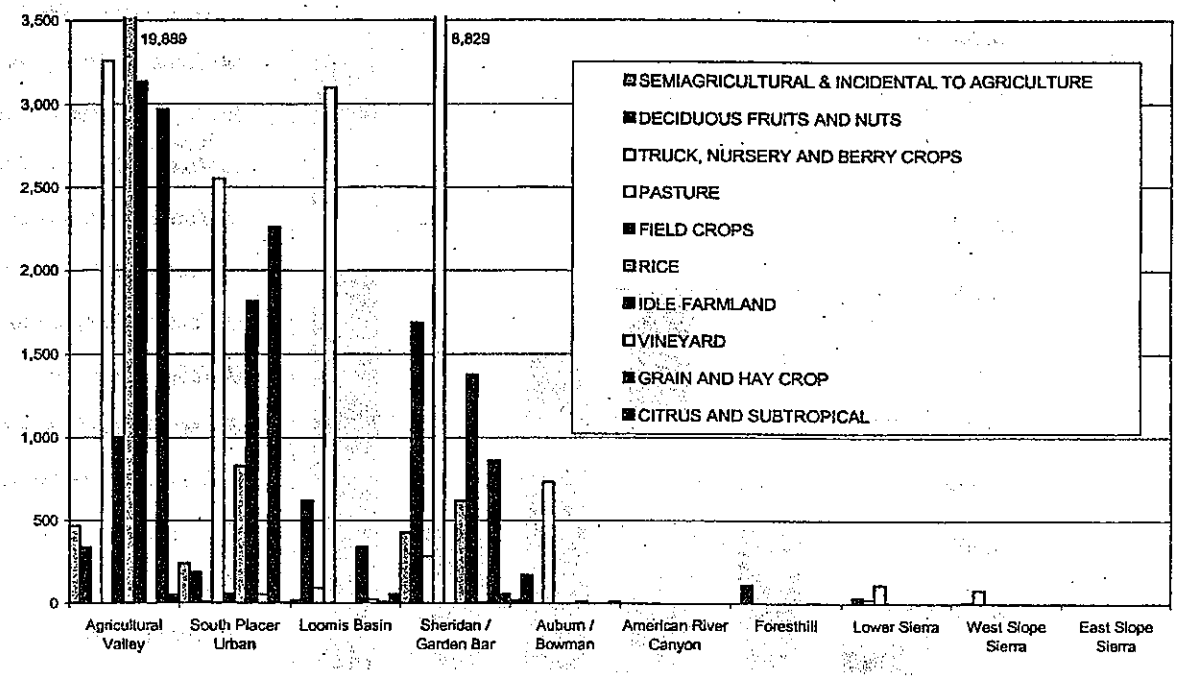
Source: see Table 4-11.

Figure 4-2. Eastern Placer Vegetation by Study Area



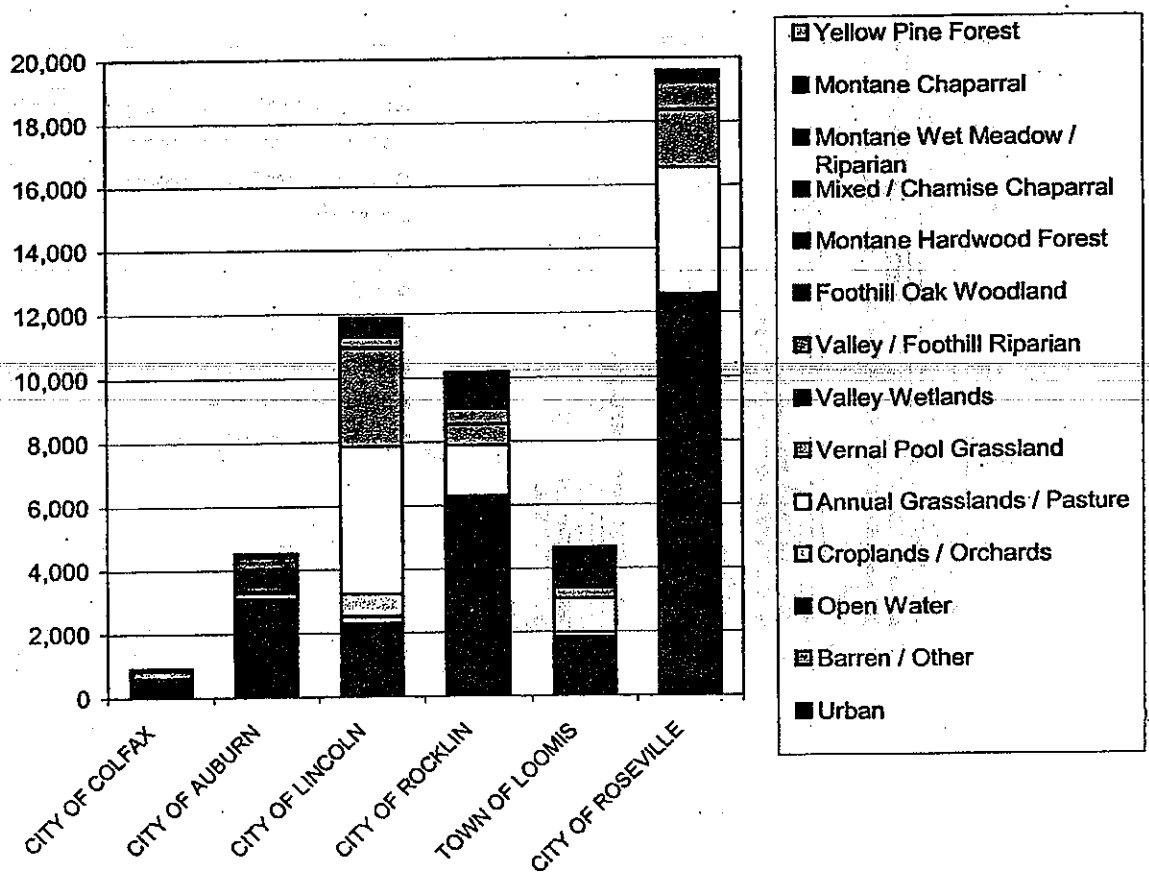
Source: see Table 4-1.

Figure 4-3. Agricultural Land Use by Study Area



Source: see Table 3-10.

Figure 4-4. City Vegetation Composition



Source: see Table 3-8.

CHAPTER V: ECONOMIC AND FISCAL IMPACT ANALYSIS

SECTION A: INTRODUCTION

There are three main sections of the economic and fiscal impact analysis. The first section—the Cost Analysis—presents estimates of total costs for Placer Legacy implementation. The analysis describes the costs and the assumptions behind the estimates. The second section is an evaluation of potential fiscal impacts on Placer County of alternative mechanisms for protecting open space and agricultural lands. The different mechanisms under consideration would have different impacts on County revenues. The third and final section outlines various economic benefits of programs such as Placer Legacy.

SECTION B: COST ANALYSIS

Overview

The purpose of the Placer Legacy cost analysis is to generate estimates of the costs of the proposed countywide program to protect and conserve open space and agricultural lands in Placer County. The largest cost component of the Placer Legacy proposal is the cost to undertake proposed land management activities. This includes one time capital costs to obtain public interests in open space, agricultural lands, and important biological resource lands, as well as other initial costs to develop plans for managing the lands and to undertake habitat restoration and capital improvements for outdoor recreation. The land management activities also require on-going annual costs to maintain and monitor lands under the stewardship of Placer Legacy.

In addition to land management activities, the Placer Legacy proposal includes a number of program elements that also have cost implications. Some of these are short-term efforts such as refining programs to protect agricultural land from conversion, identifying methods of protecting Sierra Nevada resources, identifying significant scenic qualities and locations and lands with public safety constraints, and monitoring trends affecting resources. Others are envisioned as on-going implementation efforts. Examples of the latter include marketing and tax planning assistance to Placer County farmers; increased staff resources devoted to agricultural land conservation; active participation in public land planning, land exchanges, and management agreements to facilitate protection of Sierra ecosystems; and evaluation and program development to protect historic and cultural resources.

The cost analysis provides cost estimates for both the land management activities and the program activities proposed as part of Placer Legacy. Throughout, the analysis is provided for three levels of effort, described in Chapter III, Section C. The three scenarios—Baseline Effort , Enhanced Effort , and High-Level Enhanced Effort—reflect a range of possible levels for land management in terms of number of acres and depth of stewardship activity. For the program components, cost estimates for baseline, enhanced, and high-level enhanced scenarios reflect a possible range for levels of staff and funding commitment.

The cost estimates presented here were developed in support of the Placer Legacy planning effort and serve as the basis for developing a funding proposal for Placer Legacy. Some of the preliminary estimates will undoubtedly be refined based on review and comment during the

planning process. In any case, the estimates will remain just that: estimates. They are approximations for planning purposes, based on the best information available. The land management cost factors are averages representing a variety of potential actual situations. Th. actual costs for obtaining land or for operating and monitoring for any particular set of Placer Legacy lands are likely to vary from the average estimates developed for the cost analysis. Moreover, the actual experience of implementation will result in subsequent revisions to cost estimates undertaken periodically as a regular task of administering Placer Legacy.

Estimated Total Costs for Placer Legacy

Placer Legacy costs are estimated for capital—one-time—costs and for annual on-going costs. For land management activities, capital and one-time costs include the costs of obtaining land, the costs of restoring and enhancing biological habitat, the costs of developing improvements to enhance public access and enjoyment of outdoor recreation lands, and the costs of developing plans for how all lands would be managed in perpetuity in the public interest. For program activities, one-time (or initial) costs include preparing the HCP/NCCP as well as short-term tasks that would be undertaken over the next one to three years of Placer Legacy implementation to refine various aspects of the overall effort. Annual costs for land management activities include the costs of long-term operations and maintenance for lands and resources, monitoring biological resource values and compliance with easement terms, and associated administrative costs. Annual costs for program activities include staff efforts in public assistance, public education, interagency coordination, and planning related to various Placer Legacy elements, as well as associated administration.

The one-time capital costs would occur over time as land was obtained and developed. For purposes of this planning effort, it is assumed that public interests in all land would be obtaine within a 30-year time horizon, with half occurring in the first 10 years, another 25 percent in the second 10 years, and the final 25 percent by year 30. As the public interest in Placer Legacy lands is obtained and defined, on-going annual operating and monitoring costs would begin to occur. Those costs would be lowest in the earlier years and would peak and level off after all the interests were obtained.

Table 5-1 shows total Placer Legacy costs for both land management and program activities, for the three scenarios reflecting baseline, enhanced, and high-level enhanced effort.

Table 5-1. Total Costs to Implement Placer Legacy for Three Scenarios (costs in 2000 dollars)

Cost Component	Baseline Effort	Enhanced Effort	High-Level Enhanced Effort
Land Management Activities			
X Obtaining Public Interest	$19,770,000	$72,746,000	$155,938,000
X Planning, Start-Up, and Development	4,908,000	18,659,000	25,539,000
On-going Operating and Monitoring	1,005,000	2,423,000	3,527,000
Program Activities			
X One-year Effort	$5,000	$49,000	$64,000
X Two-year Effort	--	40,000	53,000
X Three year Effort	--	5,000	25,000
X Preparation of HCP/NCCP	543,000	886,000	1,279,000
On-going Costs	28,000	145,000	225,000
Summary of One-time Costs over 30 Years	**$25,226,000**	**$92,385,000**	**$182,898,000**
Summary of On-going Annual Costs Year 30 and Beyond	**$1,033,000**	**$2,568,000**	**$3,752,000**

X = one-time and capital cost.
SOURCE: Hausrath Economics Group, Thomas Reid Associates, and the Placer County Planning Department.

One-time costs range from $25 million for the baseline effort scenario to $183 million for the high-level enhanced scenario. The one-time costs for the enhanced effort scenario would total about $92 million. The cost of obtaining the public interest in Placer Legacy lands is the primary component of those one-time costs. Obtaining fee title interest and easements would be about 80 to 85 percent of total one-time costs. The initial planning and development component adds another 15 to 20 percent to initial costs. A major contributor to this cost would be development of outdoor recreation facilities. Capital costs for restoring and enhancing biological resource lands would also be a significant component of these one-time start-up costs. In Table 5-1, the summary for one-time costs includes the one-, two-, and three-year program activity efforts and preparation of the HCP/NCCP.

Land management activities would generate the large majority of on-going annual costs for Placer Legacy. On-going program activity costs would be only five percent or less of total on-going costs.

After all lands were obtained and under management, annual costs for land management and program activities would peak at about $1.0 million per year under the baseline effort scenario, $2.4 million per year under the enhanced effort scenario, and $3.5 million per year under the high-level enhanced effort scenario. The difference primarily reflects the number of acres managed under each scenario, although costs are not directly proportional. As described below, while the intensity of management effort is assumed to vary in proportion to the level of effort defined for each scenario, i.e., some per-acre cost factors are assumed to be higher for the enhanced and high-level enhanced scenarios than in the baseline effort scenario, the cost estimates also account for cost efficiencies that would result from economies of scale. The per-acre management costs are assumed to be higher under the baseline effort scenario where smaller amounts of land would be managed, while the per-acre costs are assumed to be lower under the high-level enhanced effort scenario. To the extent they are a function of the number of acres under management, the annual costs of implementing Placer Legacy would be lower in the early

to middle years of the program than the Year 30 estimate presented in the table. The estimate in Table 5-1 reflects stable operations for the target number of managed acres identified for each scenario.

Elements of the Land Management Cost Analysis

The land management cost analysis is based on scenarios of land management effort developed to illustrate a range of possible options for Placer Legacy. The scenarios describe overall targets for land management in terms of acres of land by resource element and study area. Chapter III describes the Placer Legacy elements: agriculture, biological resources, outdoor recreation, cultural resources, scenic resources / urban separators, and public safety. Chapter IV describes the interaction between resource elements and study areas. The scenarios also incorporate targets accounting for overlap of resources—identifying the extent to which an acre of land might represent value for more than one resource element. (Chapter III, Section C outlines this approach.)

The different resource elements are associated with different cost factors for methods of obtaining public interest (depending on location within the county, extent of easement interest, and the nature of the easement agreement), for start-up and one-time planning and development costs, and for on-going operating and monitoring costs. Per-acre cost factors were developed reflecting the particular character of each resource element. The cost factors developed for Placer Legacy are the result of analysis of land sales transactions in Placer County, review of other studies and background documents, analysis of the experience and budgets of established land management entities, and consultation with knowledgeable County staff and other professionals working in the land management and resource conservation fields.

Table 5-2 presents the summary of land management costs by cost component and resource element for each scenario. The table also shows the distribution of total costs by resource element. The estimates in this table are a more detailed breakdown of the overall land management costs presented in Table 5-1.

Table 5-2. Land Management Cost Estimates for Placer Legacy Scenarios by Resource Element (costs in 2000 dollars)

Land Management Scenario	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic Resources / Separators	Public Safety	TOTAL
OBTAINING PUBLIC INTEREST - TOTAL COSTS OVER 30 YEARS							
Baseline Effort	1,114,000	12,886,000	5,770,000	--	--	--	**$19,770,000**
Enhanced Effort	15,375,000	27,451,000	18,806,000	30,000	9,023,000	2,060,000	**$72,745,000**
High-level Enhanced Effort	49,952,000	42,764,000	24,571,000	69,000	36,419,000	2,164,000	**$155,939,000**
Percent of Total by Resource Element							
Baseline Effort	6%	65%	29%	0%	0%	0%	100%
Enhanced Effort	21%	38%	26%	0%	12%	3%	100%
High-level Enhanced Effort	32%	27%	16%	0%	23%	1%	100%
PLANNING, START-UP, AND DEVELOPMENT - TOTAL COSTS OVER 30 YEARS							
Baseline Effort	29,000	2,735,000	2,144,000	--	--	--	**$4,908,000**
Enhanced Effort	427,000	4,434,000	12,842,000	13,000	76,000	868,000	**$18,660,000**
High-level Enhanced Effort	1,096,000	7,281,000	16,094,000	25,000	263,000	781,000	**$25,540,000**
Percent of Total by Resource Element							
Baseline Effort	1%	56%	44%	0%	0%	0%	100%
Enhanced Effort	2%	24%	69%	0%	0%	5%	100%
High-level Enhanced Effort	4%	29%	63%	0%	1%	3%	100%
OPERATING AND MONITORING - ANNUAL COSTS YEAR 30 AND BEYOND							
Low Effort	3,000	435,000	567,000	--	--	--	**$1,005,000**
Moderate Effort	49,000	779,000	1,553,000	25,000	8,000	9,000	**$2,423,000**
High Effort	127,000	1,061,000	2,255,000	50,000	26,000	8,000	**$3,527,000**
Percent of Total by Resource Element							
Low Effort	0%	43%	56%	0%	0%	0%	100%
Moderate Effort	2%	32%	64%	1%	0%	0%	100%
High Effort	4%	30%	64%	1%	1%	0%	100%

SOURCE: Hausrath Economics Group, Thomas Reid Associates, and the Placer County Planning Department.

As noted above, obtaining the public interest in land—a mix of fee title and conservation easement interests—would be the largest single cost component of the Placer Legacy program. For the baseline effort land management scenario, most of the costs would be concentrated on biological resources; no fee title or easement interests in land for cultural resources, scenic resources, or public safety resources are proposed for the baseline effort scenario. For the enhanced and high-level enhanced effort scenarios, the costs of obtaining the public interest in land would be distributed progressively more broadly across the resource elements.

In all scenarios, other initial costs for planning, start-up expenses, and capital improvements would be concentrated in biological resource and outdoor recreation resource lands. These are

the lands that would require the most intensive planning and the greatest level of capital investment, in either habitat restoration and enhancement or outdoor recreation improvemen Both the enhanced and high-level enhanced effort scenarios incorporate substantial one-time investment in outdoor recreation. Planning, start-up, and development costs for agricultural resources would be a relatively small component of costs in all scenarios because agricultural lands would most likely be protected using conservation easements that allowed continued agricultural production. There would be no Placer Legacy involvement in improvement of those lands. Similarly, the interest in scenic and public safety resources would be largely passive, requiring no other capital investment. Other one-time costs for cultural resources would be small because of the relatively small number of acres involved.

On-going costs also would be concentrated among biological resource and outdoor recreation resource element. In all scenarios, more than half of on-going costs would be for outdoor recreation, reflecting the higher degree of operating and maintenance expenditure associated with public access resources. Biological resources would claim 30 to 40 percent of on-going annual costs. The costs for adaptive management and easement monitoring would be higher for these lands than for other resources protected by easements (agricultural, scenic, and public safety).

Obtaining a Public Interest

Strategy

Under Placer Legacy, public interest in land resources is defined broadly to include fee title interest (all of the rights of ownership and control), and conservation easements (a limited set of rights to the property, short of full ownership and control).Interests in land under Placer Leg would be obtained following the implementation guidelines outlined in Appendix H, Open Sp Land Acquisition Guidelines. Transactions to obtain interests from a willing seller would represent a one-time capital cost to Placer Legacy. For any particular parcel of land, the cost of a conservation easement would be less than the cost of fee title interest, because the seller of the conservation easement retains title to the property and is free to use the land and continue to generate economic return from the land, subject to the provisions of the easement agreement.

Not all forms of obtaining a public interest would have a land cost. Interests in land (either easements or fee title) could be obtained by means of donations or dedications (as part of the entitlement process) without direct capital outlay on the part of Placer Legacy. Capital outlays for land also would not be required in the case of land exchange activities or land management contracts. Land management contracts might be used in the American River Canyon, Foresthill, and Sierra study areas where much of the land is in public ownership.

Because it is a cost-effective means of protecting agricultural and open space resources and because many existing agricultural practices in Placer County are compatible with biological resource requirements and with scenic, urban separator, and public safety goals of Placer Legacy, much of the public interest for agricultural resources is expected to be in the form of conservation easement agreements. Because of the higher level of land management required and because of the desire to provide public access, most of the land obtained for outdoor recreation and cultural resource purposes would be acquired in fee title. Table 5-3 shows the assumptions for types of land interests by element.

Table 5-3. Assumptions For Interests In Land By Element

Element	Fee Title	Easement
Agriculture		100%
Biological Resources	50%	50%
Outdoor Recreation	70%	30%
Cultural Resources	100%	
Scenic Resource/Urban Separators		100%
Public Safety Resources		100%

SOURCE: Thomas Reid Associates and Hausrath Economics Group.

Land Value Assumption

Most of the land cost factors developed for the Placer Legacy cost analysis are based on analysis of real estate transactions in Placer County over the last decade. A database of transactions from DataQuick was used in this analysis. The primary source of the DataQuick information is the County Assessor's Office. The land value assumptions for areas in which the record for transactions similar to those expected under Placer Legacy is limited were provided by the Placer County Planning Department—the value assumptions reflecting per-acre values evident in current land transaction offers and negotiations in which the County is a participant.

The goal of the DataQuick transaction analysis was to develop average estimates of the cost to acquire fee title interest in land that satisfied the resource conservation targets outlined for Placer Legacy. To develop land value estimates representative of the types of parcels that would be acquired entailed sorting out transactions that did not match certain location or land use parameters. Initial criteria included land use: the transactions analyzed covered parcels with the following use designations (according to the Assessor's use code): vacant, unassigned; vacant, irrigated farm; orchards, vineyards; rice crop; poultry and small animals; vacant, dry farm; timberland, unrestricted; timberland, zoned timberland protection zone; CLCA (California Land Conservation Act or Williamson Act) restriction, non-renewal; and CLCA restriction, farm land. Transactions were sorted by location, according to the Placer Legacy study area boundaries identified in Map 4. We evaluated transactions in the following study areas: Agricultural Valley, South Placer Urban (unincorporated area only), Sheridan / Garden Bar, Loomis Basin, Auburn Bowman, and the Martis Valley area of East Slope Sierra.

Transactions involving small parcels (less than 20 acres) were excluded from the database for land value analysis. Most of those smaller parcels had the "Vacant – Not Assigned" use code designation; the land values implied indicated valuation on the basis of residential development potential.

For each study area, we calculated sale values per acre for each transaction and, on a weighted average basis, for each year and period of years. (The latter analysis evaluated real increases in land values over time.) Stratifying the database by study area, no systematic variance according to type of farming activity was evident; the study area distinction captured those differences. Moreover, many of the parcels were simply designated as agricultural use, either "farmland" or "non renewal", by means of the California Land Conservation Act (CLCA) restriction code.

With that designation, there is no indication of the type of farming activity taking place on the land.

Even after accounting for the smallest parcels, parcel size remained a significant variable influencing average sale values. In the Agricultural Valley, Sheridan / Garden Bar, and Loomis Basin, the average values for the larger parcels were about 70 percent of the values for all parcels. There was no similar discount in the Auburn / Bowman study area where the range of parcel sizes is much narrower. Because Placer Legacy would be likely to focus acquisition efforts on large contiguous tracts of land, the average values used in the cost analysis reflect the averages for larger-scale transactions. Table 5-4 shows the per-acre land value assumptions used in the Placer Legacy cost analysis.

Table 5-4. Land Cost Per Acre, By Study Area
(Fee Title Interest; Values in 2000 dollars)

Study Area	Fee Title Cost Per Acre
Agricultural Valley	$1,800
South Placer Urban	$6,000
Sheridan / Garden Bar	$2,600
Loomis Basin	$4,500
Auburn / Bowman	$6,000
American River Canyon	$2,400
Lower Sierra, Foresthill, West and East Slope Sierra	$1,250

SOURCE: Hausrath Economics Group and the Placer County Planning Department.

The following points provide some context for the estimates from the transactions database:

- Land values in the Agricultural Valley are lower than they are elsewhere in the ex-urban parts of South and Mid Placer County. The difference reflects relatively lower value agricultural activities and, on average, larger parcel sizes. The final set of transactions used to develop the estimate of $1,800 per acre excluded transactions of 80 acres or less. Those smaller parcels, with higher values reflecting value as ranchettes or hobby farming, increase the average price by almost $1,000 per acre. The per-acre values for parcels greater than 80 acres ranged from $70 per acre (for rice crop land) to $6,100 per acre for irrigated farm land. Within that large range, two-thirds of the transactions averaged between $1,000 and $3,000 per acre. The average parcel size was 313 acres.
- The South Placer Urban land value assumptions reflect values in unincorporated South Placer—south of Baseline Road. Data analysis of a relatively small number of transactions indicated a wide range of land values—from $206 per acre to over $30,000 per acre, with a weighted average over the decade of $13,400 per acre. This part of the unincorporated area has been the target of substantial land speculation over the last decade as it became one of the few parts of unincorporated South Placer to be designated for urban development in the 1994 General Plan Update. The value assumption shown in the table and used in the

cost analysis is based on recent Placer County experience in a transaction for park land in the Dry Creek area.

- In the Sheridan / Garden Bar study area, although existing land use characteristics are similar to those in the Agricultural Valley, average land values are higher, apparently a function of smaller average parcel sizes. Given the predominance of the agricultural use designations with 10, 20, and 40-acre minimum lot sizes, we used 40 acres as the cut-off for the final set of land use transactions. As in the Agricultural Valley, including the smaller parcels added about $1,000 per acre to the average land value. Also as in the Agricultural Valley, there were extremes in the average land values over the decade; per-acre values for the larger parcels ranged from $600 per acre to $14,000 per acre. In Sheridan / Garden Bar, 60 percent of the transactions fell between the values of $1,000 per acre and $4,000 per acre. The average parcel size was 146 acres.
- The higher land values in the Loomis Basin reflect less agricultural land use and smaller parcel sizes. Over the decade, only one transaction involved Williamson Act land. For most transactions, the use code was "Vacant – Unassigned". The range of average sale values was extreme, with transactions ranging from under $100 per acre to over $40,000 per acre. Values for the few transactions involving land categorized as "dry farm" averaged under $1,000 per acre, while other transactions including orchard and vineyard land, Williamson Act contracts, and Vacant – Unassigned averaged $12,800 per acre. On a simple average basis (not considering the number of acres involved in the transactions) , $10,000 per acre was about the midpoint of average sale values. The $4,500 per acre estimate used in the analysis, however, reflects a weighted average (accounting for the number of acres involved in each transaction). The weighted average covers the wide variety of potential acquisition situations in the Loomis Basin subarea. The average parcel size in the transactions database was 83 acres.
- Vacant land transactions in the Auburn-Bowman area exhibit many of the same characteristics of those in the Loomis Basin. Not much of the land sold is classified as farmland, and parcel sizes are substantially smaller than in either the Agricultural Valley or Sheridan / Garden Bar. Over the course of the decade, average land values have been very stable at around $6,000 per acre overall. Seventy percent of the transactions average between $2,000 and $6,500 per acre. The average parcel size was 77 acres.
- Land values are substantially lower in the eastern parts of the County, where urban development potential is limited and agricultural production values are lower than is the case around Auburn and to the west. The database contained few transactions for the eastern parts of the County; parcels are generally larger; many are publicly owned or owned for timber productionvalue; and title is not often transferred. Analysis of a 1997 transaction involving almost 600 acres in the Martis Valley area indicated an average land value of about $1,250 per acre. The assumption for the American River Canyon study area reflects a higher value assuming a substantial premium for the views associated with any development potential on that land.

The land values used in the cost analysis are estimates for planning purposes. The price paid for land obtained by Placer Legacy would be negotiated in each willing seller transaction, typically based on appraisals and the expertise of land management professionals. The values in Table 5-4 do not represent a target, a ceiling, or a floor for land values.

Changes in Land Values Over Time

The cost analysis assumes no real increase in land values over time; the analysis assumes land values keep pace with inflation. Real increases are not evident in the data used to develop the estimates. We evaluated the change in per-acre land values from the database of transactions going back to 1990. The decade of the 1990s included a boom in land prices in the early part of the decade, a decline in prices toward the middle of the decade, followed by an upward trend toward the current boom-period. In all the study areas analyzed, average land values were higher in the early years of the decade than they are now; the trend in the late 1990s is clearly upward, however. We also analyzed a dozen parcels where there was information about a prior sale. The changes in sale values showed no consistent pattern. The land values used in the analysis generally reflect the average over the entire decade, weighted somewhat more heavily toward the current period.

On the other hand, over time, the scarcity factor might support real increases in land values. HEG conduced sensitivity analysis of the effect of real increases in land values on overall program costs. A one percent per year real increase would add up to eight percent to overall program capital costs over 30 years. A more moderate real increase (on the order of 0.5 percent per year) would add about four percent to overall program costs over 30 years. Since it is unlikely that such a real increase would be sustained over the entire acquisition period and in subareas of the County, these cost differentials represent the high end of likely outcomes. The differentials from the costs presented here (less than 10 percent overall) are within the range of possibilities represented by the program-level planning efforts.

Moreover, the analysis does not incorporate any discount to the capital outlay for obtaining public interests in land on the assumption that some of the land would be dedicated, donated, or managed under contract with no change in title. This factor could lower program costs by at least eight to ten percent, thereby offsetting the differential introduced by assuming a real increase in land values over time.

Easement Value Assumptions

In practice, easement market values would be determined by an appraisal of the property evaluating the value of the rights foregone by the owner of the fee title interest as a result of the easement. Research into the typical values for conservation easement purchases reveals a wide range of values reflecting the individualized and negotiated character of such transactions. The experience of the California Department of Fish and Game's (CDFG) conservation easement program for Central Valley wetlands is that easement values range from 25 percent to 75 percent of fee title value. The Marin Agricultural Land Trust (MALT) cites agricultural easement prices ranging from 25 percent to 50 percent of unrestricted market value, averaging between 40 percent and 50 percent.

The assumptions used for the purpose of developing land cost factors for the Placer Legacy cost analysis are that, on average, purchase prices for conservation easements on agricultural land would be 50 percent of the fee title purchase price; purchase prices for biological conservation easements and scenic conservation easements with more restrictions would be 75 percent of the fee title purchase price, consistent with the greater degree of restriction on use and productive value associated with those types of easements.

As Placer Legacy is implemented, all transactions would be negotiated with willing sellers and tailored to the characteristics of each parcel. All easement transactions would be based on a formal appraisal of each property under consideration. The assumptions about easement value used in the cost analysis are conservative factors for the purposes of the estimates. They do not represent a ceiling or floor to the actual costs that might be paid.

Transaction Costs

Transaction costs are estimated at five percent of the total transaction value. The costs include title search, appraisal, title insurance, other closing costs, and recording any deed restrictions for conservation easement acquisitions.

Planning, Start-up, and Development Costs

This component of the cost analysis represents those one-time costs, in addition to land acquisition, required for responsible land and resource stewardship under Placer Legacy. The cost factors for this component account for the need to develop land management plans for all lands managed by Placer Legacy. The management plans would define the nature of the public interest in the resources and outline goals, objectives, and actions for maintaining that public interest over time. Other start-up costs include capital investment in habitat enhancement and restoration for biological resources, and in public access improvements and other outdoor recreation facilities.

Start-up and development cost factors used in the analysis are listed below. The range reflects differences by study area depending on the nature of the resources in that area.

- $25 - $60 per acre for agricultural resources,
- $110 - $2,400 per acre for biological resources,
- $50 - $90 per acre for outdoor recreation resources,
- $500 per acre for cultural resources,
- $10 per acre for scenic resources / urban separators, and
- $500 per acre for public safety resources.

The basic cost factors were adapted to the characteristics of each scenario to account for cost efficiencies due to economies of scale. The per-acre cost factors for the baseline effort scenario are higher than the averages listed above, while the per-acre cost factors for the high –level enhanced effort scenario are lower.

Planning and start-up costs are also assumed to be additive across resource elements. In this way, the cost analysis accounts for the fact that some acres would serve several resource purposes and would be managed for those multiple purposes. For example, for estimating purposes, the start-up cost for an acre of agricultural land that also contained significant biological resources and provided scenic value would be the sum of the agricultural resource cost, the biological resource cost, and the scenic resource cost.

In addition to the planning and start-up costs, capital costs for outdoor recreation improvements for intensively developed properties are estimated assuming per-acre improvement costs of $125,000 per acre, based on Placer County parks experience. This cost factor is applied to only a limited number of outdoor recreation acres in each scenario.

Operating and Monitoring Costs

This land management cost component represents the on-going operating costs of land stewardship. The costs include maintenance of outdoor recreation and cultural resource facilities and areas of public access, adaptive management of biological resource lands, and monitoring of easement conditions, as well as administrative costs. In the cost analysis, these costs are presented as annual estimates.

The basic annual cost factors for each resource element are listed below. The range reflects variation in the nature of the resources by study area and by level of effort. As in the case of planning, start-up, and development costs, the cost analysis accounts for economies of scale: efficiencies (and therefore lower costs) associated with operating on and monitoring large tracts of land and larger numbers of acres. The per-acre factors for each resource element are also additive for areas in which the land under management serves several resource goals simultaneously.

- Approximately five dollars per acre for agricultural land,
- $26 – 85 per acre for biological resource land,
- $89 - $385 per acre for outdoor recreation land,
- $1,000 per acre for cultural resource land,
- One dollar per acre for scenic resources and urban separators, and
- Five dollars per acre for public safety resources.

The on-going operating costs for outdoor recreation and cultural resources were derived from evaluation of Placer County parks maintenance budgets and the budgets of regional open space districts that have substantial land management responsibilities. Annual operating and maintenance budgets vary substantially on a per-acre basis, depending on the intensity of the land management required and the level of education and interpretive programs offered. The averages presented above are based on three per-acre cost factors developed to account for varying degrees of management, stewardship, and public access for these resources:

- $700 per acre for intensively managed outdoor recreation land allowing substantial public access,

- $70 per acre for the balance of outdoor recreation land, and
- $1,000 per acre for cultural resource land.

Summary of Land Management Cost Estimates

Table 5-5 summarizes the land management costs for baseline, enhanced, and high-level enhanced scenarios. The table shows total costs for the various cost components—obtaining a public interest (initial capital costs), start-up, planning, and development (one-time and other capital costs), and on-going operating and monitoring costs. Overall average per-acre factors are derived by dividing the total cost for each component by the total acres targeted for each scenario, accounting for the overlap of land serving multiple resource conservation purpose. (The target acres are those shown for the three scenarios in Chapter III.)

Table 5-5. Comparison of Total and Per-Acre Costs by Land Management Scenario (costs in 2000 dollars)

Land Management Scenario	Target Acres Accounting for Overlap	
Baseline Effort	7,600	
Enhanced Effort	30,000	
High-level Enhanced Effort	75,000	
Cost of Obtaining Public Interest Over 30 Years		
	Total	**Per Acre**
Baseline Effort	$19,770,000	$2,601
Enhanced Effort	$72,746,000	$2,425
High-level Enhanced Effort	$155,938,000	$2,079
Planning, Start-up, and Development Cost Over 30 Years		
	Total	**Per Acre**
Baseline Effort	$4,908,000	$646
Enhanced Effort	$18,659,000	$622
High-level Enhanced Effort	$25,539,000	$341
Operating and Monitoring Costs in Year 30 and Beyond		
	Annual Costs	**Annual Cost per Acre**
Baseline Effort	$1,005,000	$132
Enhanced Effort	$2,423,000	$81
High-level Enhanced Effort	$3,527,000	$47

SOURCE: Hausrath Economics Group, Thomas Reid Associates, and the Placer County Planning Department.

The differences among scenarios in the per-acre cost of obtaining a public interest in Placer Legacy lands reflects the different proportions of the various resource elements in the scenarios. For example, a scenario with proportionally more agricultural lands (assumed to be 100 percent easement interests) has lower average costs per acre than a scenario with proportionally more outdoor recreation resources (assumed to be mostly fee title interests with 30 percent easement interests). Another relevant factor influencing this average comparison among scenarios is that the mix of lands across study areas with different average land values varies among the scenarios.

A noteworthy difference for the start-up, planning, and development cost component is the assumption about capital costs for developing outdoor recreation facilities. Only a very small amount of such development is assumed for the baseline effort scenario (an investment of less than two million dollars). The dollar amount is substantially greater in the enhanced - and high-level enhanced effort scenarios: a $12 million to $15 million capital cost. Spreading a relatively similar dollar amount over twice the overall acres in the high-level enhanced effort scenario, compared to the enhanced effort, results in markedly lower per-acre costs for this overall comparison.

Differences between the enhanced- and high-level enhanced-effort scenarios in per-acre averages for start-up, planning, and development costs and for on-going operating costs are attributable to the substantial cost efficiencies assumed with managing the larger amount of land in the high-level enhanced-effort scenario. The cost efficiency is assumed to be greater once a substantial acreage threshold is reached and is therefore not as significant a factor in the difference between the low-effort and moderate-effort scenarios.

SECTION C: IMPACT ON COUNTY REVENUES OF ALTERNATIVE MECHANISMS FOR PROTECTING OPEN SPACE

The potential fiscal impact of the Placer Legacy program is difficult to gauge. The following discussion outlines the direct impacts on property tax and property transfer tax revenues from protecting land in perpetuity through various measures, including obtaining fee title interest or conservation easement interest, mitigation banking, and Williamson Act contracts. In addition to the direct loss, several additional means through which County revenues and expenses could indirectly affected are also described.

County Revenues and Land Protection Mechanisms

Placer Legacy would affect the County's future revenue stream in many ways. The impacts can be subdivided into direct and indirect, as well as immediate and long-term effects. Direct impacts are those attributable to placing property into trusteeship; indirect impacts are those changes in fiscal flows from nearby properties. Immediate impacts are changes in tax revenues that are immediately precipitated by trusteeship; long-term impacts are any opportunity costs of the program and longer-term benefits such as long-term property value enhancements and/or lower public service costs.

There are three different components of potential Placer Legacy land protection mechanisms that have different revenue implications for the County. One component describes the status of much of the land where a public interest would be obtained through the Placer Legacy program; fee title or conservation easement interest in that land would be obtained and held by a land steward or trustee. The second component relates to a subset of that land: any large tracts of land obtained and developed as mitigation banks. The third component is the offset to county revenue loss associated with agricultural land protection offered though Williamson Act contracts. The different revenue consequences of each component are described below.

Conservation Trusts and Tax-Exemption

Conservation trusts are typically created by either the public sector or by private, non-profit organizations. In California, the largest public sector land conservation program for privately held lands is the Williamson Act program (California Land Conservation Act). Williamson Act lands constitute roughly one-half of all agricultural lands in the state. Other public sector examples are open space and park districts. The Nature Conservancy and the California Rangeland Trust are two examples of non-profit organizations that operate as conservation trustees. Although the objectives of these trusts vary from organization to organization, in general the goal of these trusts is the long-term, permanent protection and stewardship of natural areas.

For both property tax and property transfer tax, a critical issue in determining the impact of Placer Legacy is the legal status of the party obtaining the fee title interest or easements. The Offices of both the Recorder and Assessor authorize exemptions to tax payments. Property transferred to the County or other public agency is fully exempted from recording fees, transfer tax, and property tax under the rules of those agencies. When property is transferred from a private party to the County, whether as fee title or as a conservation easement, there are no recording fees, transfer taxes, or property taxes collected. If the County were to serve as steward of the Placer Legacy lands (including any mitigation banks), loss of tax revenue from these lands would be complete for the duration of the trusteeship.

If the lands were to be held in trust by a private, non-profit group, the direct loss of tax revenue would be more limited. There is no exemption granted non-profits for recording fees or transfer taxes. Non-profits must make an annual application for exemption from property taxes under the "Welfare" provisions outlined in Section 214.01 of the Revenue and Taxation Code. To be exempted from property taxes both the non-profit organization and the property must meet strict standards established in the Code. Property held for mitigation banking would not meet the welfare requirements of the law and would be taxable even if held by a non-profit (see mitigation banking discussion below).

Immediate Loss

The immediate fiscal effect of transferring lands to a conservation trustee would be the loss of property tax revenue from conserved lands as titles and easements are added to the trust. As noted above, when fee title is held by the public sector or, in most cases, by non-profit organizations, property tax revenues would decline by the full extent of existing payments. For conservation easements, the reduction in revenue would depend on a variety of factors and could vary from no reduction in revenues to the complete elimination of revenues (although a 100% loss is unlikely). Only Williamson Act contracts on agricultural land would provide mitigation for this loss of property tax revenue (see discussion below).

The potential loss of revenue is best viewed in terms of magnitude and proportion. The objective of Placer Legacy is permanent protection of substantial agricultural and open space resources in the County. Typically this means maintaining properties as wild lands or in existing low intensity agricultural use. As a consequence of Proposition 13, lands in longstanding ownership and in these uses will have relatively low existing property tax assessments. The magnitude of direct revenue loss from Placer Legacy interests in properties of this description, whether

complete or partial, would likely be relatively small. For more recently transferred property, and particularly for those properties that have development potential which is reflected in the assessed value, the magnitude of the loss of revenue would be greater.

When the transfer of property rights is less than complete, as in the case of conservation easements, the proportion of loss is also an issue. The loss in assessed value is computed on the basis of the diminution of value in the highest and best use specified on the tax roll. For example, when a conservation easement is recorded that limits land use to cattle range and when the property is assessed as rangeland, there will be no reduction in assessed value or property tax revenue. In addition, when a conservation easement is recorded on a portion of a property where use consistent with the assessed use is not possible, there is also no reduction in property tax revenues. This latter circumstance could be the result of natural conditions, such as an un-arable portion of a property assessed for agricultural value, or law, such as critical wildlife habitat on a parcel assessed for residential development. In these cases, a conservation easement on the un-arable land or the wildlife habitat would not reduce the assessed value of the property. By contrast, the creation of a conservation easement on a property that was recently sold at a price that reflects a highest and best use in intensive development would substantially reduce the assessed value of the property and associated tax receipts.

Long-term Loss

The long-term losses from Placer Legacy land interests would stem from the loss of transfer taxes and otherwise expected increases in assessments attributable to normal turn-over and, particularly, land speculation and development. Such effects would be the opportunity costs the conservation program.

Off-setting Indirect Benefits

A conservation trust could also provide indirect fiscal benefits to the County. Tracts of land with high development potential often contain areas with watercourses, irregular topography, or other elements that make them marginally developable. Although such areas may have significant aesthetic, historic, cultural, or recreational value, they are also expensive for a development to maintain. By using Placer Legacy as a repository for such lands, developers would be encouraged to preserve these resources. Through the reduction of developer cost and the preservation of natural amenities, revenue-producing development could be stimulated while valuable natural resources are preserved. In the event that one of the outcomes of Placer Legacy implementation was a higher development density than otherwise expected the public service capital and operating cost side of the fiscal equation is likely to be reduced. Furthermore, comprehensive implementation of the open space program would be likely to result in higher property values (and therefore higher property tax revenues) over time than would be expected without Placer Legacy's contributions to enhancing the quality of life in the County. (See the following discussion of economic benefits.)

Land exchanges, as a tool to obtain property rights, could also increase County revenues. The Forest Service, Bureau of Land Management, and other state and federal agency routinely use land exchanges to enhance the value of their holdings. Such exchanges simultaneously enhance the value of the value of private holdings and require little or no cash outlay. If the County y to exchange publicly owned lands with high development value and low conservation value

lands with low development value and high conservation value, the net effect would be to stimulate development and thereby increase County revenues.

Mitigation Banking

Mitigation banking would provide both direct and indirect positive impacts on County revenues. Because mitigation banking is a relatively new practice, the State Board of Equalization (SBOE) is currently developing guidelines to standardize appraisal rules for tax assessment purposes in California. Mitigation banks create value in two distinct ways: development of the mitigation bank results in an assessed value that in the short run would be significantly higher than the land's predevelopment value (though only if the bank is not publicly owned) and the developments purchasing mitigation bank credits would also have a higher value. The SBOE has determined that the creation of wetlands under the Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act of 1993 will be treated as new development and the property will be assessed as new construction. The assessed value of such wetlands will then decline as credits are acquired by developers. As the credits are acquired by developers, the value of developing land will also reflect the added value created by offsite mitigation. Although the specific method of valuing both value increments is yet to be established by the SBOE, the revenue impact of mitigation banks may be substantial.

Mitigation banking also would have important indirect positive impacts on County revenues. Otherwise developable property that contains environmentally sensitive resources would have greater speculative and development value if a mitigation bank were in place to facilitate development. This would be particularly true in the case of properties where the relatively small amount of sensitive resource lands makes on-site mitigation a less desirable option. In those cases, the availability of a mitigation bank would accelerate the entitlement process thereby reducing the time and costs involved in the development process. More developable property would reach the market as a result. Through such indirect mechanisms, County property tax and transfer tax revenues might be higher than otherwise expected.

Because the authorizing codes specifically prescribe that the mitigation bank provide maintenance of the newly created wetlands in perpetuity, the price of mitigation credits includes this ongoing cost. Through the mitigation banking mechanism, large areas of high ecological value can be created and maintained through the private sector, acting alone. Wildlands, Inc., a Citrus Heights based firm, has created wetlands in Placer County for mitigation banking. Such development will have the effect of increasing the property tax base while, at the same time, expanding the supply of sensitive habitat.

Williamson Act Contracts

The Williamson Act (California Land Conservation Act of 1965) and related Farmland Security Zone legislation (which is also referred to as FSZ or Super-Williamson) are cost effective vehicles for the preservation of farmland and open space. They are a useful complement to an agricultural easement program, providing a means by which the County could recoup some the property tax revenue loss associated with permanent agricultural easement restrictions. Under the provisions of these measures, the landowner and the County enter into a contract restricting the use of agricultural land in areas designated for agricultural preservation by the County. In exchange for limiting the use of the land to agricultural production for a period of not less than

10 years (20 years under the FSZ program), the landowner receives a reduction in property tax assessment. Under the Williamson Act, land under contract is assessed annually for its incor producing value in agricultural production. Under the FSZ, that assessed value is limited to percent of the Williamson Act value. As a consequence of these assessment practices, the County gives up some property tax revenue in exchange for the preservation of agricultural land and agricultural production activity. The loss of property tax revenue is partially offset by an annual subvention from the state of $5 per acre for prime agricultural land and $1 per acre for other lands under Williamson Act or FSZ contract.

Although preservation is not in perpetuity as it is in the case of agricultural conservation easements, from a fiscal perspective there are benefits of using these vehicles for agricultural land conservation. The use restrictions directly result in only a partial loss of property tax revenues. The annual subvention of $5 or $1, depending on the agricultural quality of the land under contract, is a significant offset that provides fiscal mitigation for the duration of the contract.

Conclusion

The direct and immediate fiscal consequence of Placer Legacy would be on property tax and property transfer tax revenues. Obtaining property for a public or non-profit land trust, whether through transfer of fee title, conservation easement, or with associated Williamson Act contract, would result, under most circumstances, in reduced property tax and property transfer tax receipts to the County. This would be true for rights purchased as well as rights obtained through donation. On the other hand, land exchanges and creation of mitigation banks would most likely result in higher property tax and transfer tax receipts than otherwise expected.

The long-term effects of the program are even harder to estimate. There would be some long-term revenue losses associated with placing land in a permanent conservation trust. If development were to occur at higher densities than otherwise expected, public service costs would likely be lower. Another important consideration is the potential for offsetting market responses, such as higher property values due to the amenity value of increased open space. As with the immediate effects of Placer Legacy, programs that enhanced value and accelerated development, such as mitigation banking and land exchanges, would serve to offset losses from public land conservation. Whether, in total, the Placer Legacy program would have the effect of increasing or decreasing revenues is a function of the value of property rights transferred and the relative sizes of the elements of this program.

SECTION D: ECONOMIC BENEFITS OF PROTECTING OPEN SPACE IN PLACER COUNTY

Overview

There is an extensive literature on the economic benefits of land conservation and open space protection. The primary conclusions of the research are as follows:

- Preserving open space and habitat in an integrated regional system enhances the **quality of life** for residents and businesses—enhances biological diversity,

environmental quality, rural and scenic character, and recreational and educational assets.

- Local government and property owners benefit from **increased property values and lower infrastructure and service costs** associated with communities that curb sprawl and protect open space.
- **Economic development** benefits from a regulatory component that streamlines the development process. In addition, public and private commitment to providing a superior quality of life enables businesses to attract and retain high quality workers. Protecting agriculture and scenic resources enhances the visitor experience and increases tourist revenues.
- Owners of agricultural land receive **economic value** for their land as a habitat and open space resource, and the **agricultural economy is protected** by reducing speculative pressures for urban development on agricultural land.
- With respect to a regulatory component, reducing the time and cost of project-by-project reviews results in **cost savings** for local government, federal and state permitting agencies, and project proponents.

This section presents documentation from some of the key sources for evaluation of the economic benefits of open space generally, as it would apply to the Placer Legacy options implementing current General Plan policies. The section concludes with discussion of the economic benefits of establishing a countywide Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) to provide regulatory compliance with state and federal endangered species laws. (See Chapter III, Section D for description of regulatory compliance opportunities under Placer Legacy.)

Documentation of the Economic Benefits of Open Space Conservation

In *The Economic Benefits of Parks and Open Space*, (The Trust for Public Land, 1999) Steve Lerner and William Poole describe the ways in which open space conservation results in net revenues to the public sector and increased returns on private sector investment. The report summarizes the results of case studies to conclude to following:

- Open space conservation curbs suburban sprawl by promoting higher density development patterns. This strategy is economically beneficial because as density increases, tax-supported infrastructure and services are distributed over a smaller geographic area, thus resulting in lower per capita costs. While conventional suburban development often results in greater infrastructure and service expenditures than tax revenues, open space has been shown to have the opposite effect, in many cases resulting in net revenues.
- Open space serves as a catalyst for new investment. Quality of life and, in particular, the availability of parks and open space, has become an increasingly important factor in business location decisions. The TPL report cites the conclusions of the Sierra Business Council's *Planning for Prosperity* project: the large majority of residents and businesses surveyed in the Sierra Nevada area

agree that wildlands and open space are significant factors attracting businesses to the region. In a follow-up effort to help decision-makers to understand the broad base of assets that contribute to the region's economy and well-being, the Sierra Business Council published the *Sierra Nevada Wealth Index*. The 1999-2000 edition documents trends and the current status of numerous indicators, placing financial, social, and natural capital on an equal analytical footing. Natural capital indicators include: patterns of public and private land ownership, enrollment in Williamson Act contracts, cattle production, acreage of high value crops, protection for key habitat resources, listings of threatened and endangered species, timber production, and air and water quality.

- Open space is an important part of urban revitalization efforts. Urban parks serve as attractive gathering spaces and architectural focal points. New parks typically result in increased rents and occupancy rates in surrounding properties. Parks also play an important role in revitalizing depressed urban residential neighborhoods by acting as an incentive for existing middle class families to remain in these neighborhoods, and for new middle class families to settle in them.
- Open space supports tourism. Tourism and outdoor recreation are among the largest and fastest growing sectors of the U.S. economy. Many communities have generated a significant amount of new jobs and tax revenues by preserving and enhancing their natural resources and positioning themselves as attractive destinations for tourists and outdoor enthusiasts.
- Open space supports agriculture, a critical part of the country's economy. Farm receipts totaled $202.3 billion in 1997, generating approximately $50 billion in farm income that was cycled through local communities. A 1998 Fresno report found that each acre of irrigated agricultural land produced between $6,000 and $12,000 for the local economy.
- Open space along floodplains minimizes damage caused by floods, estimated to be $4.3 billion annually in the U.S. Protecting floodplains also creates economic benefits by providing open space for recreation, wildlife habitat, and farming.
- Open space safeguards the environment. Development in watersheds results in increased pollution of drinking water supplies. Communities are discovering that it is less costly to purchase development rights in watersheds than it is to clean already contaminated water supplies. Other economic services provided by open spaces include degradation of organic wastes, filtration of pollutants from air, soil and water, buffering of air pollutants, moderation of climate change, and conservation of soil and water. The estimated annual value of Atlanta's tree cover for improving the city's air quality is $15 million, and for preventing the need for stormwater retention facilities, $883 million. The estimated value of all economic benefits generated by a single acre of wetland is $150,000 to $200,000.

In a 1998 report published by the Lincoln Institute of Land Policy, *Open Space Conservation – Investing in Your Community's Economic Health*, John Tibbetts reviews how planning, regulation, and public and private investment have been used to protect open space resource

The report reviews research documenting how economic and fiscal implications of conservation are measured for input to policy-making. Alternative approaches for estimating the economic value of open space reveal an array of potential economic arguments for land protection.

- Fiscal impact analysis compares the costs of infrastructure and services required by a given development type with the tax revenues it generates. Studies have shown residential development to result in net fiscal losses, commercial development to result in net fiscal gains, and open space to be neutral. However, results can vary according to each community's specific circumstances.
- The real estate market value approach places a value on open space according to the price commanded in a market transaction. While some claim that land is worth little unless it can be developed, others argue open spaces have value aside from their development values.
- The enhancement value approach assigns value based on the degree to which open spaces increase the value of nearby properties. Many studies, such as those included in the compilations described below, have shown properties to have higher values when they are located closer to parks, wetlands, and open space. However, other experience has shown that parks must be well maintained to have a positive affect on property values.
- The agricultural production value approach measures open space value in terms of the value of the agricultural or animal products it supports, and by the indirect economic value of associated jobs and income.
- The natural system value approach measures the value of open space according to its qualitative environmental value, such as a wetlands value in flood storage, wildlife habitat, and pollution filtration. Non-market values such as environmental value, scientific value, aesthetic value, genetic diversity value, and historical value are very difficult to measure directly in monetary terms. One method involves consideration of opportunity costs. For example, communities have decided it is more prudent to preserve wetlands than to pay the costs of flood damage or artificial filtration.
- Contingent valuation assigns value based on survey respondents' "willingness to pay" to gain or avoid losing access to open space. Other methods evaluate travel costs and recreation spending as a means of establishing the value of open space and outdoor recreation resources to the public.

A 1995 report and analysis produced by the American Farmland Trust (AFT), *Alternatives for Future Urban Growth in California's Central Valley: The Bottom Line for Agriculture and Taxpayers*, documents the potential costs associated with farmland conversion to accommodate projected growth in the Valley. Through economic and fiscal impact analysis of alternative development patterns, the AFT concluded that compact development patterns that conserved farmland would, over 50 years, reduce the potential economic loss associated with conversion of agricultural resources by about $72 billion and would save taxpayers about $29 billion in service costs. Agricultural losses associated with urban development would include loss of productive acres, increased risks and costs and lower productivity for lands remaining in production around

urbanizing areas, loss of commodity sales, and loss of related sales of suppliers, processors, and other agricultural support businesses. The fiscal impact analysis determined that the public service and infrastructure costs of serving more compact urban development would be substantially less than the costs of serving development that consumed more land to accommodate that same amount of growth.

Beyond Sprawl: New Patterns of Growth to Fit the New California, jointly produced in 1995 by the Bank of America, the California Resources Agency, the Greenbelt Alliance, and the Low Income Housing Trust Fund, presents a strong case for the economic benefits of sustainable development patterns. The report documents the costs of sprawl to taxpayers, businesses, residents of new suburbs, residents of central cities and older suburbs, farmers, and the environment. The report advocates a development model that provides for sustainable economic growth—providing certainty in where new development should and should not occur, streamlining state and local permitting where development is allowed, encouraging more efficient use of land that has already been developed, allocating the full marginal cost of development to development on the metropolitan fringe, coordinating local land use policies, and developing collaborative relationships among the various stakeholders.

The Trust for Public Land and the Land Trust Alliance have published two compilations of reports and articles about the value of open space, including anecdotal evidence of the economic benefits of parks, recreation, wildlife, and open space with respect to property values, economic revitalization, recreation, historic preservation, natural and scenic resources, agency expenditures, and health. (*Arguments for Land Conservation: Documentation and Information Sources for Land Resources Protection*, The Trust for Public Land (1993) and *Economic Benefits of Land Protection*, Land Trust Alliance (1994).) The following are some samples of key data:

- Property values increase in areas adjacent to trails or greenbelts, resulting in property taxes that can be used to offset acquisition costs. In 1986 in Salem, Oregon, urban land adjacent to a greenbelt was found to be worth approximately $1,200 more per acre than urban land 1,000 feet away from the greenbelt, all other factors being equal. A 1978 Boulder, Colorado study found that property value decreased by $4.20 for every foot of distance from public open space, up to 3,200 feet.
- The increase in nearby property values attributable to park and open space development may generate enough new property tax revenues to more than offset the costs of open space acquisition. The Boulder, Colorado greenbelt resulted in a $500,000 annual property tax increase, making it possible to recover the initial purchase price of $1.5 million in just three years.
- Outdoor recreation opportunities and cultural resource sites attract recreation spending and keep local recreation spending from leaking outside a community. A 1990 report stated that the recreation and leisure industry was the third largest segment of the California economy and that Californians spent over $30 billion per year on recreation and leisure, accounting for 12 percent of total personal consumption expenditures. A 1978 study found that for every dollar spent by the East Bay Regional Parks District, three dollars were returned to the community in primary or secondary benefits. Thirty five percent of respondents to a 1993 study

planned to visit a historical site while on vacation. Another study found that visitors stay a half-day longer and spend $62 more at historic sites than at other locations.

- Corporate real estate executives cite choosing a location that will help attract and retain key personnel as the number one factor in selecting office locations. Recreational opportunities rank at the top of the list of quality of life factors influencing business location decisions. Pueblo, Colorado credits its investment in parks and trails as a major factor in turning around its economic decline.
- Land conservation is often less expensive for local governments than suburban-style development. A 1989 study showed that residential lands required $1.12 to $1.36 for every dollar contributed, while agricultural land required only $0.21 to $0.48. In 1988, the City of Boulder estimated that the costs of providing public services are $2,500 to $3,500 per acre for developed land, but only $75 per acre for open space. A Virginia study found that for every dollar of revenue collected from residential land, $1.25 is spent on county services.
- Open space conservation is the intended by-product of dense cluster development. Due to its lower infrastructure costs, this development type has been proven to more cost effective than conventional suburban style development. A National Association of Home Builders study found cluster development to cost 34 percent less than conventional development.
- Communities that implement responsible growth patterns promoting quality of life and fiscal viability through open space and agricultural preservation have been shown to improve their municipal bond ratings.
- Preserving wetlands for groundwater recharge and water purification is more cost effective than achieving these functions through man-made means. Residents of Johnson County, Kansas decided to address the region's flooding problems by spending $600,000 on a greenways network instead of $120 million on a stormwater control system.
- Use of sensitive areas for open space or recreation purposes can reduce potential property damage and loss of life caused by flooding, slope instability, fire damage, and earthquakes. Prohibiting development in sensitive areas saves communities from having to pay the costs associated with floods, landslides, and other natural calamities.
- Agencies that manage land create jobs and contribute to the local economy.

Finally, resource economists have created models for valuing the economic role of environmental and ecological factors for comparison to traditional methods of measuring the outputs of production and capital. One example is provided in *The Value of the World's Ecosystem Services and Natural Capital*, by Robert Costanza, et. al., published in **Nature**, Volume 387 (May 15, 1997). Using published studies and some original calculations, this article estimates the value of ecosystem services (e.g., food production, waste treatment, water supply, climate regulation, biological control, recreation, raw materials, cultural services) for a comprehensive categorization of marine and terrestrial land uses. Most studies reviewed for this

article use some form of "willingness to pay" valuation method. The value of the entire biosphere is estimated at $16 – 54 trillion per year, with an average of $33 trillion per year. compares to a global gross national product of $18 trillion per year. Although ecosystem services are a critical component of the contribution to human welfare on the planet, most of the estimated ecosystem value is not captured in commercial markets.

The Economic Benefits of a Comprehensive Regulatory Compliance Component

A second phase of the Placer Legacy implementation effort is proposed to develop a conservation plan focussed on Placer County's natural communities and on securing state and federal authorization for impacts to wildlife habitat. (See discussion in Chapter 3, Section D. Regulatory Compliance Opportunities.) In addition to the economic benefits accruing to the open space values of the resource lands protected under a Habitat Conservation Plan / Natural Communities Conservation Plan (HCP / NCCP), there are additional economic benefits of pursuing such a comprehensive approach to habitat planning and mitigation of development impacts.

The array of economic benefits can be described in terms of the various parties interested in the outcome and, usually, participating in the planning process.

- Project proponents include developers of residential, commercial, office, and industrial projects; resource industries (timber and mining); as well as the public agencies, utilities, special districts and other sponsors of development projects in the county.
- Local government, specifically the planning and community development departments responsible for land use planning and environmental review.
- Federal and state permitting agencies.
- Conservation and environmental interests.
- Landowners.
- Residents, businesses, taxpayers, and visitors.

For **project proponents**, a comprehensive HCP / NCCP provides certainty with respect to mitigation requirements, enhancing development planning because case-by-case negotiations are not required. Participation in the HCP / NCCP may reduce the time required to obtain regulatory compliance. Time savings translate to cost savings: lower holding costs, planning costs, and legal costs. Project proponents are no longer responsible for the costs of biological surveys, pre-construction surveys, or monitoring. A comprehensive habitat conservation plan spreads the costs of mitigating impacts to habitat over a broader base.

For **local governments**, implementing a comprehensive HCP / NCCP ultimately reduces the time and cost otherwise devoted to permit processing and project-by-project environmental review. The economic development benefits resulting from eliminating delays that would otherwise exist for residential and non-residential development result in higher levels of local general fund revenue than would be the case without a comprehensive plan. Establishing th

HCP / NCCP retains local input to the mitigation plan and enhances the role of local government with respect to other land management agencies in the County and the state and federal permitting agencies.

For those **permitting agencies,** a comprehensive solution has several advantages over piecemeal mitigation. Ultimately, mitigation requirements are satisfied with less staff time and funding resources than is the case for project-by-project reviews. The HCP /NCCP planning process encourages cooperation rather than confrontation. An integrated regional system of preserves and open space is more beneficial as habitat, increasing the likelihood of long-term species survival and potentially helping to avoid future species listings. A comprehensive plan offers economies of scale not available to individual mitigation projects.

Conservation and environmental interests also value the enhanced benefits of an integrated regional system of preserves and open space. A comprehensive plan can result in more land and resources protected than would otherwise be the case. This interest group gains a formal role in implementing state and federal wildlife regulations and determining priorities for preserves—a role based on cooperation rather than confrontation. A comprehensive plan also offers a foundation for tapping broad-based funding sources, including an organized effort to channel charitable resources to habitat and open space conservation efforts in Placer County.

The benefits to **landowners** depend on where the land falls with respect to the conservation plan. For landowners of property with urban development potential, after a transition period, the reduction in development costs compared to costs under the existing regulatory environment might be captured in higher land prices for development. The benefits of an enhanced development climate and a regional preserve system resulting in a higher quality of life might translate to higher land prices in the longer term. Owners of agricultural land and other land without urban development potential are offered economic value for their land as a habitat and open space resource and financial incentives to manage lands for habitat values. A streamlined permitting process for some agricultural activities would have economic benefits to agricultural landowners. If the habitat conservation plan provided for neighboring land protections, there would be reduced potential for the kinds of sanctions against agricultural activities that can occur under existing regulations.

The benefits to Placer County **residents, businesses, taxpayers and visitors** are those described above for open space protection more generally. A comprehensive habitat conservation and open space plan improves prospects for maintaining and enhancing biological diversity, preserving rural and scenic character, and obtaining recreational, educational, spiritual, and other quality of life benefits therefrom. Those enhancements increase property values and the general fund revenue based on those values. Prospects for eco-tourism and its associated economic development benefits would also increase under a comprehensive habitat conservation plan.

CHAPTER VI: MULTI-SOURCE FUNDING PLAN

SECTION A: INTRODUCTION

This chapter presents a variety of different types of information for consideration of funding options for Placer Legacy land management and program activities. A premise of the funding options presentation is that Placer Legacy would have a funding plan that relies on a number of different sources. The ultimate funding plan will depend on the scope of land management activities and on the governance structure chosen to implement Placer Legacy. This chapter provides information on local public funding options and state and federal funding sources. The funding experience of public and non-profit land management entities provides a useful context for evaluating potential Placer Legacy funding commitment. The chapter concludes with information about multiple sources of funding incorporated in habitat conservation plans in California.

SECTION B: LOCAL REVENUE OPTIONS

There are a number of potential sources of local revenue that could be tapped to provide funds for Placer Legacy land management and program activities. This section presents an analysis of local revenue options available to fund Placer Legacy, in addition to a set of criteria for evaluating public funding options.

Local Public Funding Options

As summarized in Table 6-1 on the following page, typical local public funding options incl general obligation (G.O.) bond, countywide sales tax increase, and a development impact fee. Other funding mechanisms include the parcel tax, hotel/motel tax, utility tax, business tax, and a Mello-Roos special tax.

Table 6-1. Local Funding Options

Revenue Source	Adoption Requirement and Tax Base	Geographic Area Constraints
Typical Open Space Funding Mechanisms		
Taxes:	Majority vote by Board of Supervisors and voter approval countywide	
Property Tax/G.O Bond	A countywide increase in property tax to fund a general obligation bond.	Countywide
Sales Tax	A countywide increase in sales tax on all taxable retail transactions. Could be raised up to 1½ cents.	Countywide
Fees	Majority vote by legislative body for each jurisdiction imposing the fee	
Impact Fee	Implementation of an impact fee to provide for open space, recreation lands, and/or habitat resources.	By jurisdiction or any subarea
Other Open Space Funding Mechanisms		
Taxes	Majority vote by legislative body for each jurisdiction imposing the tax and voter approval by jurisdiction	
Parcel Tax	An increase in a special excise tax on use of property, typically based on a flat rate per parcel varying by land use.	By jurisdiction
Mello-Roos Community Facilities Tax	Formation of a Mello-Roos Community Facilities District for the purpose of imposing a special non-ad-valorem tax within District boundaries. Apportionment method and the rate of tax can vary.	By jurisdiction or any subarea
Hotel/Motel Tax	An increase in local tax paid on hotel, motel, and other lodging services.	By jurisdiction
Utility Tax	Imposition of new or increase in existing tax paid on utility services.	By jurisdiction
Business License Tax	An increase in tax paid by local businesses for the privilege of conducting business within the city or county unincorporated area.	By jurisdiction

SOURCE: MuniFinancial

Revenue Potential

To estimate revenue potential for each funding option, we assumed a specific increase in the particular tax or fee rate that would generate new revenue dedicated to the agricultural and open space conservation program. We based our assumptions regarding tax and fee rates primarily on incremental increases to existing rates.

Table 6-2 and Table 6-3 summarize the results of the revenue potential analysis. The tables present the following data:

- The current tax or fee rate for each revenue option, and a potential rate increment for purposes of funding Placer Legacy;
- Annual revenue based on countywide implementation, i.e., if required by law all local jurisdictions would agree to adopt the increase and contribute revenue to Placer Legacy; and

- The maximum debt capacity sustainable under each revenue option. We assume the issuance of a 30-year bond at 8% interest and a 2% issuance cost, and no capitalized interest.
-

Table 6-2. Revenue Potential for Typical Open Space Funding Options for Placer County

Revenue Source	Current Tax/Fee Rate	Potential Increase	Annual Revenue	Debt Proceeds[1]
General Obligation Bond				
Unincorporated	Min. 1%	0.025%	$2,511,000	$27,703,000
Incorporated	Min. 1%	0.025%	2,638,000	29,099,000
Total			$5,149,000	$56,802,000
Sales Tax[2]				
Unincorporated	7.25%	0.25%	$2,898,000	$31,973,000
Incorporated	7.25%	0.25%	5,616,000	61,959,000
Total			$8,514,000	$93,932,000
Impact Fee				
Residential (per unit)	NA	$300	$851,000	$9,389,000
Nonresidential (per square foot)	NA	$0.17	339,000	3,740,000
Total			$1,190,000	$13,129,000

1. Assumes a 30-year bond with 8% cost of capital and 2% cost of issuance, and no capitalized interest.
2. Revenue potential based on existing retail sales and is conservative given the probable real growth in sales over time.
3. Revenue potential based on countywide annual average growth projected from 2000 through 2020 and a hypothetical fee of $1,500 per acre. Impact fee revenues cannot be bonded, but could be used to fund a debt-like instrument.

SOURCE: MuniFinancial

An increase in the property tax rate as indicated in the table is equivalent to $0.025 per $100 of assessed value. For a residential property valued at $200,000, the tax payer would see an increase in their property tax bill of $50 per year to fund agricultural conservation and open space in Placer County.

The sales tax revenue potential is based on current levels of retail sales and is conservative given the probable growth in sales over time. The current sales tax rate is 7.25%. The rate could be raised to a maximum of 8.75%. A sales tax increase must be imposed countywide and not for any sub-area. Exemptions and the method of administration are governed by the State. The County cannot exclude from the tax purchases by either type of good or purchase value. An increase of .25% in the sales tax rate translates to an annual average cost per household of about $40. The additional sales taxes attributable to business-to-business sales in Placer County would amount to about $.05 per square foot per year.

The impact fee revenue estimates reflect an assumption about the level of a potential development impact fee for conversion of open space and/or habitat resources. A fee level of $1,500 per acre of development is within the range of habitat and open space mitigation fees imposed in other California jurisdictions (see Table 6-7 at the end of this chapter). We conv

the per-acre fee to an equivalent per-unit and per-square-foot fee using average development density assumptions. The annual revenue estimate is the result of multiplying the per-unit and per-square foot fees by the annual average number of new units and the annual average amount of non-residential development expected throughout Placer County.

Table 6-3. Revenue Potential for Other Open Space Funding Options for Placer County

Revenue Source	Current Tax/Fee Rate	Potential Increase	Annual Revenue	Debt Proceeds[1]
Parcel Tax				
Unincorporated	None	$50 per parcel	3,201,000	35,315,000
Incorporated	None	$50 per parcel	2,573,000	28,387,000
Total			$5,774,000	$63,702,000
Mello-Roos Special Tax	Flexible formula; see parcel tax for comparison.			
Hotel/Motel Tax				
Unincorporated[2]	8% - 10%	1.00%	$275,000	$3,034,000
Roseville	6%	1.00%	61,000	673,000
Utility Tax				
Unincorporated	None	--	--	--
Roseville[3]	Varies	10%	698,000	7,701,000
Business License Tax[3]				
Unincorporated	Varies	10%	59,000	651,000
Roseville[3]	Varies	10%	32,000	353,000

NOTE: The City of Roseville is the largest city in Placer County and therefore provides a good indication of the revenue potential in the incorporated area. The actual revenue generated by any new taxes or increases in existing taxes would depend on the particular combination of jurisdictions participating in the Placer Legacy revenue program.

1. Assumes a 30-year bond with 8% cost of capital and 2% cost of issuance, and no capitalized interest.
2. Tahoe area tax rate equals 10 %; Auburn area tax rate equals 8%. Assumes an average rate of 9%.
3. Current tax rates range from 0% to 5%. For these cases, the potential percentage increase refers to an increase in revenue, not an increase in the tax rate.

SOURCE: MuniFinancial

The analysis demonstrates that sources with a broad tax base, such as the sales tax or property tax, would have the greatest revenue potential. Each of the remaining revenue options could be aggregated into various combinations to yield a greater impact.

Adoption Requirements

Adoption requirements refer to the approval needed by a legislative body, or the electorate through a popular vote, to implement a revenue source. Adoption requirements can impose substantial barriers to implementing specific revenue options. Table 6-1 at the beginning of this section summarizes the adoption requirements according to the following three categories:

- Revenue options that require a majority vote by the Board of Supervisors and countywide voter approval;

- Revenue options that require a majority vote by the Board of Supervisors or by respective City Councils;

- Revenue options that require a majority approval by the Board of Supervisors and each City Council, plus voter approval in each jurisdiction.

The impact fee option arguably has the least stringent adoption requirement because no voter approval is needed. The difficulty of this option, though, is that each city and the County would need to adopt the fee to implement it on a countywide basis.

All other options would require two-thirds voter approval as a special tax. Most options, however, could gain approval with a majority vote under an approach known as the "split ballot approach". In this approach, the revenue source can be adopted with majority voter approval as a general tax with an accompanying advisory measure that specifies the program(s) the potential revenue would finance.

Evaluating Revenue Alternatives

We evaluated revenue options against four criteria:

- **Revenue potential** (discussed above);

- Adoption requirements (discussed above);

- **Revenue stability** is the ability of the revenue source to provide a constant level of fund over time. Revenue options that do not fluctuate with the business cycle, such as G.O. bo parcel tax, and utility tax, tend to generate a constant level of funds. Such revenue options rank high; and

- **Administrative cost** is the cost associated with administration and implementation. Revenue options with high administrative cost rank poorly. With the exception of the development impact fee and Mello-Roos tax, the revenue options described here do not have significant administrative costs. In the case of development impact fees, jurisdictions would have to comply with the annual and five-year reporting requirement of *Government Code* 66000 et seq. A Mello-Roos tax may require annual administration to place the tax on the tax rolls, depending on the complexity of the tax formula.

Table 6-4 evaluates how each of the revenue options ranks according to the four criteria.

Table 6-4. Ranking of Local Revenue Options

Revenue Source	Revenue Potential	Adoption Requirements	Revenue Stability	Administrative Cost
General Obligation Bond (property tax)	1	2	1	1
Sales tax	1	2	3	1
Development Impact Fee	2	1	3	3
Parcel Tax	2	3	1	1
Mello-Roos Tax	3	3	2	3
Hotel/Motel Tax	3	3	3	1
Utility Tax	3	3	1	1
Business License Tax	3	3	2	1

NOTE: Ranking scale from "1" best to "3" worst.
SOURCE: MuniFinancial

Other Local Options

Motor Vehicle License Fee Revenues

Collected by the Department of Motor Vehicles and disbursed by the State Controller, this license fee, equivalent to 2% of the market value of motor vehicles, is imposed annually by the state "in lieu" of local property taxes. Article XI, Section 15 of the California Constitution provides that this fee shall be allocated to cities and counties. Unlike the Gasoline Tax, where the use of revenue is restricted to transportation related capital projects, the use of revenue generated from the Motor Vehicle License Tax is unrestricted. This is a discretionary revenue source provided to both cities and counties. By this account, unallocated funds could be used for the implementation of Placer Legacy. A portion of this state subvention to the counties, however, is allocated for realignment programs (i.e., health and welfare).

Habitat Maintenance Assessment Districts

The State Resources Agency describes the 1993 legislation authorizing local Habitat Maintenance Assessment Districts as a key component of California's pioneering ecosystem approach to species protection (*Government Code* 50060 et seq). The legislation recognizes that no single funding source can be relied upon to achieve species protection and land conservation goals. The local funding authority embodied in the districts is intended to encourage cooperation in the interests of habitat conservation and to allocate the costs of habitat conservation in accordance with local and regional benefits The legislation establishes the principle of benefit if past or proposed use of a parcel adversely affects habitat or if the parcel otherwise benefits from improvements to habitat.

Imposition of this special assessment would require a majority vote of the voters in the district. Agricultural and timberland parcels are exempt from the assessment. The maximum annual assessment under a Habitat Maintenance Assessment District is limited by law to $25 per parcel as of 1994, increased in subsequent years by the California Consumer Price Index. Bonds could be issued, but the term is limited to 10 years. Funds can be used to acquire, develop, and maintain habitat lands.

Placer Legacy - Generated Funds

There are also options to generate revenue from Placer Legacy activities. Acquired lands mi be leased back to agricultural operations, thereby generating lease revenues. Lands acquired i fee title might also be leased for hunting. The sale of credits from a mitigation bank established by Placer Legacy might also result in net revenue that could be reinvested in land management and program activities. Users of outdoor recreation lands might be asked to pay fees for services. The discussion later in the chapter of the experience of other land management entities and habitat conservation plans provides examples of these other local revenue sources.

Other Sources

The Board of Supervisors could make **General Fund** allocations to Placer Legacy on an annual basis. The Board has allocated funds for the planning phase of the program. The County currently assesses a **Park Dedication In lieu Fee** on new residential development. The current fee level of $1,285 per lot does not fund all of the cost of developing active parks. A fee increase could be adopted to fully cover costs, and/or another fee could be adopted to satisfy the companion General Plan policy objective for passive recreation land. Other sources include: **donations** of land or funding and **dedications** associated with discretionary development projects. **Development agreement negotiations** are another means by which Placer Legacy could obtain land and/or program funding. The County could also obtain title to suitable properties that would otherwise be auctioned because of property tax delinquencies.

SECTION C: BACKGROUND ON FEDERAL AND STATE FUNDING

Federal and state funding sources applicable to implementation of Placer Legacy include programs for open space and parkland acquisition, programs for habitat enhancement and protection, programs for agricultural conservation, and programs for open space and habitat development as enhancements for transportation projects as well as for environmental protection and water quality projects.

New sources are of funding are being created at both federal and state levels. The federal Endangered Species Act has a new funding program specifically for multi-species habitat conservation planning. The first funds were made available in fiscal year 96/97. Similarly, the 1996 Farm Bill included programs and funding authority for farmland conservation and habitat preservation. At the state level, there is new bonding authority for park, open space, habitat, and resource enhancement projects. Funding is also available to support agricultural conservation efforts and comprehensive approaches to natural communities conservation planning.

Selected Federal Funding Sources

The principal sources of federal funding for acquisition of recreation lands, wildlife habitat, and wilderness areas in the **Land and Water Conservation Fund** (LWCF), created in 1964. The fund receives money primarily from fees paid by companies drilling offshore for oil and gas. Other funding sources include sale of surplus federal land and taxes on motorboat fuel. Funding is allocated to four federal agencies: the National Park Service, Bureau of Land Management, Fish and Wildlife Service, and the Forest Service. Although funding is authorized at $900 million per year, actual appropriations generally have been substantially less and the level has not been consistent over the years, although the situation is improving. With only limited

appropriations, most funds were earmarked for specific sites and projects. The last five years have seen a steady increase in LWCF appropriations. The funding level for fiscal year 2000 totals over $420 million.

California's congressional delegation has been instrumental in developing legislation that would secure permanent annual LWCF funding for land purchases and restoration. The House of Representatives is currently considering legislation to earmark $45 billion over 15 years. California's allocation would be the most—estimated at $324 million per year.

In California, the Forest Service's fiscal year 2000 land acquisition request (through the LWCF) includes $2.5 million for about 1,000 acres in the Lake Tahoe Basin, in support of the Forest Plan and the Regional Plan goals of restoring watersheds and removing environmentally sensitive lands from the threat of development. Other fiscal year 2000 land acquisition requests in California total $10 million.

The fiscal year 2000 LWCF appropriation to the Fish and Wildlife Service totals about $55 million. Of that amount, California projects claimed from $2.5 million to $4.7 million (depending on final allocations from Congress). Funds were allocated to the Don Edwards National Wildlife Refuge on San Francisco Bay and to implementation of the Multi-Species Conservation Plan in San Diego.

The **National Fish and Wildlife Foundation** provides funding for wildlife conservation projects throughout the country, often in partnership with other agencies and organizations. The Foundation awards funds (primarily federal appropriations) as challenge grants requiring additional matching funds. Since 1984, the Foundation has made more than 3,400 grants, committing over $135 million in federal funds. Current programs likely to be of particular interest to Placer Legacy include: challenge grants to projects that promote habitat conservation and collaboration among conservation and community interests; challenge grants for conservation in partnership with the Natural Resources Conservation Service (see below); and the Pacific grassroots salmon initiative.

The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture administers funding for farmland protection and habitat conservation. The conservation provisions were important components of the 1996 Farm Bill.

The **Farmland Protection Program** (FPP) provides funding to the states and local governments to acquire conservation easements or other interests in agricultural land for the purpose of limiting conversion to nonagricultural uses. In 1996 and 1997, the FPP committed $16.2 million towards conservation easement purchases; in fiscal year 1998, up to $17 million was available for this program. The FPP is intended to supplement other funds for easement purchases; the participating state or local government entities must commit to providing funding for 50 percent of the easement market value.

The NRCS **Wetlands Reserve Program** is a voluntary program to restore and protect wetlands on private property by offering financial incentives to enhance wetlands in exchange for retiring marginal agricultural land. The program works through conservation easements or cost-sharing restoration agreements. California's Wetlands Reserve Program focuses on habitat for nesting

and migrating waterfowl and shorebirds and some state and federal threatened or endangered species, including those associated with vernal pool wetlands. Riparian corridors are also important. Over 47,000 acres are currently enrolled throughout the state. Landowners receive important financial value for the relatively unproductive farmland, and there is often additional income potential through the sale of hunting privileges on restored wetlands.

The **Cooperative Endangered Species Conservation Fund** administered by the Fish and Wildlife Service provides federal funding via state agencies (the Department of Fish and Game in California) for habitat conservation planning. The program provides funding for up to 75 percent of program costs. Over the last three fiscal years, total grant funding has ranged form $13 million to an estimated $76 million (for fiscal year 2000). Grants range from $1,000 to $235,000, with an average of $100,000.

A key component of the Clinton-Gore "Livability Agenda" is financing. The proposed financing tool—**Better America Bonds**—would provide zero interest financing to local communities to preserve open space, protect water quality, and clean-up brownfields. The proposal in the 2000/01 budget is for $10.75 million in bonding authority over five years. Because the bonds would be interest free, they would significantly reduce costs compared to more typical tax-exempt financing methods. The U.S. Environmental Protection Agency would administer Better American Bonds.

Selected State Funding Sources

Enacted in 1995 as the Agricultural Land Stewardship Program, the **California Farmland Conservancy Program** is now implemented by the California Department of Conservation. The program provides grants to local governments and non-profit organizations for the purchase of agricultural conservation easements. As of April 30, 2000, $8.8 million in funding was unallocated. About half that amount was expected to be committed to applications currently under review. Passage of Proposition 12 on the March 7, 2000 ballot makes another $25 million available. Recent state legislation also transfers Williamson Act cancellation fees to this program instead of to the state's general fund.

The Department of Conservation also provides funding assistance to **Resource Conservation Districts** to promote watershed management and conservation. The annual funding level is $120,000. The Department awarded 12 grants in fiscal year 1998/99.

California's two recent bond measures—**Propositions 12 and 13**—will provide over $4 billion towards protection of wildlife habitat, open space, parkland, and air and water quality programs. Projects throughout the state are expected to benefit from this replenished funding for open space and habitat protection. Placer County's $1.2 million allocation from Proposition 12 (based on population) should be committed to park projects already under development. The County would have to submit grant applications to receive additional funding from proceeds of Propositions 12 and 13.

The **Habitat Conservation Fund Grant Program**, established by the California Wildlife Protection Act of 1990, makes grants to local public agencies. The funding level is $2 million per year through 2020.

California's Natural Communities Conservation Planning Act is a new conduit for conservation funding.

Other sources of state funds include:

- Environmental License Plate Fund
- Public Resources Account, Cigarette and Tobacco Products Surtax Fund
- Inland Wetlands Conservation Program
- Riparian Habitat Conservation Program
- Environmental Enhancement and Mitigation Program

Most of these funds are administered by the California Wildlife Conservation Board and the California Resources Agency.

The **Natural Heritage Preservation Tax Credit** is proposed in the state budget as a one-time $100 million state tax credit to landowners of unique properties who are willing to donate their land to the state for habitat and land conservation purposes. The Department of Finance is current working on the details for implementation.

SECTION D: FUNDING OF OTHER LAND MANAGEMENT ENTITIES

The actual operating experience of other local entities that manage land for conservation and recreation purposes provides a useful context for consideration of a multiple source funding plan for Placer Legacy. All of the cases presented below rely on a variety of funding sources. Local public sources (property tax and sales tax) are critical components of the support for special districts organized for land conservation purposes. Other sources relied upon to varying degrees by the different entities include: charitable contributions (of land and/or money), state and federal grants, charges for services, and lease income.

Two distinct types of land management entity are described below: special district governmental units and private, non-profit or public benefit land trusts. The two types often work in close partnership with each other. Their separate missions are designed to provide complementary services towards the goals of land conservation. Generally, the special districts manage open space and resource lands for long-term protection and to provide for public access and recreational opportunities. The non-profit land trusts often operate as the entrepreneurial agents for the special districts, stepping up to acquire land for ultimate transfer to a public agency. Without the requirements for public hearings and other governmental procedures, the non-profit land trust can be more proactive when it comes to acquisition. While the open space districts rely on significant streams of local public funding for on-going land management, the land trusts fundraise actively among corporations, foundations, and private individuals, often basing a capital campaign around the need and or opportunity to acquire one or more signature resource properties.

Partnerships between open space districts and land trusts and other public or non-profit entities with similar goals and interests are key to achieving the overall goals of comprehensive land protection and management. Among the entities described below, several such partnerships are represented. The Peninsula Open Space Trust works closely with the Midpeninsula Regional Open Space District and the Marin Agricultural Land Trust receives funding from the Marin County Open Space District. Table 6-5 and Table 6-6 following the respective subsections summarize the key characteristics of each land management entity.

Regional Open Space Districts

East Bay Regional Park District

The East Bay Regional Park District (EBRPD) is a special district formed by the voters of Alameda and Contra Costa Counties in 1935 to acquire and maintain parklands. The District manages 91,000 acres of land in two counties, providing regional parkland, trails, and educational programs. The District owns and maintains significant biologic, scenic, geologic, and historic resources. In 1999, the District's annual operating budget (exclusive of debt service and capital outlay) totaled about $54 million.

Property tax is the district's principal revenue source. A general property tax is levied on properties in Alameda and Contra Costa counties at a rate of $.03 per $100 of assessed value. This tax generated about $50 million in 1998, about 60 percent of total EBRPD revenues in that year (counting revenue for both operating and capital expenditures). Additional property taxes tied to a variety of special purpose assessment districts and bond issues accounted for another 23 percent of District revenues. Charges for services and interest income each made up another percent of revenues. Rents and leases contributed about one percent of total revenues in 199 Grants, generally for specific acquisitions or capital projects, are a relatively small component total revenues. The EBRPD partners with the Regional Parks Foundation, a separate nonprofit corporation that raises funds to support the District.

Local public funding for the EBRPD is substantial. For a typical single-family residence valued at $200,000, the combination of the basic property tax assessment, plus special benefit assessments in some areas, ranges from about $65 per year to $120 per year. In addition, in 1988 the voters passed Measure AA authorizing the district to issue $225 million in bonds for acquisition and development of recreational projects. (The measure passed with 68 percent of the vote.) The 1998/99 tax rate for the bond measure is $.0092 per $100 of assessed value. This translates to an additional $18.40 per year for a single family residence valued at $200,000. The combination of taxes and assessments represents a total tax burden of $25 per capita for the two-county district.

Midpeninsula Regional Open Space District

The Midpeninsula Regional Open Space District (MROSD), formed in 1972, is a voter-approved special district responsible for open space acquisition and preservation in the northern and western portions of Santa Clara County, the southern and eastern portions of San Mateo County, and a small part of northern Santa Cruz County. The District manages 45,000 acres of land in 23 open space preserves (ranging from 55 acres to over 12,000 acres in size) to meet its primary purpose of preserving open space. Most acquisition is through fee title interest. All MROSD lands are open to the public at no charge, 365 days a year. Improvements to provide public

access for low intensity recreation are limited and may include gravel parking areas, restrooms, signed trails, and picnic tables Unlike the EBRPD, MROSD does not provide significant interpretive or educational services. The MROSD has an annual operating budget of about $6 million in fiscal year 1998/99.

Property tax is the primary revenue source. In fiscal year 1998/99, a general property tax levied at a rate of $0.17 per $100 of assessed value generated about $13 million, about 80 percent of the District's total annual revenues for both capital and operating expenditures. The general property tax rate translates to an annual tax of about $34 for a residence valued at $200,000. Other revenue sources consist of interest income, rental income, grants, and gifts. The Peninsula Open Space Trust (POST), described below, is an important non-profit partner, undertaking strategic acquisitions and subsequently transferring that land to the open space district for long-term management.

The MROSD has issued just over $100 million in long-term debt to finance land acquisition and capital improvements. The District has employed a variety of financing mechanisms, including revenue bonds, certificates of participation, and long-term notes. None of these issues has required a public vote.

Marin County Open Space District

Formed in 1972, the Marin County Open Space District manages 13,800 acres in 32 open space preserves in Marin County. Preserves are free and open to the public year round; there are no parking areas, restrooms, or trash receptacles. While the district works closely with the Marin County Parks, Open Space, and Cultural Services Department, the district's budget is separate from the county budget. The annual operating budget is about $2.6 million.

Funding for acquisitions and operations comes primarily from a local property tax assessment. Other revenue sources include local assessment districts and community facilities districts, state and federal grants, donations, and general obligation bond proceeds. The Marin County Open Space District provides funding to the Marin Agricultural Land Trust (MALT), described below, to assist in establishing conservation easements on agricultural land.

Sonoma County Agricultural Preservation and Open Space District

Unlike the three districts described above, the Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) came into being after Proposition 13 made any proposed increases in the local property tax rates subject to a two-thirds voter approval requirement. The SCAPOSD is another special district funded with local tax revenues. The SCAPOSD was formed in 1990 to promote Sonoma County's General Plan policies on the preservation of open space and to administer an open space acquisition program. The District has preserved 29,200 acres. Compared to the other open space districts described above, the SCAPOSD annual operating budget of $1.8 million is relatively small; unlike the other districts, SCAPOSD does not play a large role in managing land. Most acquisitions are agricultural and conservation easements.

Almost all revenues come from a 0.25 percent special sales tax authorized by the voters in 1990 for a twenty-year period. For fiscal year 1999/00, the 0.25 percent local sales tax is estimated to generate $13.9 million for the District.

As of June 1999, the SCAPOSD had posted direct land acquisition costs of $46.8 million, securing preservation of 29,200 acres. The District primarily acquires conservation easements, limiting fee title acquisition to opportunities for outdoor recreation. Furthermore, many of those lands acquired in fee are cooperative projects with cities and the County, and those agencies assume responsibility for on-going management.

Table 6-5. Selected Regional Open Space Districts

	East Bay Regional Park District	Mid Peninsula Regional Open Space District	Marin County Open Space District	Sonoma County Agricultural Preservation and Open Space District
Year Established	1934	1972	1972	1990
Territory	Two counties	Parts of 3 counties	One county	One county
Preserve Acres	91,000	45,000	13,800	29,200
Capital Assets **Land** **Improvements**	$215 million $109 million	$167 million $8.7 million	$23 million	$46.8 million
Annual Operating Budget[1]	$57.5 million	$5.0 million	$2.6 million	$1.8 million
Funding Sources	◆ Property tax ◆ General obligation bond proceeds[2] ◆ Assessment districts ◆ Lease income ◆ Charges for services ◆ Donations ◆ Federal and state grants	◆ property tax ◆ proceeds from revenue bonds and certificates of participation ◆ federal and state programs ◆ lease income ◆ donations	◆ property tax ◆ general obligation bond proceeds ◆ federal and state programs ◆ local assessment districts and community facilities districts ◆ donations	◆ sales tax for 20 years ◆ grants ◆ donations
Annual Local Public Funding	$50 million (82% of operating fund revenue)	$12.6 million (80% of general fund revenue)	$1.7 million (53% of total annual revenues)	$13.9 million
Tax Rate	3.0 cents per $100 assessed value $60 per year for $200,000 residence	1.7 cents per $100 assessed value. $34 per year for $200,000 residence		0.25% sales tax (7.5% total tax rate)

[1] Exclusive of acquisitions and debt service.
[2] The general obligation bond tax rate of .0092 cents per $100 of assessed value adds another $18 per year for a $200,000 single family residence. In addition, some parts of the district contribute to benefit assessment districts support operations of the district. Total taxes and assessments per capita are estimated at about $25 for 1999.

NOTES:
EPRPD: 1988 bond measure authorized $225 million for regional and local park projects. EBRPD has acquired 22,000 acres and 100 miles of trails. Bond funds leveraged 40% more funding from public agencies and private donors. 25 percent of bond funds allocated per capita to local jurisdictions for park acquisition and development.
MROSD: $100 million in long-term debt issued to finance acquisitions and capital improvements. Most acquisition through fee title interest. Eminent domain only as "last resort".
SCAPOSD: Acquisition program focuses on lands designated in the Sonoma County General Plan Open Space and Agricultural Resources Elements, and provides for other open space projects in cities. Most acquisition through conservation easements. Fee title acquisition for public recreation lands. The District does not have the power of eminent domain.
SOURCE: Hausrath Economics Group, based on budgets, financial statements, policy statements, and other background information provided by the districts.

Land Trusts

The land trusts described below are important partners to open space special districts and local governments. They are able to take on a more entrepreneurial land acquisition function because they are not subject to the often time-consuming requirements of a public process. Unlike larger open space districts that rely on a substantial base on long term public funding, many non-profit open space trusts are not funded or organized for long-term land management. The Trust for Public Land and The Nature Conservancy are prime examples of non-profit land trusts that are national in scope.

Peninsula Open Space Trust

The Peninsula Open Space Trust was founded in 1977 as the private sector response to the open space preservation need represented in the public sector by the Midpeninsula Open Space District (described above). The district has acquired 40,000 acres for open space preservation purposes, transferring most of this land to public agencies (county, state, federal, special district) for long-term stewardship. POST has retained ownership of some properties leased back for agricultural use, and some other large and complex properties that the public agencies are not prepared to manage. POST's annual operating budget was $3.1 million in 1998/99; in that same year, the trust spent $3.6 million on land purchases.

Marin Agricultural Land Trust

The Marin Agricultural Land Trust (MALT), was the first non-profit land trust in the United States to focus on agricultural land preservation. MALT was founded in 1980 and promotes agricultural open space preservation through purchases of land and conservation easements, public education, and advocacy. MALT holds easements on about 26,600 acres of land operated as farmland and rangeland in Marin County. With an annual operating budget of $550,000 in 1998/99, MALT monitors the easements and conducts public education programs and special events. Two-thirds of MALT's operating revenues come from membership dues and contributions. Grants are also an important funding source for operations and easement acquisition. In 1998/99, expenditures for land acquisition totaled about $1.1 million. MALT receives contributions from individuals, corporations, and foundations, and receives grants from the California Coastal Conservancy and the California Farmland Conservation Program.

Solano County Farmlands and Open Space Foundation

Of the land trusts described here, the Solano County Farmlands and Open Space Foundation is different in that its primary source of funding is special tax revenue from a Mello-Roos Community Facilities District (CFD). Formed in 1986, the Foundation is the operating arm of the CFD the purpose of which is to acquire open space and agricultural lands and manage those lands for their agricultural and open space values. The Foundation manages 6,500 acres of farmlands, ranchlands, wetlands, and open space; 90 percent of the lands are in agricultural production. Most of the land is held in fee title.

Of total operating revenues of $323,000 in 1998/99, the special tax revenues from the CFD account for 43 percent. The City of Fairfield provides about 20 percent of total operating revenue in exchange for staffing of ranger and naturalist positions on City open space lands. The foundation also receives rental income from farming and grazing on some of the land that it

owns. The Foundation has been very successful in obtaining grants for acquisition, including grants from the California Coastal Conservancy, State Environmental Enhancement and Mitigation Fund, State Habitat Conservation Fund, California Department of Conservation, an CalFed. The Foundation's land assets are valued in excess of $6.5 million.

Table 6-6. Selected Non-Profit Land Trusts

	Peninsula Open Space Trust	Marin Agricultural Land Trust	Solano County Farmland and Open Space Foundation
Year Established	1977	1980	1986
Territory	San Francisco Peninsula	One county	Solano County, especially Fairfield and vicinity
Preserve Acres	40,000[1]	26,605	6,500[2]
Asset Value	Generally transfers all lands to public agencies for long-term stewardship[3]	Agricultural conservation easements on 40 properties	$6.8 million[4]
Annual Operating Budget	$3.1 million	$550,000	$250,000
Funding Sources	◆ primarily private sources (foundations, corporations, individuals) ◆ lease revenue from property retained in agricultural production	◆ primarily private sources (foundations, corporations, individuals) ◆ County grants ◆ State and federal agricultural conservation easement grant programs	◆ community facilities districts ◆ lease income from farming and grazing ◆ charges for park management services ◆ donations ◆ federal, state, and city grants

[1] Most of this acreage transferred to public agencies for long-term stewardship. Some of these acres are counte the preserve lands for the Mid Peninsula Regional Open Space District.
[2] Ninety percent of this land is in agricultural production. Includes 1,800 acres managed by the Trust for the City o Fairfield and the Department of Fish and Game.
[3] POST has retained ownership of a few properties that are leased back for agricultural production. Also, in some cases, POST retains title when public agencies are not able to secure funding or assume long-term stewardship responsibility.
[4] Easements account for only a small portion (less than five percent) of acquired acres and capital asset value.
SOURCE: Hausrath Economics Group, based on budgets, financial statements, policy statements, and other background information provided by the land trusts.

SECTION E: FUNDING OF OTHER HABITAT CONSERVATION PLANS

Table 6-7 (on the following three pages) presents summary information about the funding of other habitat conservation plans developed over the last decade in the Central Valley and elsewhere in California. The information is from planning documents published at various stages during the lengthy approval process for such plans. The key conclusions from a comparative analysis of funding plans developed over the last decade are as follows:

- The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan proposes a multiple source funding plan that does not include a local public funding component. The plan establishes a range of development impact fees ranging from $8,000 per acre for vernal pool habitat to $750 per acre for multi-purpose open space. The fee proposed for agricultural habitat land and most other natural land is $1,500 per acre. Impact fees would cover abo two-thirds of total plan costs. The plan generates funding for open space preservation n

directly related to the habitat of species covered by state and federal laws by recognizing that all land conversion reduces open space resources and most open land conversion also reduces important habitat resources. To develop impact fees, plan costs are allocated to types of future land conversion according to a relative weight attributed to the resource that would be converted (ranging from open space at the low end to high value habitat lands at the high end). The San Joaquin County Plan also relies on substantial state and federal funding and entrepreneurial activity on the part of the land management entity (lease revenue and income from creation of a successful habitat mitigation bank).

- In the Natomas Basin plan, impact fees cover less than half of total plan costs. The compensation ratio is set at one-half acre of preserve land per acre of conversion. All preserve lands are to be acquired in fee title and the plan depends on aggressive management of those lands to generate operating revenues from rice farming and hunting.

- In Yolo County's habitat plan, impact fees of $2,630 per acre fund 100 percent of plan costs. Other sources are described but assumed to be very limited. The compensation ratio is one acre of preserve per acre of conversion. All preserve lands are to be secured by means of conservation easements.

- The metropolitan Bakersfield plan has a substantially lower cost structure than do the plans for the northern part of the valley, because of significantly different land acquisition costs. Impact fees of $1,250 per acre fund 100 percent of plan costs.

- In Southern California habitat conservation plans, state, federal, and local sources are significant contributors to the funding plans.

- The San Diego Multi-Species Conservation Plan (MSCP) relies on state and federal governments to donate existing public lands for preserve assembly and to acquire 50 percent of the other preserve lands to be acquired by the public sector. Federal and state governments are also responsible for the on-going costs of managing and monitoring about 50,000 acres of preserve lands. A local (regional) funding source is proposed to fund acquisition and management of the remaining 50 percent of the preserve lands to be acquired by the public sector. (The final plan evaluates several options: benefit assessments levied by a regional park and open space district, habitat maintenance assessment district, Mello-Roos community facilities district special tax, increase in property tax rate, and increase in sales tax rate.) In 1999, the City of San Diego approved spending 20 percent of the City's share of Tobacco Settlement funds on improvements to park and open space, including the MSCP. In addition, local governments are expected to contribute over 45,000 acres of existing publicly-owned lands to the preserve system. Private development contributes about one-third of the total preserve lands. Because preserve assembly is proceeding according to targeted goals using state and federal money and mitigation of private and public development projects, a local public funding measure has not been placed before the voters.

- In Orange County, state and federal sources are proposed to contribute 60 percent of total plan costs, assuming an average funding level of $1.6 million per year.

Table 6-7. Comparison of Habitat Conservation Funding Plans in California

	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (1999, Adoption anticipated Spring 2000)		
Plan Cost - 50 years	**Amount**	**Percent of Total**	**Comments**
Land Acquisition	$170,600,000	65%	Assumes fee title acquisition for vernal pool and other grassland preserves; conservation easements for agricultural habitat and associated riparian corridors and water's edge habitats.
Restoration/Enhancement	$37,100,000	14%	Varying levels of enhancement and variety of preserve types: per acre costs range from $80 per acre for grasslands to $25,000 per acre for vernal pool creation. Costs for agricultural habitat lands (57% of preserve acres) estimated at $100 per acre.
Operations & Maintenance	$53,800,000	21%	On-going costs supported in perpetuity by endowment.
Total Plan Cost	$261,500,000	100%	
Funding Sources	**Amount**	**Percent of Total**	
Mitigation Fees	$174,200,000	67%	$8,000 per acre average for vernal pool habitat, $1,500 per acre for other natural land and agricultural habitat land; $750 per acre for multi-purpose open space.
State and Federal Sources	$42,300,000	16%	
Revolving Fund/Re-sales	$26,500,000	10%	Purchase and re-sale of land with conservation easements.
Conservation Bank	$5,300,000	2%	Sale of credits in vernal pool mitigation bank to activities not covered by SJMSCP but in need of vernal pool mitigation.
Lease Revenue and Other	$13,300,000	5%	Lease revenue from agricultural preserve acres acquired (about 10% of total preserve acres); private fundraising; duck hunting revenues; land dedications; license plate revenue (if pursued).
Total Funding	$261,600,000	100%	
Total Preserve Acres	100,841		
	Natomas Basin (Adopted 1997)		
Plan Cost - 50 years	**Amount**	**Percent of Total**	**Comments (reflects information from 1995 documentation report)**
Land Acquisition	$32,000,000	45%	100% fee title.
Restoration/Enhancement	$2,400,000	3%	
Operations & Maintenance	$36,600,000	52%	High costs to manage and maintain fee-title preserve for rice farming and hunting (to generate revenues).
Total Plan Cost	$71,000,000	100%	
Funding Sources	**Amount**	**Percent of Total**	
Mitigation Fees	$37,050,000	45%	0.5:1 mitigation ratio; $2,240 per acre; set to cover all acquisition and restoration costs and 30% of administration cost. 1999 Fee update: $3,292 per acre.
Hunting Revenues	$19,900,000	24%	
Rice Revenues	$23,000,000	28%	
Other Sources	$0	0%	
Interest Earnings	$2,200,000	3%	
Total Funding	$82,150,000	100%	
Total Preserve Acres	8,750		

(continued on next page)

Table 6-7. Comparison of Habitat Conservation Funding Plans in California(continued)

	Yolo County (1995, Approval Pending)		
Plan Cost - 20-30 years	**Amount**	**Percent of Total**	**Comments**
Land Acquisition	$22,300,000	59%	100% conservation easements.
Restoration/Enhancement	$9,000,000	24%	
Operations & Maintenance	$6,300,000	17%	
Total Plan Cost	**$37,600,000**	100%	
Funding Sources	**Amount**	**Percent of Total**	
Mitigation Fees	$37,600,000	100%	1:1 mitigation ratio; $2,630 per acre.
Other Sources	$0		Other sources described, but assumed to be very limited. State & Federal funding to be sought.
Total Preserve Acres	14,299		
	Metropolitan Bakersfield (1994, Approved)		
Plan Cost - 20 years	**Amount**	**Percent of Total**	**Comments**
Land Acquisition	$6,400,000	48%	
Restoration/Enhancement	$4,300,000	32%	
Operations & Maintenance	$2,700,000	20%	
Total Plan Cost	**$13,400,000**	100%	
Funding Sources	**Amount**	**Percent of Total**	
Mitigation Fees	$13,400,000	100%	$1,250 per acre; assuming 1:1 ratio; could increase with development of natural land requiring 3:1 mitigation ratio.
Other Sources	$0		State and Federal funding to be sought.
Totalotal Preserve Acres	10,730		
	San Diego MSCP - Southwestern County (Adopted 1997)		
Plan Cost - 30 years	**Amount**	**Percent of Total**	**Comments**
Land Acquisition	$262,000,000 - $360,000,000	56% - 60%	For 27,000 acres of private lands to be acquired by the public for preserves. State and Federal agencies commit to acquire half of acreage; local jurisdictions responsible for the other half. Range reflects wide variation in land prices.
Financing Cost	$29,100,000 - $$47,800,000	6% - 8%	Costs to local jurisdictions of interest and bond issuance, asusming 30-year financing program.
Restoration/Enhancement	na	na	Assumed to be minimal since acquiring existing habitat.
Operations & Maintenance	$180,000,000	38% - 30%	Costs for 30 years only, including costs of managing state and federal lands. Does not include costs that would continue in perpetuity, estimated to be $4.6 million per year, or the costs of an endowment to fund those on-going costs.
Total Plan Cost	**$471,100,000 - $587,800,000**	100%	
Other Costs			Costs to private development of preserving 63,170 acres of land as habitat through the development process.
Funding Sources	**Amount**	**Percent of Total**	
Impact Fees	Not estimated.		Not estimated in Plan. See "Other Sources", below.
State & Federal Sources	$191,000,000 - $240,000,000		Assumed to fund one-half of public acquisition and ongoing management and monitoring. covers costs for 30 years only, not for annual management and monitoring beyond that.
Local Sources	$339,000,000 - $411,000,000		Covers local share of acquisition, including financing costs, as well as annual maintenance and management. Assumes a 30-year regional funding program based on benefit assessments levied by a regional parks and open space district.
Other Sources			Private development projects would contribute 63,170 acres of habitat currently in private ownership through on-site and off-site mitigation. Public lands owned by local, State, and Federal governments totaling 81,760 acres would be contributed to the preserve.
Total Preserve Acres	171,920		

(continued on next page)

Table 6-7. Comparison of Habitat Conservation Funding Plans in California(continued)

	Orange County Central and Coastal Subregion NCCP/HCP (Approved 1996)		
Plan Cost - 20 years	**Amount**	**Percent of Total**	**Comments**
Land Acquisition	$9,000,000	25%	When funding available.
Restoration/Enhancement	$17,500,000	48%	When funding available. Costs not required to maintain habitat value within reserve system.
Operations & Maintenance	$10,000,000	27%	Management program for preserve system. Assumes State and Federal entities manage and monitor lands they own.
Total Plan Cost	**$36,500,000**	100%	
Funding Sources	**Amount**	**Percent of Total**	
Mitigation Fees	$11,000,000	20%	For non-participating landowners. Ranging from $46,200 per acre to $51,200 per acre, primarily reflecting land values in the range of $34,000 per acre. (Updated 1997 analysis *Basis for In-lieu Mitigation Fee Determination*, prepared by the Center for Natural Lands Management.
State & Federal Sources	$32,000,000	59%	Based on average funding level of $1.6 million per year. Plan not dependent on these funds.
Endowment	$11,000,000	20%	By landowners participating in formulating NCCP/HCP. To fund management program within reserve system.
Total Funding	**$54,000,000**	100%	
Other Sources			20,800 acres donated by private landowner; 16,000 acres public lands included in reserve. Other initial planning funds provided by landowners not included in above funds.
Total Preserve Acres	38,738		
	Riverside County HCP (1991)		
Funding Sources	**Comments**		
Mitigation Fees	Interim fee of $1,950 per acre.		
State & Federal Sources	To be explored. State contributions from Environmental License Plate Fund and Wildlife Conservation Board. BLM land trades possible. Federal funds have been received for planning.		
Local Sources	Tax increases and benefit assessment districts discussed. Voters approved Parks & Open Space District referendum but not companion open space assessment.		
Total Preserve Acres	10,000 - 15,000		

SOURCE: Hausrath Economics Group based on review of planning documents.

Appendix A
COMMONLY USED TERMS

Many terms are used to define "open space" resources in Placer County. This appendix will provide definitions to the most commonly used terms. To the extent possible, these terms are based upon language from the Placer County General Plan and state and federal statutes.

Acquisition - For purposes of this document, a public land acquisition can be defined as a dedication (voluntary or mandatory), a donation, a fee title acquisition or the purchase of a conservation easement

CEQA - The California Environmental Quality Act (Public Resources Code, div. 13, §21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, §15000 et seq.). CEQA requires public agencies in California to analyze significant adverse environmental impacts of projects and requires that the impacts be mitigated to the extent feasible. CEQA also provides a procedure by which this is to occur.

Clean Water Act Section 404 - This section of federal law provides regulation for the discharge of dredged or fill material into "waters of the United States" including streams, rivers, lakes, ponds, permanent wetlands, intermittent drainages, and seasonal wetlands. The U.S. Army Corps of Engineers (USACOE) is the federal agency vested with the authority to issue permits that are required by this federal statute.

Conservation Bank - A conservation bank is privately or publicly owned land managed for its existing natural resource values. The resource benefits derived from this management regime are sold as "credits" to project proponents who seek mitigation opportunities to compensate for resource impacts elsewhere. Credits may be generated to meet any number of resource conservation needs, including compensation for impacts to wetlands, threatened or endangered species, Environmentally Sensitive Habitat Areas, and less sensitive resources. Conservation banking legally links the owner of the bank and resource agencies, such as the Department of Fish and Game or the U.S. Fish and Wildlife Service.

Conservation Easement - A voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land. A conservation easement ensures that a particular open space feature or characteristic is conserved in perpetuity or for a specified duration of time. The easement is signed by the landowner, and the easement holder, which must enforce the terms of the easement in perpetuity. After the easement is signed, it is recorded with the County Recorder and applies to all future owners of the land. A conservation easement can be purchased by the easement holder, or donated by the landowner. To qualify for a tax deduction, the easement holder must be a government agency or a qualifying conservation or historic preservation organization.

The landowner and prospective easement holder can tailor the easement terms to protect the land's conservation values, and meet the financial and personal needs of the landowner. Thus each easement is a unique document. Generally, limitations are made on the number and location of structures and the types of land use activities that can take place. The easement may

apply to just a portion of the entire property, leaving the option of development open for the remaining part, as long as the development wouldn't harm the natural or historic resources of property.

People sell or donate conservation easements because they want to protect their property from unwanted development but they also wish to retain ownership of their land. By signing a conservation easement, a landowner can assure that the property will be protected forever, regardless of who owns the land in the future. A conservation easement may also provide significant financial advantage to the landowner. In most cases, the restrictions on future development specified in an easement reduce the fair market value of the land, resulting in reduced estate taxes, and, potentially, property taxes. The Internal Revenue Service allows a deduction if the easement is perpetual and donated "exclusively for conservation purposes." The amount of the tax deduction is determined by the value of the conservation easement.

The landowner continues to own the property after executing an easement. Therefore, the owner can sell, give or lease the property, as before. However, all future owners assume ownership of the property subject to the conditions of the easement. The landowner retains full rights to control and manage his/her property within the limits of the easement, and continues to bear all costs and liabilities related to ownership and maintenance of the property. The easement holder monitors the property to ensure compliance with the easement's terms, but it has no other management responsibilities and exercises no direct control over other activities on the land.

The public does not have access to property protected by an easement unless specifically allowed by the original landowner. Most easement donors do not want, and therefore do not allow, public access to their property.

Endangered Species Act – State and Federal laws that regulate specified sensitive species to insure that populations of these species can be maintained and recovered over time.

Federal - The Federal Endangered Species Act is a statute initially passed by Congress in 1973 in an attempt to counteract the alarming rate of species extinction. The Act provides a means of conserving plants and animal species that are currently in danger of extinction (endangered species) and those that are likely to become endangered within the foreseeable future (threatened species). It also protects the habitat needed for their survival. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service are responsible for ensuring that government and citizen actions do not further harm species that are listed as endangered or threatened, as well as for developing and implementing a plan for recovering the species to a stable population.

State - The California Endangered Species Act (CESA) (Fish & Game Code §§2050, et. seq.) generally parallels the main provisions of the Federal Endangered Species Act and is administered by the California Department of Fish and Game (DFG). Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

CESA establishes a petitioning process for the listing of threatened or endangered species. The California Fish and Game Commission is required to adopt regulations for this process and establish criteria for determining whether a species is endangered or threatened. CESA prohibits the "taking" of listed species except as otherwise provided in State law. Unlike its Federal counterpart, CESA applies the take prohibitions to species petitioned for listing (state candidates). §86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Fee Simple/Fee Title – In modern estates, the terms "fee" and "fee simple" are substantially synonymous. The term "fee" is of old English derivation. "Fee simple absolute" is an estate in real property by which the owner has the greatest power over the title which it is possible to have, being an absolute estate. In modern use, it expressly established the title of real property in the owner, without limitation or end. He/she may dispose of it by sale, or trade or will, as he/she chooses.

General Plan – A general plan is a legal document, required by state law, that serves as a community's "constitution" for land use and development. The plan must be a comprehensive, long-term document, detailing proposals for the "physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgement bears relation to its planning" (Government Code Section 65300 et. seq.).

Habitat – Place where an animal or plant normally lives, often characterized by a dominant plant form or physical characteristic (i.e., the stream habitat, the forest habitat)

Habitat Conservation Plan (HCP) - California Fish and Game Code Section 2800-2840 A plan prepared pursuant to an agreement entered into in accordance with subdivision (a) of Section 2810 of the . The plan identifies and provides for the regional or areawide protection and perpetuation of natural wildlife diversity, while allowing compatible and appropriate development and growth.

Mitigation - The act of eliminating, reducing or minimizing an impact on the environment by incorporating measures into the project proposal which directly or indirectly have an effect on the impact. Mitigation includes 4 elements that are typically applied successively as follows. An applicant generally does not descend to the succeeding levels until he or she has shown that the preceding methods are infeasible:

a. Avoiding the impact by not taking a certain action or parts of an action.

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

c. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

d. Compensating for the impact by replacing or providing substitute resource or environments.

Mitigation Bank - Habitat restoration (usually associated with wetland habitats), creation, enhancement, and in exceptional circumstances, preservation undertaken expressly for the purpose of compensating for unavoidable habitat losses in advance of development actions, when such compensation cannot be achieved at the development site or would not be as environmentally beneficial. Mitigation banks typically involve the consolidation of small, fragmented mitigation projects into one large contiguous site. Units of restored, created, enhanced or preserved wetlands are expressed as "credits" which may subsequently be withdrawn to offset "debits" incurred at a project development site.

Natural Communities Conservation Plan (NCCP) - Based upon the Natural Communities Conservation Planning (NCCP) Act of 1991 (California Fish and Game Code Section 2800-2840) An NCCP is a plan prepared pursuant to an agreement entered into in accordance with subdivision (a) of Section 2810 of the Fish and Game Code. The plan identifies and provides for the regional or areawide protection and perpetuation of natural wildlife diversity, while allowing compatible and appropriate development and growth. As opposed to the single species interpretation of the State Endangered Species Act, this act aims at protecting many species using a regional approach to habitat preservation.

Open Space – For purposes of this program, open space is defined through Government Code Section 65560(b) 1-4 defines in the context of General Plans in the State of California.

1. **Open space for the preservation of natural resources** - including, but not limited to - areas required for the preservation of plant and animal life, including habitat for fish wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

2. **Open space used for the managed production of resources** - including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

3. **Open space for outdoor recreation** - including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, 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.

4. **Open space for public health and safety** - including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

Riparian Habitat - Riparian lands are comprised of the vegetative and wildlife areas adjacent to perennial and intermittent streams. Riparian areas are delineated by the existence of plant species normally found near freshwater. Using contemporary definitions provided by DFG, two forms of riparian habitat commonly exist in Placer County, the Valley Foothill Riparian and the Montane Riparian Habitat.

Species – A group of actually or potentially interbreeding populations that are reproductively isolated from all other kinds of organisms.

Wetlands – Wetlands are a habitat type that is unique due to its saturated soil conditions and the plants and animals that have adapted to this condition. A number of agency definitions have been generated to describe what constitutes a wetland. The following are those that are most relevant to this program.

1. **California Department of Fish and Game**
   The California Department of Fish and Game adopted their current wetland definition in 1987 when the Fish and Game Commission accepted the recommendations of the Commission's Wetland Subcommittee. The following is an excerpt from the Fish and Game Code which explains the policy of the Fish and Game Commission as it relates to wetland definitions, mitigation strategies and habitat value assessment methodologies.

   Principles of Application

   The Fish and Game Commission accepts the wetland definition, mitigation strategies and habitat value assessment methodologies recommended by the Department [of Fish and Game] in its report submitted to the Commission Wetland Subcommittee on June 24, 1987. The Commission expects the Department of Fish and Game to apply the Commission's wetland policy and the Department's proposed implementing procedures with scientific accuracy; sound judgement; and in a manner which assures the protection and enhancement of the state's wetland resources. The Department, in its application of the policy and implementation procedures to specific situations, should strive to maximize the long-term interests of the fish and wildlife resources involved and to make recommendations that are both timely and appropriate to this end. The Department may depart from the letter of the policy only when such departure will better serve the long-term interests of wetland resource protection.

Scope of Policy

The Commission has found the policy and implementation procedures to be nonregulatory in nature. Their intended application is in those circumstances where the Department's role is advisory, as in, but not limited to, the application of the California Environmental Quality Act, National Environmental Protection Act, California Coastal Act, Clean Water Act, and other applicable state and federal laws and regulations.

Definition

The Commission concurs with the Department's recommendation to use the U.S. Fish and Wildlife Service's (USFWS) definition as the basis for wetland identification. When all three wetland indicators (i.e., hydric soils, wetland vegetation, and hydrology) are present, the presumption of wetland existence shall be conclusive. Where less than three indicators are present, policy application shall be supported by the demonstrable use of wetland areas by wetland associated fish or wildlife resources, related biological activity, and wetland habitat values.

The USFWS wetland identification system should be applied by professionals trained in its methodology. The accuracy of existing wetland inventory mapping should not necessarily be assumed. The Commission supports the Department's current practice of on-site inspections of projects which would impact wetlands and strongly encourages the Department to conduct on-site inspections of such projects and particularly whenever requested to do so by project proponents or concerned public agencies.

2. U.S. Fish and Wildlife Service Definition

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (i.e., plants adapted to survival in the extreme conditions of a wetland environment); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

3. U.S. Army Corps of Engineers/Environmental Protection Agency Definition

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

4. Natural Resource Conservation Service

Wetlands are defined as areas that have a predominance of hydric soils and that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, except lands in Alaska identified as having a high potential for agricultural development and a predominance of permafrost soils.

Appendix B
EXISTING OPEN SPACE CONSERVATION PROGRAMS

Placer County's open space resources have long been recognized as an important asset to the community. Since the middle of the last century the County's agricultural and timber industries have been an important part of our local economy while at the same time preserving large areas of open space. Additionally, the County's scenic and historic resources are valued by many throughout the region, the state and the nation. As our community grows we are becoming increasingly aware of our need to protect these important resources. With the growth that is now occurring, we have also found out that we need to develop recreational opportunities for an expanding population, to separate or define our urban areas and to protect the public from impacts caused by natural disasters.

Placer County has focused its attention over the years on some of these resources by developing programs and ordinances that will help preserve or conserve the resource. For example, the County has established a General Plan and zoning designations that provide protection for agricultural and timberlands, we also have the right to farm ordinance, the Williamson Act program and the timber preservation program. For other open space resources, the County has developed little in the way of a program or regulatory response to the conservation of the open space resource (e.g., scenic areas). One of the purposes of ***Placer Legacy*** will be to develop new programs where no programs currently exist and to strengthen existing programs.

STATUS OF EXISTING PROGRAMS

The County has developed a number of programs to conserve open space. The following is a l. of existing programs for each of the open space resources discussed in this report.

Agriculture/Timber

Because of the long legacy of agricultural and timber development in the county, a significant amount of attention has been paid to protect agricultural/timber lands and the agricultural/timber economy. The following is a list of those programs that are in place today.

1. **Placer County General Plan** – The Placer County General Plan was adopted in 1994. The General Plan contains a chapter of goals and policies specifically related to agricultural and timber lands in Placer County. Many, if not most, of the policies were written with the intent of preserving existing agricultural and timber resources of the County. The General Plan land use diagram is the graphical representation of the General Plan policy language. The land use designations depicted on the General Plan are created with the intent of establishing a land use pattern that separates incompatible uses and places compatible uses adjacent to each other. For agricultural/timber areas this means that the General Plan avoids placing land uses adjacent to agricultural/timber areas that will result in an environment that detrimentally affects agricultural/timber operations.

   The General Plan also contains buffer standards that are written to insure that new uses locating adjacent to agricultural/timber lands are required to create a physical separation between the new use and existing agricultural/timber operations. The burden to establish the buffer is upon the new use not the existing agricultural/timber operator.

Managing Department or Entity
Placer County Planning Department

2. **Zoning Ordinance** – The Zoning Ordinance provides land use regulations for a wide variety of land use types. Four zone districts, Farm, Agricultural Exclusive, Forestry and Timberland Production, are included in the Zoning Ordinance for the expressed purpose of allowing farming or timber operations as the key land use activity permitted in the zone district. In the Forestry and Timberland Production zones, even single family residences are not permitted. In the Farm and Agricultural Exclusive, homes are permitted as a compatible use but not as the primary use of the land. The Zoning Ordinance has been an effective tool in that it essentially creates an environment within which farming and timber operations can occur. Incompatible land uses are prohibited or limited which allows agricultural/timber operations to occur essentially free of the constraints of local land use regulations.

   The zoning ordinance has also been successful in insuring that viable farm and timber areas are kept in lot sizes of a sufficient size to make agricultural/timber operations economical. In the valley floor, the zoning of most of the Farm zoned properties is 80-acre minimum. In the foothill region, where hobby farms dominate the landscape, the zoning minimum is typically 10 and 20 acres. In the timber areas, the minimum acreage can range from 10 to 640 acre minimum parcel sizes.

   The zoning ordinance will continue to be an effective regulatory tool and will continue to be used as one of the key implementation tools for the Placer County General Plan.

   Managing Department or Entity
   Placer County Planning Department

3. **Williamson Act Program** – In 1967, the Board of Supervisors formed the first Agricultural Preserve in Placer County under the provisions of a section of state law known as the Williamson Act. The Williamson Act allows the County and a farmer to enter into a contract wherein the County reduces the property taxes of the farm if the farmer provides food and fiber and he or she allows land use restrictions to be placed on the property. The restrictions are placed to insure that the farm's productivity is maintained during the life of the contract. Once a contract is established it will run for approximately ten years and is automatically renewed unless the farmer requests the nonrenewal of their contract.

   The Williamson Act has been effective at maintaining both open space and productive agricultural lands in western Placer County. Furthermore, because of the additional restrictions imposed by the contract (e.g., no subdivision of contracted lands), it has also kept contracted properties in parcel sizes in excess of the zoning minimums. Lastly, the land use restrictions have also kept incompatible land uses away from agriculturally productive areas. Recent trends have resulted in more land coming out of the program than lands coming into the program. Contracts are also being divided into numerous smaller contracts which typically makes the land less productive. Lastly, a significant amount of contracted land is not actively farmed, possibly as high as 25%. These lands function as open space but their lack of productivity is not consistent with the terms of

the contract. Recent amendments to the County's administrative rules for the Williamson Act program will allow individuals to form a contract for solely open space purposes.

Managing Department or Entity
Placer County Planning Department
Placer County Agricultural Commissioner

4. **Timberland Preservation Zones (TPZ)** – The TPZ is intended to be an exclusive area for the growing and harvesting of timber and those uses that are an integral part of a timber management operation. Land uses within a TPZ-designated area will be restricted for a minimum of 10 years to growing and harvesting timber, and to a limited number of compatible land uses described in the Zoning Ordinance. This zoning generally allows land to be valued for property taxation on the basis of its use for growing and harvesting timber only.

Managing Department or Entity
Placer County Planning Department
State Department of Forestry and Fire Protection

5. **Right to Farm Ordinance** – In 1985, Placer County adopted a Right to Farm Ordinance. The ordinance was amended and strengthened in 1999. This ordinance serves primarily as a disclosure document. The ordinance informs a buyer of property in an agricultural area that existing farming activities may be perceived as obnoxious but, the farmer has the right to continue these activities provided that they are legal and are associated with farming operations (e.g., crop dusting, tilling, planting, operation of heavy equipment, dust and odor generating activities, etc.)

Historical Resources

The County has numerous historical resources; many of which are important and significant in the history of California. Recognition of the importance of these resources and the development of additional programs as a part of the ***Placer Legacy*** program will allow additional opportunities to protect these important places and structures.

1. **Placer County General Plan** – The General Plan contains policies that seek to preserve and protect the significant historical resources. The language in the General Plan essentially encourages rather than mandates the preservation and protection objectives of the plan. Currently there are no regulations that require the preservation of significant historical structures or features. Furthermore, there is no County-managed implementation program in effect that would allow the County to acquire or rehabilitate important historical structures.

Managing Department or Entity
Placer County Planning Department
Placer County Museums Department

2. **Placer County Historical, Architectural and Archaeological Resources Inventory of Placer County** – This inventory was completed in 1992 in order to inventory the known significant cultural resources of Placer County. It covers all of the lands of

unincorporated areas of the County. The inventory contains no regulations and no implementation mechanisms to acquire or rehabilitate significant resources.

Managing Department or Entity
Placer County Museums Department
Placer County Planning Department

3. **CEQA Guidelines, section 15064.5, subd. (c)** – This section of CEQA addresses archaeological impacts. The County is obligated to use the guidelines contained within this section of State law when evaluating projects that have the potential to have important archaeological or historical resources. Application of these guidelines may result in the in situ preservation of resources; the excavation and preservation of identified resources, mitigation of impacts or even the destruction of the resource if it is found to be not important.

Managing Department or Entity
Placer County Planning Department
Placer County Museums Department

Scenic Resources

Placer County is blessed with a tremendous diversity of scenic resources because of the varied landscapes we have moving from east to west. Moving from west to east we move from the Central Valley to the oak woodlands of the Sierra Nevada foothills through a broad range of coniferous forests to an alpine zone at the summit and ending at the depths of Lake Tahoe. In addition to the scenic character of our landscape we have a tremendous diversity of architectural and cultural resources we also contribute to the scenic qualities of our community.

1. **Placer County General Plan** – When the General Plan was adopted in 1994, it superseded a policy document that was approved in 1977 known as the Scenic Highways Element. In the absence of this 1977 document the County must rely upon the limited policy language of the General Plan for scenic resources. The General Plan essentially provides guidelines for new development to insure that projects be designed in a manner which does not detract from scenic areas. Examples of scenic areas include river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes. The General Plan also encourages the protection and enhancement of scenic corridors although no specific scenic corridors are identified at this time. These policies will typically only apply to new discretionary projects.

   In addition to the Placer County General Plan, the County has adopted numerous community plans. These community plans contain policies that address the specific scenic resources of the various unincorporated communities of Placer County. The County's community plans that contain policies specifically related to scenic resources include the following:

   Auburn/Bowman
   Horseshoe Bar/Penryn
   Martis Valley
   Meadow Vista
   Granite Bay

Squaw Valley

Managing Department or Entity
Placer County Planning Department

Public Safety
Numerous programs are already in place to protect property and persons from dangerous natural and man-made disasters. The ***Placer Legacy*** program provides an additional means of utilizing open space and buffer areas to insure that conflicts between economic development activities and the general use of land does not result in public harm.

1. **Placer County General Plan** – The General Plan contains numerous goals and policies which seek to protect the public from natural disasters. In Placer County, these typically take the form of flooding, wildfires, or avalanches. General Plan policies are applied to new land development projects, including the construction of single family homes, in order to insure that there are appropriately designed to avoid or mitigate potential impacts. For example, the County routinely requires projects to place homes or other structures outside of known avalanche areas, or above of the 100 year floodplain of a stream or river. Other natural hazards exist in the County; the examples listed above are those that historically have had the greatest impact and receive the greatest amount of attention on a day-to-day basis.

   Managing Department or Entity
   Placer County Planning Department
   Placer County Department of Public Works
   Placer County Building Department
   Placer County Office of Emergency Services

2. **Zoning Ordinance** – The Zoning Ordinance has numerous requirements that will insure that public health and safety is protected. One of the key purposes of the Zoning Ordinance is to regulate land use activities to "reduce hazards to the public resulting from the inappropriate location, use or design of buildings and land uses in relation to natural and built hazards…". The application of these ordinances on many activities on land in the unincorporated area is the responsibility of the Planning Department. Certain land uses are discretionary and such discretionary uses are only permitted where particular findings are made that state that the public's health and safety is not compromised by the proposed use. If such a finding cannot be made, the use cannot be approved.

   Managing Department or Entity
   Placer County Planning Department

3. **Flood Damage Prevention Ordinance** – The County has prepared a Flood Damage Prevention Ordinance and stormwater management manual. These ordinances primarily serve as guidelines and standards for the purpose of minimizing the loss of property and life in area prone to flood hazards. The guidelines address such activities as construction within the floodplain, activities that result in the loss of flood storage, and activities that will affect the flow of floodwaters within the floodplain.

Managing Department or Entity
Department of Public Works
Placer County Flood Control District

4. **Avalanche Ordinance** - The County developed an avalanche ordinance following the serious avalanche that destroyed structures and killed or injured a number of individuals in Alpine Meadows in the early 1980's. The County's ordinance delineates potential avalanche areas, provides disclosure to the public about the presence of these avalanche areas and requires appropriate engineering techniques in the construction of new homes and buildings that lie within the avalanche prone areas.

   Managing Department or Entity
   Placer County Planning Department
   Placer County Building Department

5. **Fire Safe Regulations** – In 1992 the California Department of Forestry and Fire Protection (CDF) developed a series of standards to create a "fire safe" environment in rural areas that have the potential to be impacted by wildfires. The CDF standards were established through state law but are implemented through local ordinance. One of the key features of the fires safe standards is fuel modification around homes and a requirement for an adequate separation of structures in rural areas in order to create a defensible space.

   Managing Department or Entity
   Placer County Planning Department
   Placer County Building Department
   California Department of Forestry and Fire Protection

Outdoor Recreation

Outdoor recreation opportunities are provided by numerous entities in Placer County including independent special districts (Auburn Recreation District and the North Tahoe Public Utilities District), the federal government (U.S. Forest Service and the Bureau of Land Management), state departments (Park and Recreation Department), local government (Placer County and the Cities of the County) and by private parties (e.g., hunting and fishing clubs). New park and recreation areas are generally associated with the impacts with new development. New development has an obligation to mitigate their impacts on park and recreation facilities by typically paying fees or by constructing new parks. Little in the way of discretionary revenue is available to build new park and recreation facilities for the community at large.

1. **Placer County General Plan** – The General Plan contains park development standards for recreational areas in unincorporated Placer County. The standards are intended to insure that park areas provide a range of outdoor recreational opportunities, and that such facilities are provided in a timely manner as growth proceeds. The list below contains those standards that are included in the Placer County General Plan Policy Document. Other standards may be included in the individual community plans and within the Cities of Placer County:

   a. 5 acres of active park land per 1000 residents

b. 5 acres of passive park land per 1000 residents
c. 1 tot lot per 1000 residents
d. 1 playground per 3000 residents
e. 1 tennis court per 6000 residents
f. 1 basketball court per 6000 residents
g. 1 hardball diamond per 3000 residents
h. 1 softball/little league diamond per 3000 residents
i. 1 mile of recreation trail per 1000 residents
j. 1 youth soccer field per 2000 residents
k. 1 adult field per 2000 residents
l. 1 golf course per 50,000 residents.

Managing Department or Entity
Placer County Planning Department
Placer County Facility Services Department, Parks Division

2. **Subdivision Ordinance** (Park Dedication In-lieu Fees) – The subdivision ordinance contains a requirement for developers of subdivisions to dedicate land for parks or to pay an in lieu fee where a park land dedication is not required. These revenues are used to acquire and develop park facilities. They are not used for ongoing personnel and maintenance costs.

Managing Department or Entity
Placer County Planning Department
Placer County Facility Services Department, Parks Division

3. **Parks Development and Maintenance** – A number of jurisdictions develop and maintain parks throughout Placer County. The Cities and Placer County typically develop active recreational facilities, e.g., ball fields, soccer fields, playgrounds, etc. A couple of special districts have also been formed to develop active facilities as well. Passive facilities can be found on state and federal lands, primarily in the National Forests and State Recreation Areas.

Typical park development ratios for urban and suburban areas are 5 acres of active parkland per 1000 residents and 5 acres of passive parkland per 1000 residents.

Local agency revenues for park development and maintenance come from park dedication fees, County Service Area assessments, Community Facility District taxes, Lighting and Landscape District Assessments and other forms of revenues. A variety of funding sources provide revenue to state and federal agency management public lands.

Managing Department or Entity

a. Placer County Facility Services Department, Parks Division
b. City or Roseville
c. City of Rocklin
d. City of Lincoln
e. Town of Loomis
f. Auburn Recreation District

g. North Tahoe Public Utilities District
h. Tahoe City Public Utilities District
i. Placer County Water Agency
j. U.S. Forest Service
k. State Department of Park and Recreation
l. Bureau of Land Management
m. Bureau of Reclamation

Separation of Urban Communities

The County has determined that it is an objective of the Placer Legacy project to attempt to create a separation between distinct urban/suburban areas in the County. Such separations could occur between the Cities of Placer County, between the unincorporated area and the Cities, and between unincorporated suburban/urban areas. The use of open space to create this separation will be evaluated by this project. There are a couple of areas of the County today where such buffers or separators exist. In South Placer County, it will be necessary to establish such community separators or community edges in the near future because of the rapid growth that is occurring.

1. **Placer County General Plan or Community Plans** – General Plan policy encourages the separation of urban communities into distinct areas. In that the General Plan only applies to the unincorporated area of the County, it does not insure that such a separation will take place. Where the County has the ability to establish such a separation through the preparation of its own General Plan, community plan or specific plan, the County can insure that a separation is made a part of the land use diagram. An example of this recently occurred in the Sunset Industrial Area Plan. Along the north edge of that plan a permanent buffer exists between the industrial areas to the south in the County and the potential residential areas to the north in the City of Lincoln. This buffer takes two forms: the 100 year floodplain of Orchard Creek which is designated Open Space and the establishment of a wetland mitigation bank also along Orchard Creek which traverses the area from east to west. These two buffers will insure that an open space separation will remain, in perpetuity, up to one mile in depth, between the County's industrial areas and the City of Lincoln.

   Managing Department or Entity
   Placer County Planning Department

2. **City General Plans** – As stated above, the separation between urbanizing areas obviously includes the cities of Placer County. In some instances the County and City interface. Where such examples occur, the County and the City have an opportunity to work together to define the interface of the two areas. Even in the event the City does not create a buffer, the County has the ability if it is interested within the unincorporated area. In other areas of the County there exists numerous City:City interfaces. In this case, the County has no authority to require or have established any separation between urban communities. Only the cities have jurisdiction over their land use and only the cities can determine whether or not a separation is to occur.

   Managing Department or Entity
   City Planning Departments

Appendix C
PLACER COUNTY GENERAL PLAN
CONSERVATION GOALS, POLICIES & PROGRAMS

The Placer Legacy Open Space and Agricultural Conservation Program is based upon the goals, policies and programs of the 1994 *Placer County General Plan Policy Document.* The following represents a paraphrased description of the goals, policies and programs related to the Placer Legacy program. The Board of Supervisors adopted these policies in 1994 when the General Plan was updated. Policy language that provides specific direction that can be incorporated into Placer Legacy program. If there is a reference following the policy statement, it refers to the actual policy language contained in the *General Plan Policy Document*

The policies have been arranged by topical area. Each topical heading reflects one of the seven types of open space that the Board of Supervisors described in the Placer Legacy goal statement they adopted in April of 1998.

Agriculture

- Ensure that new development and public works projects do not encourage expansion of urban uses into designated agricultural areas. (1H1)
- Agricultural lands are to be protected from conversion to non-agricultural uses. (7A1)
- Agricultural lands are to be protected from flooding. (7A4)
- Support the use of conservation easements as a tool for agricultural preservation.
- A program should be developed to allow for the purchase and transfer of development rights as a means to preserve and protect agricultural land. (7.2)
- Forest lands are to be conserved for sustained production and for open space and the conservation of other natural resources. (7C1)
- Encourage CDF to prepare an inventory of yew trees and old growth forests in Placer County in order to incorporate these resources into a biological data base for use in future land use planning decisions. (7.7)
- Identify potential impacts on and the need the preserve of, old growth forests in Placer County. (7.8)

Outdoor Recreation

- Five acres of passive park land should be provided for every 1000 persons in the population. (5A1)

- Passive park land can include floodways, riparian corridors, wildlife corridors, greenways associated with rail development, open water, woodland areas, and sensitive habitat areas. (5A4)

- Recreational development is to be distributed and managed according to an area's carrying capacity, with an emphasis on controlling environmental impacts and conflicts between uses and trespass. (5A13)

- Compatible recreation use of riparian areas is to be encouraged where public access is balanced with environmental values and property rights. (5A22)

- The County supports the development of a countywide trail system that achieves a number of objectives including the protection of open space and natural resources. (5C1)

Scenic and Historic Areas

- Identify, designate and adopt a system of scenic routes (1.4)

- Designate scenic routes in order to preserve outstanding scenic quality within different geographic settings. (1L1)

- Link major points of historical, cultural or recreational interest with scenic routes (1L2)

- Protect and enhance scenic corridors through a number of means including the use of open space easements and land conservation contracts. (1L3)

- Protect historical landmarks and monuments along scenic routes (1L6)

- Preserve or enhance the aesthetic qualities of natural drainage courses in their natural or improved state. (4F10)

- Use, where feasible, incentive programs to assist private property owners in preserving cultural resources. (5D4)

- Consider the use of acquisition programs as a means of preserving significant cultural resources that are not suitable for private development. (5D12)

Plant and Animal Communities

- Permit only low-intensity land uses in areas with sensitive environmental resources. (1A2)

- Development should be planned and designed to avoid areas rich in wildlife or of a fragile ecological nature. (1I2)

- Off-site mitigation of impacts on sensitive areas can be permitted when avoidance of impacts is infeasible or where equal or greater ecological benefits can be obtained through off-site mitigation. (1I2)

- Fish and wildlife habitat is to be protected, restored and enhanced to support fish and wildlife species so as to maintain populations at viable levels. (6C)

- Significant ecological resource areas and unique wildlife habitats are to be identified and protected. Such areas include wetlands, streams, sensitive species habitat, deer fawning areas, critical deer winter range, migratory or wildlife movement zones, routes, large areas of non-fragmented habitat, and spawning areas or anadramous fish. (6C1)

- The habitat of all indigenous species is to be maintained without preference to game or non-game species through the maintenance of habitat diversity. (6C7)

- Critical habitat for state managed, important fish and game species, should be identified and protected from incompatible development. (6C14)

- A detailed countywide inventory of ecologically significant resource areas is to be completed. (6.9)

- Maps are to be developed which depict the extent of critical habitat for important fish and game species. (6.10)

- Preserve outstanding areas of natural vegetation including oak woodlands, riparian are. and vernal pools. (6D3)

- Landmark trees and major groves of native trees are to be preserved and protected. (6D4)

- Large and continuous expanses of native vegetation are to be conserved to provide suitable habitat for maintaining abundant and diverse wildlife. (6D5)

- Wetland and riparian areas should be restored, expanded and managed for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitat. (6D7)

- Open space and natural areas that are of sufficient size to protect biodiversity, accommodate wildlife movement and sustain ecosystems are to be maintained. (6E3)

- Preservation and re-establishment of fisheries in rivers and streams is to be supported. (6C8)

- A comprehensive habitat management plan is to be developed to address long-term preservation and maintenance of sufficient natural habitat to support the diversity of plants and wildlife species currently represented in Placer County indefinitely. (6.11)

- A habitat management plan should be prepared which involves a multi-jurisdictional effort involving state and federal agencies, surrounding counties and the six cities of Placer County (6.11)

- A habitat management plan should prioritize important habitat that supports a high diversity and concentrations of special status species. (6.11)

- A habitat management plan should apply sound conservation biological principles with an emphasis on a multi-species habitat conservation. (6.11)

- A habitat management plan should apply sustainable multiple-use land management principles and incorporation of diverse and potentially compatible land use objectives. (6.11)

- A habitat management plan should include a variety of land preservation, acquisition and easement techniques, funding mechanisms, and cooperative agreements. (6.11)

- A habitat management plan should recognize and protect habitat corridors throughout Placer County, the six cities and adjacent counties to provide for wildlife movement, prevent habitat fragmentation and isolation, and to promote individual identity and physical separation between developed communities. (6.11)

- The County seeks to protect and enhance the natural qualities of Placer County's streams, creeks and groundwater. (6A)

- The County encourages the use of natural stormwater drainage systems to preserve and enhance natural features. (4E1)

- Creek corridors should be preserved through setbacks, easements or dedications. (6A4)

- Perennial streams, intermittent streams and sensitive habitats are to be protected through the use of buffers. (6A1)

- Development near riparian corridors should avoid disturbing the vegetation and if avoidance is not possible, mitigate onsite or offsite. (6A3)

- Wetland communities and riparian areas are considered valuable resources. (6B)

- Wetland impacts are to be reduced to a point of no net loss. (6B1)

- Wetland resources include wetlands defined by the Corps of Engineers and by the Fish and Wildlife Service and Department of Fish and Game. (6B1)

- Upland areas adjacent to wetlands and riparian areas are to be conserved when they are critical to the survival and nesting of wetland and riparian species. (6B4)

- Programs should be developed to publicly acquire creek corridors, wetlands, and significant ecological resources as public open space through the fee title purchase or use of protective easements. (6.5)

- Acquisition of lands for open space purposes should include provisions for maintenance and management in perpetuity. (6.5)

- A resource conservation zone overlay district should be developed and applied to creek corridors, wetlands, and areas rich in wildlife or of a fragile ecological nature. (6.6)

- Federal and state agencies and resource conservation organizations are encouraged to acquire and manage sensitive species habitat. (6C6)

- Important wildlife corridors and sensitive species habitat should be preserved on private lands with the cooperation and encouragement of the County through fee title acquisition or the use of conservation easements. (6C12)

- An ordinance should be adopted requiring the dedication of open space lands or the payment of fees to provide and maintain open space. (6.14)

Endangered and Special Status Plant and Animal Species

- Habitats of rare, threatened or endangered species shall be preserved. (6C6)

- Federal and state agencies, and other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats. (6C6)

- Conduct a detailed countywide inventory of a variety of resource areas, including habitats of rare, threatened, endangered, uncommon or special status species. (6.9)

- A list of sensitive species should be prepared and maintained by the County. (6.13)

Separation of Urban Areas

- Distinguish among urban, suburban, and rural areas to identify where development will occur and where public infrastructure will be provided. This pattern shall promote the maintenance of separate and distinct communities. (1A3)

- Maintain agriculturally-designated areas for agricultural uses and direct urban uses to designated urban growth areas an/or cities. (1H1)

- Require non-agricultural development immediately adjacent to agricultural lands to be designed to provide a buffer to avoid land use conflicts. (1H6)

- Encourage infill of urban areas as an alternative to expanding urban boundaries into agricultural areas. (7A8)

- Identify and maintain clear boundaries between urban/suburban areas and agricultural areas. (7B1)

- Require land use buffers between urban/suburban areas and agricultural areas. (7B1)

Public Safety

- Provide protection from flooding for agricultural activities from flooding. (7A4)

- In areas susceptible to landslides, alteration of land is to be prohibited which could increase the hazard. (8A5)

- Areas with steep or unstable slopes shall be limited. (8A11)

- Floodplain delineations are to be based upon topographic and flow characteristics under fully developed and unmitigated runoff conditions. (4F4)

- Efforts to acquire easements for drainage and other public uses of floodplains are encouraged. (4E2)

- Manage floodplains for their natural resource values. (4F)

- The 100-year floodplain of all rivers and streams are to be maintained in their natural condition with few exceptions. (4F5)

- Floodwaters should be viewed as a resource for waterfowl habitat, aquifer recharge, agricultural water supply and fishery enhancement. (4F8)

- Prescribed burning techniques should be used to mimic the effects of natural fires. (6D11)

- Limit development in areas of steep or unstable slopes to minimize hazards caused by landslides or liquefaction.

- Maintain maps of potential avalanche hazard areas. (8H1)

Appendix D
BOARD OF SUPERVISORS RESOLUTIONS FOR THE PLACER LEGACY PROGRAM

Between April of 1998 and the adoption of the plan, a number of resolutions were presented to the Board of Supervisors for consideration. These resolutions provided both direction and policy statements on the development and implementation of the program. The following is a list of the resolutions approved by the Board of Supervisors. The following pages contain copies of the actual resolution documents

Resolution No.

98-82	Creation of a Citizen's Committee for the Placer County Open Space Implementation Project [Placer Legacy]
99-110	Open Space Trust Fund Expenditures
99-111	Establishing a Willing Seller Willing Buyer Policy for Land Acquisitions Associated with the Placer Legacy Project
99-112	The Placer Legacy Project Policy Related to Open Space Land Acquisitions and Management
99-283	Resolution Directing the Placer Legacy Citizens Advisory Committee and Cou Staff to Prepare a Range of Planning Strategies for the Placer Legacy Open Space Conservation Plan
	Board actions in June 2000

Appendix E

PLACER LEGACY DRAFT STRATEGY FOR THE CONSERVATION OF BIOLOGICAL RESOURCES

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INTRODUCTION

In 1994 Placer County updated and adopted its General Plan, which contains numerous goals, policies, and programs that encourage the conservation of open space and the protection of agricultural resources. In 1998 the County formed a partnership with the Sierra Business Council to initiate the preparation of an implementation program to accomplish these goals. The result was the Placer Legacy Open Space and Agricultural Conservation Program.

Placer Legacy is guided by an eleven member Citizens Advisory Committee that provides recommendations to the Board of Supervisors. An Interagency Working Group, consisting of representatives from state and federal agencies and local governments with jurisdiction in Placer County, will ensure that Placer Legacy is in compliance with all laws, regulations, policies, and ordinances. An independent Scientific Working Group will ensure that the conservation actions recommended by the County and its consultants are scientifically sound.

The Placer County Planning Department, working with Thomas Reid Associates and other consultants, is now developing open space and agricultural conservation strategies in coordination with the Citizens Advisory Committee and appropriate local, state, and federal agencies. Open space issues include agricultural conservation, public safety, cultural resources, community edges and urban separators, outdoor recreation, and biological resources. This draft conservation strategy specifically addresses biological resources.

CONSERVATION STRATEGY

The biological resources conservation strategy of the Placer Legacy project intends to conserve biodiversity county-wide. It will do this by implementing the open-space and habitat conservation policies and programs contained in the 1994 General Plan and numerous community plans. Conservation areas and easements will be acquired only from willing sellers. It is anticipated that the costs of implementing the plan will be covered both by public funding

and development impact fees. General goals are (1) to conserve representative natural habitats within the Great Valley, Foothill, and Sierra Nevada ecoregions, (2) to identify and conserve smaller sensitive communities at the scales at which they occur, (3) to maintain or restore key ecosystem processes, and (4) whenever, possible, to reduce threats to biodiversity (e.g., unnecessary habitat conversion, fragmentation, or degradation; disruption of ecosystem processes; invasive exotic species).

REGULATORY COMPLIANCE

Much land in Placer County is privately held, and a substantial portion of the currently undeveloped private land is already entitled for development. If state or federally listed species are involved, developers will have to secure incidental take permits from the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, or California Fish and Game. The cost of a permit is mitigation through a Section 7 consultation or a Habitat Conservation Plan (HCP) under federal law, or a Natural Communities Conservation Plan (NCCP) under state law, plus the time it takes to negotiate these. If each developer has to negotiate his/her own HCP, mitigation tends to be done piecemeal and is dependent upon the landowner to provide the appropriate conservation measures. However, if Placer County develops an HCP or NCCP, mitigation can be coordinated, conservation standards and objectives can be set higher, and a much more effective reserve design will result plus the burden on the each individual landowner can be reduced. The intention of an HCP or NCCP is to guarantee that lands set aside for conservation will be protected over the long term as specified in the applicable plan.

Conservation actions under Placer Legacy will be far more efficient under an HCP or NCCP because of its county-wide scope and long planning horizon. Placer County has developed a comprehensive database for conservation planning that is appropriate in scale and detail. In addition, the County will be in a much better position to acquire conservation lands outright, purchase conservation easements, undertake restoration projects, and develop incentives for sustainable use that correspond to local community values than would any individual effort.

Placer Legacy will develop a countywide HCP/ NCCP in three distinct planning phases which are tied to habitat types. Planning phases have been prioritized by the immediacy of the threat to species in these habitat types. While developed and implemented in phases, the objective remains to develop a conservation plan that provides linkages between and among the habitats within each phase. Table 1 shows the proposed schedule for phasing.

Table 1. Major planning phases and conservation targets for regulatory compliance in Placer County.

Phase 1
- **Western County**
  - vernal pool/grassland
  - valley riparian
  - salmonid habitat in streams

Phase 2
- **Foothills**
  - foothill oak woodland
- **East Side Sierra Nevada**
  - Martis Valley/Tahoe

Phase 3
- **West Side Sierra Nevada**
  - public and private timberlands
- **East Side Sierra Nevada**
  - public and private timberlands

WESTERN COUNTY AND FOOTHILLS

Valley Grassland/Vernal Pools

Prior to European settlement, the valley grassland habitat was most likely a perennial bunchgrass prairie. The introduction of domestic livestock and the seeds of alien annual grasses, large-scale cultivation, and changes in the fire regime have resulted in the replacement of the original prairie with annual grassland. Valley grassland now consists mostly of introduced annuals, although native bunchgrasses and forbs occur sparsely throughout and some remnant stands of native prairie still may occur. The valley grassland community occurs as a ring around the Central Valley from sea level to about 3900 feet and also forms the understory for oak woodlands.

Valley grasslands in Placer County are habitat for numerous sensitive animal species including Swainson's hawk and the burrowing owl, and they support the majority of the county's vernal pools. Vernal pools are seasonal wetlands that form in shallow depressions of various sizes at sites where soils contain an impermeable layer that produces a perched water table. The depressions fill during winter rains and dry out completely by spring or summer.

There are two types of vernal pools in Placer County. *Northern volcanic mudflow vernal pools* occur on Tertiary volcanic mudflows called lahars. These small pools form in irregular depressions in gently sloping surfaces on the Merhten Formation. A second type, *northern hardpan vernal pools* occur on acidic soils on old alluvial fans ringing the Central Valley. Pools tend to be clustered in archipelagos in localities where the proper conditions for their formation occur. Vernal pool ecosystems are unique and complex assemblages of seasonal wetlands and associated upland watersheds. These ecosystems often harbor rare and endemic native plants and animals as well as provide habitat for other wildlife such as migratory waterfowl.

California vernal pool vegetation is characterized by high endemism, and more than 70% of t plant species are native annuals. Introduced species comprise less than 7% of this flora; unlik the surrounding grassland, vernal pools have resisted invasions well. The number of species within an individual pool (alpha diversity) is usually low and is related to pool area, pool depth, and the amount of bare ground. However, the number of species among pools in an archipelago (beta diversity) is quite high. Thus, typical vernal pool plants are characterized by highly subdivided populations with low genetically effective sizes and low dispersability.

A few vertebrates such as salamanders and spadefoot toads use vernal pools for breeding, but the vast majority of the pool fauna consists of invertebrates. Listed species that are found in vernal pools in Placer County include the vernal pool fairy shrimp and the vernal pool tadpole shrimp and one plant species, the Boggs Lake hedge-hyssop, a member of the snapdragon family.

Valley grassland/vernal pool habitats continue to disappear under agricultural, residential, and industrial development. Most of the few remaining pools have been damaged or disturbed, and they continue to face a variety of threats including inappropriate livestock grazing, off-highway vehicle use, watershed alteration, and trash dumping. Conservation efforts will focus on archipelagos of vernal pools with representative soil and pool types and diversity of plants, animals and natural communities, both rare and common; fencing off a single pool surrounded by development is not an effective strategy because of the low alpha diversity of individual pools. Furthermore, because of the complexity of vernal pool habitats and their associated watersheds, strategies for their conservation must include the surrounding grasslands. In particular, adequate habitat for the pollinators of the vernal pool flora must be included. The areal requirements these pollinators is currently unknown but is a high-priority for future research (see below).

We estimate that several thousand acres of high-quality vernal pool/grassland habitat could be available for one or more core conservation areas within the County. These core areas will be obtained from willing sellers through purchases or easements and will be conserved independently of any mitigation for future development. Selection criteria for acquisitions of remnant grasslands include the amount of endemism, extent of disturbance, and type of land use. For grassland/vernal pool complexes additional criteria include hydrology, position in the watershed, pool density, and pool species diversity and composition. These core areas will not provide development mitigation for impacts to vernal pools and special status species, but will complement and enhance the conservation of habitat and species covered under the HCP/NCCP.

As buildout occurs, vernal pool mitigation, paid for by impact fees, will occur largely along the perimeter of the core areas, as well as in other locations that may be more ecologically appropriate to the specific geographic and habitat characteristics of the vernal pool impact areas. At the present time, the total area necessary for effective vernal pool conservation is not known. However, this is a high-priority research item (see below).

Valley/Foothill Riparian

Riparian areas perform vital ecological services such as dissipating stream energy associated with high water, filtering sediment, capturing bedload, aiding floodplain development, improving ground-water recharge, and providing key fish and wildlife habitat. Many species, including

large number of sensitive species, are dependent on riparian zones during some or all of their life cycles.

Valley foothill riparian (VRI) habitats occur in the Great Valley and Sierra Nevada Foothills subregions from sea level to about 3000 feet. They are generally associated with low velocity flows, flood plains, and gentle topography. In Placer County they are associated with perennial streams such as the Bear River, Dry Creek, Coon Creek, Pleasant Grove Creek and Auburn Ravine. A healthy, mature VRI forest has a canopy layer of cottonwood, California sycamore, valley oak, or some combination of the three.

Research has repeatedly demonstrated causal linkages between riparian condition and fish habitat quality. Particularly important functions of riparian forests are their ability to provide shade and a source of wood to streams and to regulate inputs of nutrients and other materials. It is also well known that maintaining the physical connection between riparian forests along fish-bearing streams and the rest of the stream network is a necessary prerequisite for high quality stream habitat. VRI habitats provide food, water, migration and dispersal corridors, and escape, nesting, and thermal cover for a number of wildlife species. Fifty-five species of mammals and 147 species of birds are known to use VRI habitats in the Central Valley region. This represents 30% of the mammals and 27% of the birds in the entire state.

Periodic disturbance by flooding is necessary to maintain healthy riparian habitats. Thus, management prescriptions for upstream impoundments and diversions will have to be examined and possibly revised. Furthermore, the management of riparian ecosystems has to focus not only on the zone of vegetation immediately adjacent to the stream but also on a broader region that has direct influence on the stream. This broader area has three overlapping zones, (1) a *community influence zone*, the area recognized as clearly riparian, (2) the *energy influence zone* which includes all the riparian area that is likely to contribute energy and structure to the aquatic ecosystem, and (3) the *land use influence zone* in which human activity is likely to influence the aquatic ecosystem by increasing nutrients, sediment, and other factors.

The land use influence zone increases as a function of the type of disturbance, the steepness of surrounding hillsides, and the erodibility of soils. Inappropriate livestock grazing also has a major impact on riparian zones. These relationships are probably multiplicative.

Establishing variable-width riparian management zones (buffer strips) based on stream attributes, the riparian community, and hill-slope gradients, is probably the most effective strategy for conserving riparian zones. This action will result in stabilized stream banks and shoreline and improved water quality, help ensure viability of native species, maintain special habitats and plant and animal community diversity, increase watershed connectivity, maintain floodplains and water tables, and moderate streamflow and sedimentation. Developing scientifically sound guidelines for determining the width of riparian buffer strips is another high-priority research item (see below).

Placer Legacy's conservation plan for valley/foothill riparian communities is to (1) establish and implement over time variable-width riparian management zones and restore riparian connectivity along key creeks using conservation easements from willing sellers, and (2) rehabilitate degraded stream reaches for frog/salmonid habitat in favorable localities by working with the 20 or so

federal, state, and local agencies and private groups with ongoing projects and responsibilities in this area.

The habitat needs of target species, including birds identified by the Riparian Bird Conservation Plan (Partners in Flight, Riparian Habitat Joint Venture Project), will be used to develop standards for land acquisition and riparian enhancement. The value of riparian woodlands as movement corridors for species between upland habitats, such as vernal pool grasslands and oak woodlands, will be considered to the extent possible.

Intermittent streams, which may provide valuable habitat for fish, amphibians and macroinvertebrates, are also important for preserving water quality, reducing flood potential, and improving channel stability in downstream main channels. Riparian conservation activities will include the identification and conservation of naturally functioning intermittent drainages, and the enhancement of degraded channels within the context of current land use patterns and existing hydrologic modifications.

Salmonid Habitat in Streams

Placer County streams provide habitat for several races of salmon and steelhead trout. Dam construction has likely affected adult spring-run salmon and steelhead trout populations, which historically migrated high into the watershed. Fall and late fall-run chinook salmon historically and presently utilize the lower stream elevations on the valley floor. These lower-elevation streams have been affected by sedimentation and erosion, loss of riparian canopy cover and changing land use patterns within the watershed.

The Bear River and the American River are most likely the only streams that supported spring run salmon and steelhead trout because they are the only streams that extended to high elevations and provide the temperature regime required of these fish. Opportunities to restore anadromous fish runs above existing dams are limited, particularly along the American River. However, smaller tributary streams such as Dry Creek and Auburn Ravine likely play an important role in contributing to the overall Central Valley salmon and steelhead trout population. The protection and enhancement of salmonid habitat in these smaller streams will help maintain genetic diversity and increase the probability of long-term persistence by providing population refuges.

Accessible spawning habitats have been degraded from timber harvest, mining, road construction, development of upland areas, and other activities that impact stream habitat and riparian quality. As previously discussed, Placer Legacy will assist in the enhancement and maintenance of healthy and functional stream and riparian zones, recognizing the potential for increasing salmonid populations throughout western Placer streams.

Oak Woodland

Oak woodland is a 20- to 30-mile wide belt of oak-dominated communities growing between open grassland and montane forest or chaparral. The dominant trees are deciduous oaks, *Quercus lobata* (valley oak), and *Quercus douglasii* (blue oak) along with *Quercus wislizenii* (interior live oak). At higher elevations, foothill (digger) pine, *Pinus sabiniana*, and black oak, *Quercus kelloggii* become important components in these communities. Ground cover in oak woodlands, except in rare remnant stands, is usually dominated by introduced annual grasses and forbs. Understory shrubs often are few and concentrated on shallower soils.

Oak woodlands are important wildlife habitat, with over 300 vertebrate species relying on them for feeding, cover, or nesting sites. These communities are also very important to water quantity and quality, and they provide public recreation and aesthetics.

Since European settlement, oak woodlands have been managed primarily for livestock and firewood production, and over 80% are in private ownership. Historically, losses of oak woodlands occurred because of clearing for range improvements and agriculture and fuel wood harvest. Old aerial photographs show that many of the existing oak woodlands in small-parcel rural residential areas are second-growth stands that have replaced fruit orchards abandoned about 50 years ago. The major losses of oak woodland now are from intensive residential and industrial development. Poor oak and understory shrub recruitment and regeneration are problems in some areas.

Oak woodlands present a substantial management challenge at the landscape scale; road networks, fragmentation, and increasing interface with urban areas pose major threats to their biodiversity. Road networks increase wildlife mortality and provide invasion opportunities for invasive exotic species; fragmentation results in the isolation of small, extinction-prone populations; and urban encroachment brings household pets, humans, and fuels management policies into these habitats.

If approved by the Board of Supervisors, Placer Legacy will attempt to acquire by purchase or easement a substantial acreage of oak woodlands in the area bisected by Coon Creek and the Bear River. This area has the largest stands of undeveloped and unfragmented oak woodlands in Placer County and is adjacent to similar stands in Nevada County. If successful acquisitions are made, the area will be managed as a regional park/conservation reserve.

Most of the oak woodland in the southern and central parts of the county is zoned for rural residential development. In this area Placer Legacy will undertake a vigorous outreach and education program to educate land owners about the biological values of oak woodlands. This education program will be accompanied by a concerted effort to encourage landowners to adopt voluntary conservation and fire safety guidelines for their properties.

Placer Legacy also will identify properties for easements to enhance north-south and east-west connectivity in the oak woodland zone. Ideally, such properties should be part of large, contiguous, high-quality stands of oak woodlands with connectivity to riparian zones. Both east-west and north-south connectivity in this zone are important to the County's biodiversity. The persistence of many foothill species depends on north-south connectivity, and up-elevation range shifts facilitated by east-west connectivity may allow for the persistence of species that can no longer live at lower elevations because of global warming. The unique requirements of individual special status species, with respect to oak woodland configuration/connectivity and vegetation characteristics, will also be considered when setting land acquisition priorities.

Research is currently underway in areas zoned as rural residential in the oak woodland zone to determine the extent to which native biodiversity is conserved along the development-density gradient (see below).

SIERRA NEVADA

Habitat Types

A series of major habitat belts resulting from changes in elevation and topography runs lengthwise (primarily north-south) along the Sierra Nevada. Most of these belts can be further subdivided into habitat types determined by elevation, exposure, soils, and past disturbance. *Zonal habitat types* develop within certain elevational boundaries on well-drained sites with moderate slope and well-developed soils. *Intrazonal habitat types* occur within or are interspersed with zonal habitats in places that have poor drainage, steep slopes, or unusual soils. *Azonal habitat types*, such as riparian zones and wet meadows, develop wherever the right conditions occur at any elevation. The major habitat belts and habitat types are shown in Table 2.

Table 2. Major Sierra Nevada habitat types.

ZONAL AND INTRAZONAL HABITATS

Foothill woodland/chaparral belt (900'-5,600')
- Chamise-redshank chaparral
- Mixed chaparral

Westside yellow pine belt (2,600'-7,900')
- Ponderosa pine
- Sierran mixed-conifer
- Montane hardwood-conifer
- Closed-cone pine.
- Montane hardwood
- White fir

Eastside yellow pine belt (5,000'-6,500')
- Bitterbrush.
- Eastside pine
- Jeffrey pine

Lodgepole pine-red fir belt (7,000'-10,000')
- Lodgepole pine
- Red fir
- Aspen

Subalpine belt (9,000'-11,000')
- Subalpine conifer

Alpine belt (10,600'-up)
- Alpine dwarf-shrub

AZONAL HABITATS
- Montane chaparral
- Montane riparian
- Wet meadow

In many respects, these are the most important habitat types in the County. Most of them are forests, and forests are fundamental to sustainability. Not only do forests provide commercial timber, fuel, many non-wood products, and recreation, but they also provide invaluable environmental services. They protect watersheds and thus regulate the quantity and quality of water flows. They protect soils with their moisture and nutrients. They modulate climate at local and regional levels through regulation of precipitation and albedo, and they help to slow global warming by acting as carbon sinks. These forest habitats also are home to a number of sensitive species including the bald eagle, northern goshawk, California spotted owl, Sierra Nevada red fox, and California wolverine.

Conservation Needs

The conservation of these habitat types is critically important for biodiversity conservation and sustainable development in Placer County, but the checkerboard ownership pattern in the Sierra Nevada makes effective management at the landscape scale a major challenge. Public lands managed by the U.S. Forest Service, the U.S. Bureau of Reclamation, and the U.S. Bureau of Land Management are interspersed with privately-owned lands. Much of the private land is owned by large corporations, but there are also many smaller holdings.

Placer Legacy will provide opportunities for coordinated land management between a variety of public and private partners. Since so little is understood about how to manage entire landscapes to retain their ecological integrity, adaptive management approaches must be adopted by these partnerships.

In 2000, the U.S. Forest Service is expected to amend 11 forest plans affecting nine million acres of public lands in the Sierra Nevada. The Agency's purpose is to address concerns related to the degradation of aquatic, riparian, old growth, and hardwood ecosystems. Placer County will review the several alternatives presented in the Agency's environmental impact statement and support the plan that will best protect and restore ecological processes and contribute to long-term ecological sustainability and human well-being. The County also will urge the Forest Service to exercise decisive leadership to bring about a new era of management for ecological and economic sustainability.

Major Questions

The following questions have been identified as important to ecological sustainability in the Sierra Nevada. However, these have not yet been addressed by the Citizen's Advisory Committee, the Interagency Work Group, or the Scientific Working Group in any detail. They will be addressed in Phase 3.

Watershed restoration. What are the most effective and cost-effective ways to restore degraded watersheds? Suggested actions include the restoration of natural ecological processes, the rehabilitation of wet meadows, the reduction of road densities, the establishment and maintenance of variable-width riparian buffers, and the strengthening of mitigation measures related to dams and other water developments.

Wildlife habitat. What is the most effective way to support a diversity of wildlife and other species? Maintaining a variety of successional stages, including late-successional-old growth, is assumed to be very important.

Sensitive areas. Ecologically significant areas and other conservation areas have been identified by the Sierra Nevada Ecosystem Project, the Nature Conservancy, the California Native Plant Society, and other organizations. Should these areas receive special attention from Placer Legacy?

Connectivity. A high level of landscape connectivity is critical to species persistence. Establishing and maintaining habitat connectivity will require land management agencies to coordinate with adjacent public and private landowners. How can this best be accomplished?

Fire management. Can a regional approach to fire management be developed that is biodiversity-friendly, restores the natural role of fire within habitat types and across landscapes, reduces the risk of fire at the urban-wildland interface, and focuses fire suppression efforts in areas where substantial threat to human life and property may exist?

Timber harvest. Does following best forest practices on both public and private lands significantly lessen the impacts of timber harvest? Are these practices especially important on lands adjacent to streams and wet meadows?

Genetic diversity. The genetic diversity of forest resources is critical to sustainability. How can methods for conserving this diversity be developed and implemented on both public and private lands?

Residential development. Many private lands in the Sierra Nevada are planned for or undergoing intensive residential development (e.g., Martis Valley, Squaw Valley, Alpine Meadows, and the Truckee River corridor). How can the impacts of these developments on ecological sustainability be minimized?

Land exchanges and acquisitions. How can land exchanges and acquisitions be most useful in helping consolidate public land into larger and more manageable blocks?

Monitoring. How can a scientifically sound regional monitoring program for tracking ecological and socioeconomic trends and assessing the results of adaptive management actions be developed and implemented effectively?

PRIORITIZED RESEARCH NEEDS

The following research needs have been identified as contributing to effective conservation planning (Phases 1-3) and implementation (implementation phase). Information from Phase 1 projects will be needed before the information from projects focused on later phases.

Riparian Buffer Strips (Phase 1)

Establishing variable-width riparian management zones (buffer strips) is probably the most effective strategy for conserving riparian zones. Thus, developing scientifically sound guidelines for determining the width of riparian buffer strip is a high priority. One useful product of this research would be a predictive model that uses stream attributes, soil types, topography, and kinds of disturbance to determine the community influence zone, the energy influence zone, and the land use influence zone.

Vernal Pools (Phase 1)

Patterns of alpha and beta diversity in vernal pool complexes in Placer County is essentially unknown. Furthermore, little information is available on the habitat requirements of pollinators of vernal pool plants. Research that addresses both of these questions should begin as soon as possible.

Remnant Stands of Native Grassland (Phase 1)
The California Native Plant Society will conduct surveys to locate any remnant stands of nati bunchgrass prairie. If found, these stands will be a high conservation priority.

Groundtruthing Geographic Information System Layers (Phases 1-3)
Over the past year the County has obtained an impressive electronic spatial database relevant to biological resource conservation. Coverages include vegetation, soils, land use, wildlife habitat relationships, riparian and vernal pool areas, known locations of sensitive species, and parcel ownership. Some of these coverages will need ground-truthing, however. These coverages need to be identified and the relevant information obtained in the field as soon as possible.

Species Information (Phases 1-3)
Placer County supports several hundred species of vertebrates, over a thousand species of vascular plants, and an indeterminate, but very large, number of invertebrates, nonvascular plants, fungi, lichens and microbes. Planning for all of these species is clearly impossible. Thus, several groups of *target species* must be used as surrogates for species diversity in general. Information must be acquired on the following target groups as soon as possible for HCP/NCCP development and increase citizen awareness of the unique biological resources of Placer County. Additionally, distribution of sensitive species on conservation lands or lands to be developed will be determined by extensive field surveys.

Species of conservation concern are species that are federally or state listed, proposed for listing, candidates for listing, or have a high likelihood of being listed during Placer Legacy's planning horizon. If these species are likely subject to "take" during future development, an federal and state standards for issuing take authorizations are met by the biological resources conservation plan, species in this group may receive take authorizations.

"Species profiles" of the 125 or so species that fit into this category are currently in preparation; about three quarters of them have been completed. Information contained in the species profiles includes regulatory status (state and federal), basic life history information, current distribution and abundance statewide and in Placer County, threats to persistence, potential conservation strategy, proposed monitoring program, and literature references and other sources of information. Species profiles will be peer-reviewed by both independent scientists and agency biologists; after review they will be available to the general public on the "placerbiodiversity.com" web site.

Regional endemics include species that are not listed but are known to have regionally significant populations in the county and are important to include in the planning process to ensure their long-term regional viability (e.g., California slender salamander, *Batrachoseps attenuatus*).

Flagship species are species that are not rare or threatened but are popular with the general public. Although most are well covered by existing regulations, their inclusion in Placer Legacy planning is important to maintain citizen interest. Examples are oaks, mule deer, black bear, mountain lions, and western bluebirds.

The presence of species of conservation concern, regional endemics, and flagship species on conservation lands or lands slated for development will be determined by field surveys as needed.

Small Patch Ecosystems and Associated Species (Phase 1-3)
The present collection of vegetation coverages is adequate to identify *coarse-scale ecosystems* of matrix-forming vegetation and *large-patch ecosystems*. The former are defined by general, widespread climatic and elevational gradients (e.g., foothill woodland/chaparral belt, westside yellow pine belt), while the latter are relatively discrete communities defined by distinct physical factors and environmental regimes (e.g., chamise-redshank chaparral, closed-cone pine, montane chaparral, valley-foothill riparian).

While these GIS coverages are adequate for much conservation planning, additional work will be necessary to identify *small-patch ecosystems*. These ecosystems, a few square meters to a few thousand hectares in extent, tend to be relatively discrete, geomorphologically defined, and spatially fixed; they often occur because of distinct abiotic factors (geologic outcrops, unique soils, or hydrologic features). Many local-scale invertebrate and plant species are closely connected with specific small-patch ecosystems. These species tend to be poor dispersers or they may be small-patch ecosystem specialists that exist as metapopulations. Examples include plants restricted to unusual soil types, amphibians known from only a few localities, or bats that require caves. Many of these species will require species-specific or site-specific conservation, management, and monitoring.

The first step in locating these small-patch ecosystems and their associated species will be to assemble GIS coverages of topography, geology, vegetation, and soils at a sufficiently fine scale. The second step will be to survey for unique elements of biodiversity.

There are a number of important outcomes of such a project. First, it will help pinpoint potential locations of unique communities and species, and it can serve as a good demonstration to the public of what already has been lost. This project also will provide baseline data from which to model potential changes in biodiversity under various management scenarios. Moreover, such a study can help make the point that unique biodiversity can be found in many small areas throughout the county and that landowners should be careful stewards of these resources.

Oak Woodlands (Phase 2)
Research has begun to assess the pattern of species persistence along an urbanization and road-impact gradient in the oak woodland zone. The hypothesis to be tested is that species occurrences in this zone are more related to the intensity of land use than to biophysical factors (e.g., soils, exposure, slope). Since the biodiversity of oak woodlands consists of thousands of species of microbes, plants, invertebrates, and vertebrates, two indicator taxa that have proved previously to be useful in this regard (birds and butterflies) have been selected as surrogates for biodiversity as a whole. This research should be completed by the spring of 2001.

Additional coverages will be necessary to establish the spatial arrangement of oak woodland patches and types of connectivity among them. Computer modeling will be necessary to evaluate the range of conservation options available.

Other important research topics include (1) determining the types and densities of key habitat elements necessary to maintain biodiversity in the oak woodland habitat, and (2) identifying appropriate combination of disturbance, acorn supply, spring precipitation, and predator pres that leads to successful oak regeneration.

Sierra Nevada River Basins (Phase 3)
The major river basins (e.g., North Fork of the American, Middle Fork of the Rubicon, Bear, Yuba, Truckee) and the lower-order streams that drain into them have been identified as high conservation priorities. However, a detailed GIS analysis of these watersheds will be useful for informed decision-making.

Monitoring and Adaptive Management (implementation phase)
Placer Legacy will develop adaptive management plans for its conservation lands. Adaptive management is far more than simply trial and error tinkering; rather, it has several key and obligatory steps which include a clear statement of management goals and objectives, conceptual models that explore policy alternatives, targeted research to provide necessary knowledge, selection of appropriate indicators for monitoring, monitoring of indicators, assessment of management effectiveness, and a clear connection between data and further management actions.

Indicators for monitoring will include land cover measured by aerial photographs, population trends in species of conservation concern, presence of habitat indicator species, regional endemics, species associated with unique microenvironments, and invasive exotics such as star thistle. Additional monitoring may be specified in performance standards for a HCP/NCCP. A scientifically based monitoring plan is paramount to the measurement of the effectiveness of conservation plan design and management actions. Monitoring and adaptive management w. allow for needed modifications that will provide necessary assurances for such large scale conservation planning efforts such as Placer Legacy.

Habitat indicator species. Many species that are small and difficult to survey will be conserved by conserving healthy habitats, so it is critical to identify more easily surveyed species that are sensitive to the general effects of land use. Taxa that include such species are freshwater mussels, crayfish, amphibians, fishes, flowering plants, conifers, ferns, tiger beetles, odonates (dragonflies and damselflies), reptiles, butterflies (including skippers), mammals (especially bats), and birds. A suite of habitat indicator species will be selected from these taxa for each of the conservation lands in Placer Legacy. Species selected will be habitat-specific, relatively easy to sample, abundant enough to get reasonable sample sizes, and, whenever possible, chosen from taxa that are popular with the public. Habitat indicator species could include both resident species and species that use habitats in the county for migration or wintering.

Population trends in species of conservation concern. If a species of conservation concern is found to be declining, the first step in reversing that trend is to determine whether it is declining because of a shortage of habitat (area-limited), a shortage of critical resources (resource-limited), an inability to disperse between suitable habitat (dispersal-limited), or is process-limited, (i.e., it would be able to persist if the habitat were managed in a different way). Area-limited species need additional habitat; species unable to disperse across unsuitable habitat require enhanced connectivity. The critical resource(s) identified as limiting for resource-limited species must be increased to a level that meets their needs. For process-limited species it is necessary to ide

the processes (population, community, ecosystem) that are limiting and determine how these processes are linked to the persistence of these species, to show explicitly that designated conservation areas will support the appropriate intensity, rate, and frequency of these processes, and to demonstrate, at least qualitatively, how other management actions might affect these processes.

Some species may not be limited by any of the above factors (e.g., it is not clear whether declining amphibians are primarily area-, resource-, dispersal-, or process-limited; many amphibian declines seem to be far too complex to fit neatly into these boxes). Others may be declining because of more straightforward problems such as the invasion of exotics such as star thistle or bullfrogs. In addition, many species themselves control key processes (e.g., gray foxes are key mesopredators and quite sensitive to urbanization). The complexities of managing multi-species reserves should not be underestimated.

County-wide Monitoring (implementation phase)

Placer Legacy also needs to develop a set of indicators that communicates information about changes and trends in the county's environment as a whole in much the same way as employment and inflation rates indicate the health of the economy. This set of environmental indicators will help focus appropriate attention on ecological conditions and help guide informed policy choices. These indicators must be credible, understandable, quantifiable, and broadly applicable. The data that support them must be clear and interpreted objectively.

While some relevant data already are being collected regionally by federal or state agencies, other data need to be obtained by the county. These data include land cover, ecosystem resilience, and ecosystem productivity. Land cover--the types and extent of wetlands, riparian areas, grasslands, vernal pools, etc.--should be surveyed and reported on every five years to determine how conditions are changing. Ecosystem resilience (the capacity of ecosystems to sustain themselves) can be measured by trends in species diversity (as indicated by changes in lists of species of concern), invasive species, nutrient runoff, and soil quality; and a number of indices (e.g., NDVI) can measure ecosystem productivity directly from Landsat data.

Appendix F
A GUIDE TO PLACER COUNTY ECOLOGICAL ZONES

A GUIDE TO AQUATIC AND WETLAND HABITATS - Peter F. Brussard (7/7/99)

INTRODUCTION

Aquatic and wetland habitats in Placer County include riverine (rivers or streams), lacustrine (lakes and ponds), and fresh emergent wetlands. Riverine, or lotic, habitats are characterized by intermittent or continually running water, while lacustrine (lentic) habitats are the water contained in inland depressions or dammed riverine channels. Riverine habitats range from small, headwater streams to major rivers; lacustrine habitats vary from small ponds to large lakes and reservoirs. Vernal pools are technically lacustrine habitats, but because of their conservation importance in Placer County they are treated separately. Fresh emergent wetlands (FEWs) may occur in association with various terrestrial habitats or with riverine or lacustrine habitats. FEWs range in size from small patches to areas covering several square miles. The boundary between wetland and upland habitats is generally considered to be the boundary between hydric and non-hydric soils. The boundary between wetlands and lacustrine or riverine habitats is the deep water edge of the emergent vegetation, about 6.6 feet in depth.

DISTRIBUTION

These habitats are found throughout California and Placer County. Lacustrine habitats can be found at virtually all elevations, but riverine and FEW habitats are more common below 7500 feet. An enormous acreage of FEWs once occurred in the Sacramento Valley, but most of this was drained and converted to agriculture.

VEGETATION

Riverine habitats can be subdivided into an open water zone (depth greater than 6.6 feet), a submerged zone between open water and the shore, and the shore. Small streams may not have an open water zone. If the current is slow enough, rooted vegetation may occur in the submerged zone. If vegetation on the shore has a canopy cover of greater than 10% it is considered to be riparian habitat.

Lacustrine habitats also show zonation. The limnetic, or open water zone, extends from the deepest part to the depth of effective light penetration. The littoral zone is shallow enough to permit light penetration and occurs at the edges of lakes and throughout most ponds. Rooted aquatic plants can occur in this zone. The shoreline zone borders on the water; if it has more than 2% vegetative cover it is classified as riparian.

Fresh Emergent Wetlands are characterized by saturated or periodically flooded soils that support some combination of rushes, sedges, nutgrass, saltgrass, cattail, bulrush, and arrowhead. Vegetation may be distributed as concentric zones that follow basin contours and reflect the relative depth and duration of flooding, or if the bottom of the wetland is very uneven, the vegetation zones may be patchy rather than concentric.

FISHES AND WILDLIFE

Fresh Emergent Wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds and numerous mammals, reptiles, and amphibians. Many species rely on this habitat type for their entire life cycle. Lacustrine habitats are used by 18 mammals, 101 birds, 9 reptiles, and 22 amphibians for reproduction, food, cover, and water. This represents about 23% of the terrestrial vertebrates in California. The open water zone of large rivers provides resting and escape cover for many species of waterfowl, and many fish-eating birds forage there. Near-shore waters and shoreline provide habitat for numerous fish-eating and insectivorous birds and mammals.

Several Placer County species of particular interest, the Central Valley steelhead, chinook salmon, Sacramento splittail, and foothill yellow-legged frog, are completely dependent on healthy riverine habitats. Tahoe yellow-cress is confined to the shoreline zone of Lake Tahoe. The giant garter snake and the California black rail use FEWs almost exclusively. Lahontan cutthroat trout, mountain yellow-legged frog, and bald eagle use both riverine and lacustrine habitats, and the California red-legged frog and the peregrine falcon use those habitats plus fresh emergent wetlands.

CONSERVATION AND MANAGEMENT

In California, where a large and growing human population competes with aquatic organisms for limited supplies of fresh water, amphibian populations are declining precipitously, and 77 of the115 native fish species are either extinct or in danger of extinction within the next 50 years. The situation with other aquatic organisms is presumably just as bad or worse, but their status is poorly known. The acreage of fresh emergent wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture. Clearly, virtually all aquatic and wetland habitats in the state are in need of major conservation actions.

Necessary management actions for aquatic and wetland conservation include (1) organizing management by watershed boundaries, not by administrative units or political borders; (2) restoring natural hydrologic regimes, including low and high flow events; (3) reconnecting rivers to their floodplains by de-channelization and other means; (4) restoring and managing riparian areas properly; (5) reducing or eliminating populations of non-native fishes, amphibians, invertebrates, and plants; (6) controlling water quality by decreasing nutrient and toxin loading and sedimentation; and (7) and educating people on the economic, aesthetic, and other values of properly functioning ecosystems.

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A GUIDE TO VALLEY GRASSLAND HABITATS - Peter F. Brussard (7/7/99)

INTRODUCTION

Prior to European settlement, the Valley Grassland ecosystem was most likely a bunchgrass prairie with native annual grasses and forbs filling the interspaces between the bunchgrasses. Unfortunately, no detailed descriptions of the original community, other than "excellent pasture," exist. However, botanists are fairly certain that the dominant bunchgrass was Stipa pulchra, purple needlegrass.

Permanent alterations to the original ecosystem began when Europeans first reached the Americas. First, seeds of alien plant species, including scores of annual grasses, arrived in packing material, hay, and debris from Spain, and once these species became locally established, they were widely distributed throughout California by birds, mammals, and human activity. Second, domestic livestock shifted the timing and extent of grazing. Although the original bunchgrass prairie supported large numbers of native grazing ungulates, they tended to be seasonal residents. Livestock were maintained in the grasslands throughout the year and in increasingly large numbers during the gold rush period and afterward. Yearlong, heavy grazing favored the introduced annual grasses at the expense of the native perennial bunchgrasses. Third, large-scale cultivation which began in the Valley Grassland ecosystem during the latter half of the 19th century also has contributed to the replacement of the original prairie. Abandoned farmland came back as annual grassland rather than as the original community. Fourth, changes in the fire regime also may have favored annual grasses.

DISTRIBUTION

Valley Grassland occurs as a ring around the Central Valley from sea level to about 3900 feet. It also forms the understory for oak woodland communities. It borders on Valley Foothill Riparian, Fresh Emergent Wetland, Cropland, Orchard-Vineyard, and Pasture habitats at lower elevations and merges into woodland and chaparral habitats in the foothills.

VEGETATION

The Valley Grassland ecosystem now consists of a wide mixture of species, mostly introduced, annuals. Grasses include wild oats, soft chess, ripgut brome, red brome, wild barley, and foxtail fescue, and forbs include filaree, mullein, clovers, and many others. The boundaries of this ecosystem are probably little different from the original perennial prairie. A few small remnants of the original ecosystem still exist, and most of the original perennial species can still be found as scattered individuals throughout the ecosystem.

The annual plants begin to germinate in the fall with the first good rains, grow slowly through the winter, grow rapidly in the spring, and mature between late April and June. A few warm-season annuals may reach their peak growth in summer. Since soil water deficits characterize this ecosystem for 4-8 months every year, most of the vegetation lives through the dry season in the seed stage.

WILDLIFE

The original Valley Grassland ecosystem supported large numbers of pronghorn, deer, tule elk, jackrabbits and rodents. As European man and his domestic animals rapidly increased in numbers in the 1850s, the larger wild animals diminished, but the smaller ones remained numerous. The Valley Grassland ecosystem is still habitat for numerous native reptiles, birds, and mammals. Placer County species of particular interest include the California tiger salamander, Swainson's hawk, the burrowing owl, and the mountain plover (if it occurs in the county at all).

CONSERVATION AND MANAGEMENT

Valley Grassland ecosystems continue to disappear under agricultural, residential, and industrial development, so their conservation should be an important goal for Placer Legacy. This dovetails well with open space conservation for agriculture, since these grasslands need to be managed as grazing systems. In the absence of livestock, annual grassland habitats often become dominated by tall, dense stands of grasses such as ripgut brome and wild oats that are not used by many wildlife species. In fact, annual grasslands can withstand fairly heavy livestock use with little soil erosion, high productivity, and little change in floristic composition. The introduced grasses are now permanent members of the ecosystem, and their elimination is inconceivable. Thus, they should be thought of as naturalized plant species rather than as invading species characteristic of rangeland in poor condition.

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A GUIDE TO OAK WOODLAND HABITATS - Peter F. Brussard (7/7/99)

INTRODUCTION

"Oak woodland" is a zone of oak-dominated communities growing between open grassland and montane forest or chaparral. The dominant trees are deciduous oaks, Quercus lobata (valley oak), and Quercus douglasii (blue oak). At higher elevations, foothill (digger) pine, Pinus sabiniana, becomes an important component in these communities. The lower elevational border of oak woodland is well defined by the absence of oak trees and the appearance of true grassland. The upper border, where an increasingly dense woodland becomes forest, is more difficult to define. Relict forest trees well within the present woodland zone and eroded forest soils that are now supporting woodland suggest that the upper border may have moved upward after destructive logging and severe burning of the lowest elevation forests occurred.

Ground cover in oak woodlands is now dominated by introduced annual grasses and forbs. Understory shrubs are few and concentrated on shallower soils.

Since European settlement, oak woodlands have been managed primarily for livestock production, and over 80% are in private ownership. Historically, losses of oak woodlands occurred because of clearing for range improvements and agriculture; the major losses now are from intensive residential and industrial development. Poor oak recruitment and regeneration is a major problem in many areas.

In addition to their value as rangeland, oak woodlands are important wildlife habitat, and they provide public recreation and aesthetics. Since virtually all of the state's water flows through or is impounded in the oak woodland belt, these communities are also very important to water quantity and quality. .

DISTRIBUTION

Oak woodlands occur in the Great Valley and Sierra Nevada Foothills subregions as a 20 to 30 mile wide belt ranging from nearly sea level to about 4500 feet in elevation.

VEGETATION

Oak woodland is conventionally divided into three different community types, valley oak woodland, blue oak woodland, and blue oak-foothill pine woodland.

Valley oak woodland. On deep, well-drained alluvial soils, usually in valley bottoms, valley oak forms nearly pure, parklike stands of large trees (mature valley oaks range in height from 50-115 feet). A few live oaks (Q. wislizenii, interior live oak) may be mixed in. These stands blend into riparian forests (Valley Oak type of Valley Foothill Riparian) along stream courses and on active floodplains. The understory of valley oak woodland consists of a carpet of introduced annual grasses and forbs, and the shrub layer, if present, contains bird-dispersed species such as poison oak, toyon, and coffeeberry. At lower elevations, valley oak woodlands merge with annual

grasslands or border on agricultural land. In the foothills they intergrade with blue oak woodland or blue oak-digger pine woodland.

Blue oak woodland. Blue oaks are relatively slow-growing, long-lived trees that can reach 80 feet in height. On shallower, well-drained upland soils, they form savanna-like stands on dry ridges and gentle slopes. Interior live oak and valley oak also may be present where the soils are deeper. The shrub layer in these communities is rarely extensive, often occurring only on rock outcrops. Shrubs include poison oak, coffeeberry, buckbrush, California buckeye, and several species of manzanita. The understory is typically composed of annual grassland species such as bromegrass, wild oats, foxtail, and fiddleneck. Blue oak woodland intergrades with annual grasslands or valley oak woodland at lower elevations and blue oak-foothill pine woodlands at higher elevations. Blue oaks are well adapted to dry, hilly terrain where the water table is usually unavailable, and they have an unusual tolerance for severe drought, shedding their leaves under extreme moisture stress.

Blue oak-foothill pine woodland. This community differs from blue oak woodland in having conifer and shrub components. Blue oak and foothill pine typically comprise the overstory, with blue oak the most abundant species. Interior live oak and California buckeye are typical associates. The shrub layer is patchy and includes several species of manzanita, ceanothus, redberry, coffeeberry, poison oak, California yerba-santa, and California redbud. The understory consists of annual grasses and forbs. At lower elevations these woodlands merge with annual grassland, blue oak woodland, and valley oak woodland. At higher elevations, tree and shrub density and the number of evergreens increases until this community merges with mixed chaparral or forest types.

WILDLIFE

Oak woodlands are one of the richest wildlife habitats in California, with over 300 vertebrtate species relying on them for feeding, cover, or nesting sites during all or some part of the year. The California tiger salamander, Swainson's hawk, and the Truckee barberry are Placer County species of particular interest that are found in oak woodlands.

CONSERVATION AND MANAGEMENT

Oak woodlands have decreased by over 1,000,000 acres during the last 50 years because of agricultural, residential, and industrial development. Moreover, in many places, blue and valley oaks have reproduced poorly during this time period. Even when germination occurs, seedling survival usually fails.

Valley oak regeneration. The failure of valley oak regeneration seems to be related to competition for soil nutrients and moisture between oak seedlings and introduced annuals, consumption of acorns and seedlings by wild and domestic animals, and flood control projects. Valley oaks are tolerant of flooding while other components of the community that are potential predators or competitors are not.

Blue oak regeneration. Poor blue oak regeneration also is related to competition for soil moisture from introduced annual grasses and the consumption of acorns and seedlings by insects, domestic livestock, and wildlife. Blue oak is somewhat shade-intolerant, and disturbances producing openings in the canopy may be necessary for seedling growth and survival.

Livestock and wildlife relationships. Some ecologists think that the lack of regeneration in oak woodlands can be explained by the consumption of acorns and seedlings by cattle. However, cessation of livestock grazing does not generally result in oak regeneration because wildlife and insects also cause heavy damage to acorns and seedlings. Populations of deer and many other species of mammals and birds that eat acorns and young oaks are probably more abundant now than in the past because of land use changes and predator control. However, some of these species have positive effects on oak regeneration; acorns buried by scrub jays, yellow-billed magpies, western gray squirrels, and California ground squirrels are more likely to germinate because they root better and are less likely to be eaten.

Fire. Frequent fires historically occurred in oak woodlands, and fire control has affected regeneration negatively in both valley and blue oaks. Young trees of both species will sprout when fire damaged, but older trees will not. Thus, frequent fires tend to maintain oak stands of younger age classes, but a century of fire control has resulted in the predominance of older trees. When these stands eventually burn, they do not regenerate themselves. Furthermore, the absence of frequent, non-catastrophic ground fires encourages the invasion of evergreen oaks, and their seedlings seem to be more browse resistant than those of deciduous oaks.

Conservation management. Active management of blue oak woodlands has increased regeneration in some areas. Recruitment enhancement techniques include reducing the intensity and duration of browsing pressure on woody vegetation, using fire to manipulate the understory, creating gaps in the canopy, and minimizing livestock use until regenerating blue oak saplings are taller than the browse level. For maintaining biodiversity in oak woodlands it is also necessary to conserve important habitat elements such as snags and downed wood.

Oak woodlands also present a substantial management challenge at the landscape scale; fragmentation and increasing interface with urban areas pose major threats to their biodiversity. The former results in the isolation of small, extinction-prone populations, and the latter brings household pets, humans, and fire suppression policies in contact with these habitats, . Encouraging cluster development and conserving connecting corridors between oak woodlands can help reduce these threats.

Oak woodlands offer an excellent opportunity for adaptive management to (1) identify the appropriate combination of disturbance, acorn supply, spring precipitation, and predator pressure that leads to successful regeneration, (2) determine the types and densities of key habitat elements necessary to maintain biodiversity at the stand scale, and (3) establish the spatial arrangement of oak woodland patches and types of connectivity among them that best conserves their biodiversity at the landscape scale.

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A GUIDE TO VERNAL POOL HABITATS - Peter F. Brussard (7/7/99)

INTRODUCTION

Vernal pools or "hogwallows" are seasonal wetlands that form in shallow depressions of various sizes at sites where soils contain an impermeable layer such as caliche, claypan, hardpan, or some other material that produces a perched water table. The depressions fill during winter rains and dry out completely by spring or summer. Vernal pools have been a part of the California landscape for at least ten thousand years judging from the number of endemic species restricted to this habitat.

There are two types of vernal pools in Placer County. Northern volcanic mudflow vernal pools occur on Tertiary volcanic mudflows called lahars. These are usually small pools, forming in irregular depressions in gently sloping surfaces. In the foothills of the Sierra Nevada this type of pool is found primarily on the Merhten Formation. A second type, northern hardpan vernal pools occur on acidic soils on old alluvial fans ringing the Central Valley.

DISTRIBUTION

In the western United States, vernal pools are found from southern Oregon into northern Baja California. In California they are found on lower coastal mountain terraces from Sonoma County south to San Diego County and in the Central Valley from Shasta County south to Kern County. In Placer County, vernal pools are most common in the Valley Grassland ecosystem, but they also occur in Blue Oak Woodland. Pools tend to be clustered in archipelagos in localities where the proper conditions for their formation occur.

VEGETATION

California vernal pool vegetation is characterized by a high proportion of plants that are endemic or regionally restricted to that habitat, and several genera show evidence of recent adaptive radiation. A recent study listed 101 plant species known to occur in vernal pools; more than 70% are native annuals; introduced species comprise less than 7% of this flora. Unlike the surrounding grassland, vernal pools have resisted invasions well.

The vegetation in vernal pools is arranged concentrically. The first zone corresponds to the pool bottom, the second occurs around the pool margin, and a third zone is on higher ground and supports typical annual grassland species. Because of winter flooding there is a sharp boundary between the grassland and the pool zones. Plant cover in the grassland zone may exceed 100%, while most pools have a characteristically low total cover, frequently less than 15-30%. Species richness is highest in the marginal zone, slightly lower in the grassland zone, and considerably lower in the pool.

The number of species within an individual pool (alpha diversity) is usually low and is related to pool area, pool depth, and the amount of bare ground. However, the number of species among pools in an archipelago (beta diversity) is quite high. Thus, typical vernal pool plants are characterized by highly subdivided populations with low genetically effective sizes and low dispersability.

WILDLIFE

A few vertebrates such as salamanders and spadefoot toads use vernal pools for breeding, but the vast majority of the pool fauna consists of invertebrates. Most are widespread species, but a few are endemic. The invertebrate fauna of vernal pools is not well studied, and it is likely that further work will result in the description of additonal endemic species. Placer County species of particular interest that are found in vernal pools are two invertebrates, the vernal pool fairy shrimp and the vernal pool tadpole shrimp, one vertebrate, the California tiger salamander, and one plant, the Boggs Lake hedge-hyssop.

CONSERVATION AND MANAGEMENT

Prior to the 1950s the primary threats to vernal pools were grazing, water impoundments, and conversion to agriculture. More recently, urbanization, industrial development, and infrastructure construction have resulted in losses as high as 97 percent. The few remaining pools have been damaged or disturbed, and they continue to face a variety of threats including livestock grazing, off-highway vehicle use, watershed alteration, and trash dumping. Conservation efforts have been slow to develop because these small, ephemeral ecosystems are easily overlooked, especially during the dry season, and few people consider them important.

Conservation efforts must focus on archipelagos of vernal pools; fencing off a single pool surrounded by development is not an effective strategy. Furthermore, because of the complexity of vernal pool habitats and their associated watersheds, strategies for their conservation must include the surrounding environment. In particular, adequate habitat for the pollinators of the vernal pool flora must be included.

Conservation strategies include fencing for the protection of pool archipelagos, elimination of artificial drainages that alter pool hydrology, and creation of new pools using a variety of impervious substrates followed by innoculation with topsoil salvaged from other pools or with seeds of selected species. The results of vernal pool restoration are mixed, ranging from qualified successeses to dismal failures. The lack of detailed knowledge of the physical and biological attributes of natural reference pools makes the evaluation of restoration success quite difficult.

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A GUIDE TO SIERRA NEVADA HABITATS - Peter F. Brussard

The final habitats that the Biodiversity Working Group will consider are those found in the middle and eastern parts of the county in the Sierra Nevada Foothills and Sierra Nevada ecological subregions. In many respects, these are the most important habitat types in the county. Most of them are forests, which are fundamental to sustainability. Not only do forests provide commercial timber, fuel, and many non-wood products, but they also provide invaluable environmental services. They protect watersheds and thus regulate the quantity and quality of water flows. They protect soils with their moisture and nutrients. They modulate climate at local and regional levels through regulation of precipitation and albedo, and they help to slow global warming by virtue of being carbon sinks. These forest habitats also are home to a number of species of particular interest, including the bald eagle, northern goshawk, California spotted owl, Sierra Nevada red fox, California wolverine, and Truckee barberry. Thus, the conservation of large, continuous blocks of these habitat types, especially late successional-old growth (LSOG) stands, is especially important for biodiversity conservation and sustainable development in Placer County.

The distribution of many of these Sierra Nevada habitat types is determined primarily by elevation and exposure. On a regional scale this results in a series of major habitat belts that run lengthwise along the Sierra. These are the foothill woodland-chaparral belt, the east-side and west-side yellow pine belts, the lodgepole pine-red fir belt, the subalpine belt, and the alpine belt. Most of these belts can be further subdivided into habitat types, the distribution of which within or among belts is determined by elevation and exposure, topography, soils, and past disturbance. *Zonal habitat types* develop within certain elevational boundaries on well-drained sites with moderate slope and well-developed soils. *Intrazonal habitat types* occur within or are interspersed with zonal habitats in places that have poor drainage, steep slopes, or peculiar soils. *Azonal habitat types*, such as riparian zones and wet meadows, develop wherever the right conditions occur at a given elevation. Most of the habitat types that follow represent a so-called *climax* state--the vegetation that eventually appears at a site after recovery from a major disturbance such as fire or logging. The major exception is montane chaparral, which is often a seral, or intermediate, stage in the development of the climax vegetation at a site.

ZONAL AND INTRAZONAL HABITAT TYPES

Foothill woodland/chaparral belt (900'-5,600')

Foothill woodland/chaparral belt habitats include valley oak woodland, blue oak woodland, blue oak-digger pine woodland, chamise-redshank chaparral, and mixed chaparral habitat types. The first three have been covered previously.

Chamise-redshank chaparral. This habitat type consists of nearly pure stands of chamise or redshank or a mixture of both species. It generally occurs below and intergrades into mixed chaparral. Fire occurs regularly in this habitat type, and annuals, perennial herbs, and subshrubs dominate for several years after a fire. As the habitat matures, shrub cover increases and herbaceous cover declines. The primary land management consideration in this habitat type is fire; long-term fire suppression can lead to stand senescence and declines in deer, small mammals, birds, and reptiles.

Mixed chaparral. Mixed chaparral is a brushland habitat type dominated by shrubs with thick, stiff, heavily cutinized, evergreen leaves. It is floristically rich, supporting a high diversity of woody plants. Compared to chamise-redshank chaparral, mixed chaparral generally occupies

mesic (wetter) sites at higher elevations or on north-facing slopes. At upper elevations it grades into ponderosa pine or mixed conifer types and frequently forms the understory of these habitats. Fire is a major factor in this habitat type, and many of its constituent species sprout from root crowns after fires. No wildlife species are confined to mixed chaparral, and, as in chamise-redshank chaparral, management usually focuses on selecting alternative fire management regimes.

Westside yellow pine belt (2,600'-7,900')

Ponderosa pine. In Placer County, ponderosa pine stands occur above oak woodland and montane hardwood habitats and below Sierran mixed conifer. Prior to European settlement, LSOG stands of ponderosa pine were parklike, with widely-spaced, large trees and very little understory. Periodic ground fires maintained this condition. Under fire suppression, shrubs and shade-tolerant conifers such as white fir grow to form a dense understory under the ponderosa pines. This understory usually ladders fire into the tree crowns, resulting in intense, stand-replacing burns that also threaten life and property.

Sierran mixed-conifer. This habitat type is an assemblage of conifer and hardwood species that forms a multilayered forest. Burning and logging have caused a wide variability in stand structure and composition. Dominant trees are ponderosa pine, sugar pine, Douglas fir, incense cedar, white fir, and California black oak. Because of fire control, white fir is almost ubiquitous in the understory. The mixed conifer forest supports a large number of wildlife species including several Placer County species of particular interest. A grove of giant sequoia is a striking associate of this habitat type in Placer County as well.

Montane hardwood-conifer. This habitat type is interspersed with ponderosa pine and Sierran mixed-conifer habitats and often occurs on coarse, well-drained soils as a mosaic of pure stands of conifers interspersed with pure stands of broad-leaved trees. The canopy is often dense and bi-layered with little understory. Common tree species include ponderosa pine, Douglas fir, California black oak, incense cedar, white alder, dogwood, and bigleaf maple. This habitat has high vegetational and floristic diversity with large numbers of endemic species. Mature montane hardwood-conifer forests are valuable to cavity-nesting birds, and many amphibians are found on the forest floor in more mesic areas.

Closed-cone pine. In Placer County this habitat type most often consists of patches of pure stands of knobcone pine within chaparral, montane hardwood-conifer, or mixed conifer habitats. These habitats are typically found on soils that are more rocky and infertile than those supporting the zonal habitat type. There is usually a well-developed shrubby understory. This habitat type is fire dependent; closed-cone pines have serotinous cones that are sealed tightly by resin and only open and spread their seeds when the resin is melted by a fire. Many wildlife species use this habitat, but none seems to be dependent on it.

Montane hardwood. In Placer County this habitat type usually consists of relatively pure stands of canyon live oak. There is a poorly developed shrub stratum and a sparse herbaceous layer. These habitats are characteristic of steep, rocky, south-facing slopes of major river canyons and interface with mixed hardwood-conifer, ponderosa pine, and Sierran mixed-conifer habitats. Many species of birds and mammals that feed on acorns, as well as a diversity of amphibians and reptiles that are found on the forest floor, utilize this habitat type.

White fir. In the Sierra Nevada white fir habitat occurs between mixed conifer and red fir habitats. It is characterized by a closed-canopy overstory of even-aged white fir trees with relatively few understory species. Fire influences this habitat by causing a mosaic of even-aged

stands in different successional stages. The white fir habitat type is the coolest, most mesic nonriparian habitat within the yellow pine forest zone, and, as stands mature, many trees die, resulting in many snags and downed wood. Thus, excellent habitat is provided for cavity nesting and insect gleaning bird species.

Eastside yellow pine belt (5,000'-6,500')

Bitterbrush. In Placer County bitterbrush habitats are found on low elevation flats and slopes with deep soils on the east side of the Sierra Nevada. While the dominant species in this habitat is antelope bitterbrush, it rarely occurs in pure stands. Rather, it is usually associated with big sagebrush, rubber rabbitbrush, Mormon tea, and desert peach. Sometimes there is a sparse overstory layer of ponderosa pine, Jeffrey pine, or curlleaf mountain mahogany. Bitterbrush is an important browse plant for mule deer, pronghorn, cattle, sheep, and horses, and many species of birds, rodents, and insects consume its seeds.

Eastside pine. A small amount of eastside pine habitat occurs in eastern Placer County. Ponderosa pine is the dominant tree species, with Jeffrey pine, lodgepole pine, white fir, incense cedar, and western juniper as associates. Undergrowth may include big sagebrush, antelope bitterbrush, greenleaf manzanita, ceanothus, mountain mahogany, mule ears, and arrowleaf balsamroot. Logging, bark beetles, and fire are the major disturbances in this habitat type. Disturbance usually increases the understory, particularly manzanita and ceanothus, and the brush may become so dense in the absence of fire that livestock and big game cannot use an area. On the other hand, brush also creates a high degree of structural diversity which favors many other species of wildlife.

Jeffrey pine. In Placer County, the Jeffrey pine habitat type occurs on the eastern slope of the Sierra Nevada above and intermingled with eastside pine. A single tree layer is characteristic, giving the impression of openness and light. A sclerophyllous shrub layer consisting of greenleaf manzanita, squaw carpet, and snowbush is usually present at higher elevations; at lower elevations the shrubs are usually antelope bitterbrush and sagebrush. Jeffrey pine habitats are self-perpetuating under a regime of periodic ground fires. This habitat is moderately species-rich, due in part to the value of its seeds as food for many birds and mammals.

Lodgepole pine-red fir belt (7,000'-10,000')

Lodgepole pine. Lodgepole pine habitats are typically found below or intermixed with red fir habitats. Lodgepole pine usually forms monospecific stands; occasional associates include aspen, red fir, and mountain hemlock. The understory is typically sparse except where lodgepole pine habitats are associated with meadow edges. There, grasses, sedges, and forbs are abundant. Many Sierran meadows have been invaded by lodgepole pine over the last few centuries; the reasons for the invasions are not at all clear. Lodgeple pines establish rapidly and reproduce at an early age. This continued recruitment within stands produces overcrowding which weakens the trees and makes them suceptible to insects, and dead and moribund trees create large quantities of fuel that increase the probability of wildflire. The lodgepole pine habitat type has low structural diversity and supports relatively few animal species. However, the wolverine, northern goshawk, and bald eagle, Placer County species of particular interest, use lodgepole pine habitat, particularly at meadow edges.

Red fir. In Placer County, red fir habitats occur on frigid soils in the higher elevations of the Sierra Nevada. These habitats are usually monospecific with very few plant species other than red fir in any layer. Heavy shade and a thick layer of duff tend to inhibit understory vegetatic

Windthrows, lightning fires, insect outbreaks, and logging tend create an even-aged stand structure. At lower elevations red fir habitats intergrade with mixed conifer habitats on drier sites and with lodgepole pine on wetter sites. At higher elevations, red fir habitats intergrade with subalpine conifer habitats. Northern goshawk, Sierra Nevada red fox, and California wolverine, along with a number of other sensitive and rare species, utilize red fir habitats, particularly LSOG.

Aspen. Aspen habitats occur primarily at higher elevations near seeps, streams, and meadows, and they may consist of pure stands of quaking aspen or aspen in association with willows, alders, pines, and firs. In Placer County aspen habitats most often occur in the lodgepole pine-red fir zone, but they also can be found in mixed conifer, Jeffrey pine, and subalpine conifer habitats. All aspen stands spread by root suckering, resulting in a mosaic of clones of different ages. This is often evident in the fall when the leaves of each clone turn color at different times. Aspen habitats support a greater diversity and abundance of birds than adjacent forests and shrublands because of higher insect production and more nesting cavities. On the eastern slopes of the Sierra Nevada aspen habitats are important nesting sites for northern goshawks, a Placer County species of particular interest. Long-term fire suppression or excessive grazing and browsing by ungulates may result in the disappearance of aspen from an area.

Subalpine belt (9,000'-11,000')

Subalpine conifer. Typical subalpine conifer habitats are open forests of several species of conifers of low to medium stature. Placer County species include western white pine, lodgepole pine, and mountain hemlock. A sparse shrub understory may be present. Subalpine conifer habitats intergrade with red fir and lodgepole pine habitats at lower elevations and with alpine dwarf shrub habitats at timberline. Near timberline the trees are shaped by wind and snow into krummholtz--shrubby, mat-like forms only a few feet tall. Although fires and windstorms provide natural disturbance in this habitat, it has been little disturbed by human influence in California. Because of the severe climate and short growing season, this habitat supports fewer wildlife species than any other forested habitat in the state. However, the California wolverine, a Placer County species of particular interest, finds subalpine conifer habitat suitable.

Alpine belt (10,600'-up)

Alpine dwarf-shrub. The alpine dwarf-shrub habitat is found above timberline where it replaces subalpine conifer habitat. The environment is cold, dry, and windy, and the growing season is very short. The vegetation of this habitat consists of low growing grasses, sedges, and forbs with an admixture of dwarf shrubs, often cushion plants. Plant species diversity is surprisingly high, but only a handful of wildlife species use this habitat.

AZONAL HABITAT TYPES

These habitats are found throughout the Sierra, wherever the appropriate conditions occur, irrespective of belt or zone.

Montane chaparral. Montane chaparral habitats in Placer County are found in both the eastside and westside yellow pine forest belts and in the lodgepole pine-red fir belt. They are characterized by several species of shrubs including whitethorn ceanothus, snowbrush ceanothus, greenleaf manzanita, pinemat manzanita, bitter cherry, huckleberry oak, Sierra chinkapin, and California buckthorn. Most of these species are fire-adapted and sprout back from the root crown after a burn. One type of montane chaparral forms a permanent community on shallow soils

overlying fractured granite bedrock. The more common type, found on deeper soils, is a transient community which follows a disturbance to a forested habitat. This type of montane chaparral important link in forest regrowth since the shrubs build up nutrient levels, especially nitrogen, the point where trees can survive. Many birds and mammals use montane chaparral habitat. Deer in particular depend on this habitat type for foraging, fawning, and escape cover.

Montane riparian. The montane riparian zone occurs as a narrow, often dense strip of broadleaved, winter deciduous trees associated with lakes, ponds, meadows, rivers, streams, and springs. Montane riparian can occur as stringers of shrubby willows or alders along creeks or seeps; in other situations an overstory of white alder, quaking aspen, black cottonwood, and willows may be present. Montane riparian provides important habitat and migration corridors for many species of amphibians, reptiles, birds, and mammals and modulates associated aquatic habitats for fish and invertebrates. Lahontan cutthroat trout, mountain yellow-legged frog, and willow flycatcher are Placer County species of particular interest that require healthy montane riparian habitats.

Wet meadow. Wet meadows can occur in virtually all of the habitat types in the Sierra Nevada wherever water is at or near the surface during most of the growing season. These habitat types have a simple structure consisting of mostly perennial herbaceous plants (grasses, sedges, rushes, and forbs). Shrub and tree layers are usually absent or sparse except near the meadow's edge. In the Sierra Nevada wet meadows provide important habitat for several species of amphibians and reptiles, including the mountain yellow-legged frog, a Placer county species of particular interest.

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Appendix G
POTENTIAL STRATEGY FROM NOVEMBER 8, 1999 BOARD RESOLUTION IMPLEMENTATION STEPS FOR AGRICULTURE

A. Assist Placer County farmers by developing a strong local product identity and by promoting farmers' markets

B. Assist with the marketing of locally-grown produce

Preliminary Approach to Implementation (of A. and B) (Input from Roger Ingram, Joanne Neft)

1. Placer Grown and other local agricultural promotion groups need more funding (e.g. grants, advertising in a newsletter, short or longer-term County funding). Placer Grown should hire a marketing person/fundraiser on salaried basis.

2. Placer Grown and other local associations/cooperatives should focus marketing on the following entities who will value the quality, freshness etc. of local-grown produce:

   - Restaurants (especially "quality" or high-end restaurants)
   - Large local employers who purchase food (e.g. Hewlett-Packard, Del Webb These could contract for regular delivery of Placer produce to their plant
   - Placer County schools, hospitals and the County of Placer complex (Dewitt Center could have a farm stand).

3. The agricultural community could institute a Legacy supported "farm stand" program on major country roads through farm country, selling seasonal products (either attended or on "honor system") (similar to El Dorado County's "Apple Hill" or "Sonoma Farm Trails").

4. More farm stands or markets (similar to Ikeda's, but with specific emphasis on local-grown products) in the I-80 corridor and adjacent to the freeway, targeted at locals and transients (Tahoe skiers and other vacationers). Newcastle would be a logical hub for this type of marketing.

5. Regular farmers markets in all major cities – (especially Roseville, Lincoln, Auburn, Loomis, Newcastle (one is opening). Food stalls/displays should clearly identify the Placer Grown label (or other) and logo Presentation of the products is important is establishing consumer identity and loyalty.

6. Flower u-pick concessions could be opened in flower-growing areas.

7. The State Office of Economic Development could provide funding to open more small neighborhood markets featuring Placer Grown products.

8. Entry into large grocery chain markets (e.g. BelAir, Raley's, Ralphs, Safeway etc.) may be slow because these markets depend on a guaranteed weekly volume of each type of produce and are reluctant to devote shelf space to a less predictable product, even if has premium qualities. However, see the approach of Select Sonoma County (pp. 8 - 9 of this document) in marketing to the large chains. This is having a degree of success. Also, some of the chains (e.g. Raley's) buy from local growers when they can get fresh, seasonal produce such as sweet corn, strawberries etc.) Similar to Select Sonoma County a useful approach would be to market the non-perishable products (e.g. jams, jellies, syrups, dried fruit (peaches, pears, persimmons), Christmas baskets and rice bouquets) to these large chain stores first before fresh produce.

9. A major marketing effort should be undertaken in neighboring Sacramento County.

10. Review County rules and regulations of commercial operations on agricultural lands. For example, rules/regulations affecting wineries, produce stands, picnic areas etc. should refine zoning ordinance standards to reflect the scale of the land use.

C. Educate the public regarding the special values of locally grown crops

Preliminary Approach to Implementation: (Input from Roger Ingram, Joanne Neft)

1. Advertising of Farmer's Markets and places where Placer Grown products are featured in **local newspapers and newspaper inserts**. Advertising should include the history of agriculture in Placer County (e.g. that in 1923 66 million pounds of fruit were grown and shipped from the County).

2. Food Fairs and festivals showcasing local products

3. **Radio spots on local stations** announcing availability of fresh season products (something like the style of Joe Carcione or Narsai David in the Bay Area, but targeted at local products and the local market)

4. School programs to educate children and young adults about the values of healthful, locally grown food. These could include teaching young people about farming by planting a sample of row crops on school property, growing, harvesting and preparing meals from the crops in cooking classes.

5. The County Health Department could play a pro-active promotional role in educating the public about the positive values of local sustainable and organic agriculture in relation to health standards for sanitation and nutritional value of foods.

6. Local products should be promoted both in and outside of Placer County. A

brochure could be used as promotional action to encourage new, high value agricultural opportunities in the County (e.g. wine grapes, oranges, nut crops

7. Various informational services should be used to inform the public of the reasons to support local agriculture (i.e. buy local and keep agriculture in the County).

D. Utilize the Agricultural Commissioner's office as an agricultural advocate with the Board of Supervisors

Preliminary Approach to Implementation: (Input from Roger Ingram, Loren Clark, Joanne Neft, Bob Roan)

1. This is already in the works. Representatives from this office are meeting on a weekly basis to discuss the economics of farming and have regular communications with the Board.

2. Increase the staffing of the Agricultural Commissioner's office to participate in program development and implementation.

3. The Agricultural Commissioner's office should help farmers develop creative ways to market their own products.

4. Farmers should be encouraged to diversify their crop range to maximize year-round income from farming. For example, diversification could include the introduction of aquaculture (fish farming) on rice lands that are already a for aquaculture. The market could probably support greater plantings of Satsuma mandarin oranges.

5. The County Board of Supervisors needs to lend more support to the Agricultural Commissioner's Office and use the County Agricultural Commissioner as they use the County Planning Commission (i.e. as extension of staff). This may require setting specific actions by the Agricultural Commission.

E. Establish neighborhood agricultural "districts" with specific policies that are locally applicable

Preliminary Approach to Implementation: (Input from Loren Clark, Bob Roan)

1. This requires research on the part of the Planning Department

2. The agricultural community can provide input as to what areas have unique agricultural characteristics that need to be preserved and to make sure that the General Plan recognizes these areas as unique.

3. Use the GIS data base and existing knowledge to identify existing neighborhoods (e.g. areas of similar crops or potential. Once "areas" have been identified, use the County parcel map to send letters to determine interest in collaboration. County could offer incentives to landowners willing to participate in

neighborhood agricultural districts (e.g. offer Williamson Act contracts to small parcels if they were aggregated; the minimum parcel size for Williamson Act contracts is 10 acres on prime land).

F. Encourage neighboring agricultural landowners/producers to collaborate on easements/land preservation

Preliminary Approach to Implementation: (Input from Roger Ingram)

1. This collaboration to protect larger aggregations of land may be an outgrowth of the U.C. Cooperative Extension survey (Roger Ingram) survey. Some of the larger landowners have already indicated that they are interested in selling easements.

2. Some combination of the U.C. Cooperative Extension, Farm Bureau, and Agricultural Commissioner's office should develop materials, in part based on the survey, to deal with farmers' issues. These could be distributed by mail to farmers or available to be picked up either at the relevant offices, or on the Internet.

G. Assist farmers with tax planning

Preliminary Approach to Implementation: (Input from Jim Elias, Roger Ingram, Erik Vink, American Farmland Trust, John Gamper, California Farm Bureau)

1. Tax planning divides into current planning and estate planning.

2. Basic education of the farmers as to what their options are: up-to-date materials available by mail or on line, prepared by experts in current law and accounting. (Funding provided by California Farm Bureau, Agricultural Commissioners' office, Placer Legacy etc.) Options include Farmland Security Zone (super Williamson Act), creation of easements through cash sales, donation, or a combination). (See further discussion under Williamson Act, below)

3. Making sure farmers have access to individual tax counselors, accountants etc. who can evaluate their specific situation and make recommendations.

4. County (or others) hire lobbyists to promote legislative changes at state and/or federal level more favorable to farm preservation. The estate tax law is especially punitive to holders of large parcels.

5. American Farmland Trust (AFT) is part of a coalition with lobbyists in Washington, D.C. which are tracking ongoing opportunities to introduce changes in tax law more favorable to farmers each time a major tax bill is introduced in Congress. The California Estate Tax was abolished in the late 70's or early 80's .

6. There is a monthly newsletter specifically directed at tax information of value to farmers to which Placer Legacy, the County and individual farmers should

subscribe: the title is Farm Tax Saver and this can be ordered by e-mailing to Trenna R. Grabowski (the editor) at *grabeau@midwest.net (Tel) 618-435-407*

7. The main opposition to changing the federal inheritance tax to be more favorable to farmers is the National Building Industry Association, who is lobbying to keep a steady supply of farmland available for new housing construction. This conflict must be resolved before productive changes can be made in the inheritance tax laws affecting farmers.

8. Development of literature specific to the tax planning issues for farming in Placer County.

9. County conduct annual workshops to discuss tax planning alternatives. The first one is already budgeted for 2000.

H. Implement and promote the Williamson Act to ensure that the needs of farming operations are protected

Preliminary Approach to Implementation: (Input from Diana Stralberg, Loren Clark, Roger Ingram)

1. Current (1999) utilization of the Williamson Act is 49% of prime farmland is currently in Williamson Act, but only 37% is active with no non-renewal filed. Of all mapped farmland, 12% is active Williamson Act and 10% is active, with no non-renewal filed.

2. Farmers and ranchers need to be educated on provisions of the new Farmland Security Zone (FSZ), and how it affects them individually. Provides greater tax benefits than conventional Williamson Act, but term of contract is 20 years and is non-cancelable. The legislation and a thorough explanation of how it works, including an economic impact study example, are available on the California Farm Bureau Federation's web site (*cfbf.com/land*).

3. Placer County has adopted the Farmland Security Zone but there are no examples of it being implemented yet. The reason for this lack of enrollment should be researched because it could indicate farmers in general are unwilling to commit to keep their land in agriculture for as long as 20 years, even for the additional tax advantages offered by the FSZ over the traditional Williamson Act. Bob Roan believes that farmers' unwillingness to utilize the Williamson Act or the FMZ may stem from their lack of assurance that the County will protect their agricultural districts through the land/use zoning process.

4. Use of alternative forms of the Williamson Act is part of overall fiscal/tax planning tools available to farmers.

5. Utilize the Agricultural Commissioner's office to promote greater utilization of either the original Williamson Act or the new Farmland Security Zone.

I. Make the existing right-to-farm ordinance more useful to the farmer by educating the public and by intervening in legal challenges subject to right-to-farm
Preliminary Approach to Implementation: (Input from Roger Ingram)

1. The UC Cooperative Extension Service (R. Ingram) is already working on this. He has prepared a brochure on the County's Right-to-Farm Ordinance and how it works. Notice of the Right-to-Farm provisions were to be distributed to all of the unincorporated area of Placer County (not sure if just farmers or all residents). The brochure could be made more generally available through mass mailing and/or the web.

2. One of the biggest problems is educating the real estate community about the Right-to-Farm Ordinance and how to incorporate right-to-farm agreements into real estate transactions (e.g. for residential sales). Cindy Pecos (Placer Board of Realtors) is taking the lead in educating the real estate community.

J. Work to make water available at a reasonable price
Preliminary Approach to Implementation: (Input from Roger Ingram, Bob Roan, Nevada Irrigation District, Terry Mayfield, Einar Maisch, Mal Toy, Placer County Water Agency, Brad Arnold, South Sutter Irrigation District).

1. Biggest problem is how to get reliable water to western Placer County. With reliable water farming is more efficient (greater production on less land). Placer County Water Agency has recent converted some of its surplus water to permanent water which improves the reliability of supply to its agricultural customers.

2. One possible mechanism is water trades between agencies (those with a surplus trade with those with a deficit).

3. The County has met with the water agencies and now has an understanding of where farmers are getting their water and the limits of the water agencies ability to provide water to both agriculture and urban users. The issue now is to guarantee that water to agriculture will not be curtailed by either conservation pricing or allocation of a much greater proportion as treated water which costs twenty times the raw water cost.

4. Surplus water from South Sutter Irrigation District (up to 10,000 acre feet/year) could be used for agriculture or biological conservation purposes under the Placer Legacy program rather than going to housing development on lands west of Fiddyment Road..

5. New development competing with agriculture should be served by a combination of the following, rather than by diminishing the supply available to agriculture:

- more conjunctive use of groundwater
- possible increase in water recycling (though most water being recycled no
- converting open canals to pipelines to reduce evaporation losses
- improve conveyance system to recharge more water during peak runoff and deliver more water in times of peak dry season demand

K. Develop a program to identify methods to protect agriculturally designated areas from conversion to non-agricultural uses

Preliminary Approach to Implementation: Input from Loren Clark, Roger Ingram, Bob Roan

1. This general policy needs to be further interpreted in terms of general plan language and requirements for the Board of Supervisors to make findings before allowing conversion of agricultural areas to non-agricultural uses.

2. County already has a zone district called Agricultural Exclusive (AE), but this is not currently used. This zone could be employed to prohibit or discourage non-compatible uses from encroaching on agricultural lands.

3. Criteria need to be developed to designate the most valuable classes of agricultural parcels (e.g. combination of prime soils, permanent water, lack of encroachment by incompatible uses, high crop value etc.)

4. R. Ingram states that encroachment of non-compatible uses in more importan than size per se in determining whether the land stays in agriculture. High value crops and more experimental methods may allow viable farming on parcels as small as 5 acres or less

5. There is also a component of viable "boutique" farming by part-time farmers who grow high value crops as a second income or "hobby" but have other employment in addition to farming.

6. Farming by traditional methods requires larger parcels.

L. Placer Legacy: evaluate which lands have multiple values as easements (e.g. riparian, recreational or scenic)

Preliminary Approach to Implementation:

1. This determination will be made by querying the GIS database.

M. Placer Legacy: prioritize lands for possible easement purchase

Preliminary Approach to Implementation: Input from Misty Arias (Sonoma Land Trust)

1. Sonoma Land Trust model: the County passed several ballot measures creating the Sonoma Agricultural Preservation and Open Space District and voting in a 1/4 cent sales tax increase for 20 years to pay for easement purchase. So far this '

generated $12 to $13 million per year for easement purchase in Sonoma County.

2. Prioritization criteria include willing sellers (several large landowners have already indicated interest in selling easement), multiple values in addition to agriculture, valuable parcels in particular jeopardy or useful as urban separators, and funds available for easement purchase at the time.

Appendix H
OPEN SPACE LAND ACQUISITION GUIDELINES

PURPOSE

Acquisition of private property by the public sector occurs when a specific public purpose and/or benefit has been defined and ownership or rights to the property need to be obtained. Most acquisitions occur because of a need to provide public services for a growing population. Other acquisitions occur when it's necessary to upgrade or improve the community's infrastructure and levels of service.

There are numerous examples of such acquisitions by government. The following examples are a part of the daily activities of local government.

- the provision of public access to a certain area or facility
- the preservation and/or conservation of natural resources
- fee title acquisition for park development
- fee title acquisition for infrastructure or County facility construction
- utility or road rights-of-way
- the protection of a scenic vista or viewpoint
- to protect the public from environmentally-induced hazards (e.g., flood plains and avalanche-prone areas.)
- the protection of a important historical or cultural site
- the separation of communities
- the establishment of a permanent land use buffer
- the conservation of agricultural lands

These guidelines, the ***Interim Open Space Land Acquisition Guidelines***, will focus on the acquisition of property for a variety of open space purposes and values, the so-called "green infrastructure" of the County.

Each acquisition is unique and requires a new evaluation and confronts different issues each time one is considered. Consequently, these guidelines are intended to provide general direction. The sequencing may or may not need to be followed exactly as described. The steps in the process need to be carefully evaluated as to their need. Steps not listed below may need to be added or steps may be deleted depending on the unique characteristics of the particular situation. The key is to utilize these guidelines as a reference guide for information that will be applicable to most but not all acquisition efforts. (These guidelines <u>do not</u> apply to condemnation of private property for public purposes.)

Lastly, these guidelines have been prepared to insure that County staff has the necessary information to protect the County's interests. They will also insure that minimum standards are in place, that adequate disclosure occurs, and that there will be a consistent application of rules over time.

DEFINITIONS

Many terms are associated with a land acquisition program. The following definitions apply uniformly to most circumstances.

Acquisition - For purposes of these guidelines, a public land acquisition can be defined as a *dedication* (voluntary or mandatory), a *donation*, a *fee title acquisition* or the *purchase of an easement* (e.g., utility, access or conservation easements).

CEQA - The California Environmental Quality Act (Pub. Resources Code, div. 13, §21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, §15000 et seq.). CEQA requires public agencies in California to analyze significant adverse environmental impacts of projects and requires that the impacts be mitigated to the extent feasible. CEQA also provides a procedure by which this is to occur.

Conservation Easement - A voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land. The easement insures that a particular open space feature or characteristic is to be conserved in perpetuity or for a specified duration of time.

Dedication - Lands offered to the public through the discretionary approval of a parcel map, final map, minor/conditional use permit, rezoning , and development agreement or other discretionary review. Many dedications are made as a requirement or a condition of approval (e.g., park land dedications for public use). Other dedications may be voluntary based upon the interest or need of the landowner.

Encumbrance - Restrictions and impediments that affect how a parcel may be used. Encumbrances may also affect the ability to finance using the value of the property to carry the debt. Typical encumbrances include easements; liens and debt carried on the land (e.g., deeds of trust).

Fee Title - One form of ownership to property that is absolute and complete. Property may also be held in fee simple, which is limited.

Lead Department - The County department pursuing an open space acquisition to implement a program or objective of that department.

Land Acquisition Committee (LAC) - A committee comprised of the Department of Public Works, County Counsel, the Planning Department, the Facility Services Department and the

County Executive's Office. The LAC is to convene at the request of the Lead Department to assist and provide recommendations to the Lead Department on an acquisition on an as need basis.

Placer Legacy - Open Space Conservation Plan prepared by Placer County. Addresses the preservation of variety of open space areas including: agricultural lands, areas for outdoor recreation, scenic and historic areas, community edges, natural communities to insure biodiversity and the protection of sensitive species and areas to protect the safety of the public

Title Insurance - An insurance policy that protects the insured from losses as the result of claims on one's ownership of land. Problems that can occur that can be covered by the policy are fraud, improper court proceedings, missing heirs, the incompetence of previous seller(s), recording mistakes, and unfiled liens.

DEPARTMENTAL RESPONSIBILITIES

Numerous County Departments may be involved in land acquisition activities. For open space acquisitions, most activities will result from the implementation of programs administered by the Planning Department and the Facility Services Department. The Department of Public Works will likely provide a supportive role in that they provide services that may be necessary for the operation and maintenance of open space lands.

LAND ACQUISITION COMMITTEE

In order to consistently apply these guidelines and to obtain the necessary advice and counsel of relevant departments, a Land Acquisition Committee (LAC) should be formed. The LAC would be convened on an as-needed basis as determined by the Lead Department (see below). The LAC should be comprised of the departments listed below. Each department is listed with their general area of responsibility:

1. **County Counsel** – To advise the County on legal matters pertaining to the acquisition procedure and liability.
2. **Facility Services Department** –Facility Services Department staff shall be responsible for assisting in the land acquisition negotiation phase. The Facility Services Department may also be identified as a Lead Department for County Parks development and acquisitions necessary to develop and service these park facilities.
3. **Planning Department** – Planning Department staff are to be consulted on matters pertaining to land use and CEQA. For acquisitions that are implementing the Placer Legacy project, the Planning Department is to be the Lead Department.
4. **County Executive's Office** – The CEO is to be consulted for general direction, assistance and budget matters.
5. **Department of Public Works** – The Department of Public Works (DPW) staff are to be consulted on matters related to land surveys, road and utility easements (existing or required), site drainage and/or flooding, and geotechnical constraints to use or physical development the property. These guidelines do not relate to projects requiring condemnation.

LEAD COUNTY DEPARTMENTS

In order to consider acquiring private land for public purposes, a number of County Departments may need to be involved. In particular, the department seeking the acquisition should be identified as the lead department and shall be responsible for convening and coordinating the activities of the LAC and to insure that the procedures identified in these guidelines are considered. The following departments may be involved in land acquisitions as described:

1. **Facility Services Department** – Most acquisitions of open space by the Facility Services Department will be by the Parks Division for new County parks and trails. However, there may be occasions where wastewater treatment or conveyance facilities, solid waste facilities or even new County facilities for services could be associated with open space land management. When such occasions arise, the Facility Services Department will be identified because of the department's existing management responsibilities for these services.
2. **Planning Department** – Open space acquisitions consistent with the Placer County General Plan and the Placer Legacy Open Space Conservation Project.
3. **Department of Public Works** – Utility and road easements, road rights-of-way associated with the development of open space areas.

FEE TILE LAND ACQUISITION PROCEDURES

Fee title land acquisitions are considered to be a dedication (voluntary or mandatory), a donation, or purchase. They are different from the purchase of an easement (e.g., utility, access or conservation easements). The fee title to property is obtained when it is desirable or mandatory for the land to be held by the public sector. The County may own the land in perpetuity or it may be transferred to the private sector for management (e.g., land trusts). Typical examples of fee title acquisition include: purchase of park land, purchase of sensitive species habitat to insure a high level of protection, acquisition of flood plains, and receipt of donated lands.

This section of these guidelines will provide direction on the acquisition of the fee title to private property. Where appropriate, the responsible party for a particular task is identified. The guidelines examine the process of acquiring land in the following sequence: preliminary decision-making, disclosure and negotiation, Board of Supervisors action and final steps.

I. PRELIMINARY DECISION-MAKING

A. PURPOSE OF ACQUISITION

The first activity for any acquisition is to determine how the land will be used, managed or maintained if it is to be acquired and held by the public sector or simply to be encumbered for a particular purpose. The use of the property should implement a program managed by the Lead Department. The Lead Department should carefully evaluate the property in order to decide

whether or not the property can be used as proposed given site constraints and/or encumbrances. If time or full public disclosure is not a consideration, the staff should notify the Board of Supervisors of an intent to proceed with negotiations for a particular use of the property and seek preliminary approval from the Board to proceed with the acquisition. In no case should negotiations for an acquisition proceed without a well-defined use of the land for public purposes.

There may be occasions were an expeditious response from the County will be necessary to initiate negotiations with a landowner because of a particular need or interest of the landowner or because of time constraints associated with funding options (e.g., grant applications). The Lead Department will need to use discretion to decide whether or not to proceed with early Board authorization to initiate negotiations when an expeditious response is required. Similarly, a property owner may request privacy/anonymity during informal consultations. Consequently, it would be inappropriate to initiate consultation with the Board of Supervisors until after it is decided to proceed with public, formal negotiations to acquire the property.

B. DETERMINATION OF PUBLIC BENEFIT

As a part of the decision to proceed or not to proceed, the staff should determine whether or not the acquisition provides one or more distinct benefits to the public. If no discernible benefit can be identified, the staff should decide against proceeding with an acquisition.

If the staff can identifies clear and distinct public benefits they should be included in the staff report to the Board of Supervisors. The benefits should be described for the Board's consideration and included in any resolution to proceed with formal negotiations. Where possible, the determination of public benefit should be based upon existing policies, objectives and programs (e.g., infrastructure capital improvement programs, a parks or trails plan and Placer Legacy objectives).

If the Board is not notified at this stage, the staff should nevertheless have identified the public benefits prior to proceeding.

C. PRELIMINARY ANALYSIS OF COSTS OF ACQUISITION

A preliminary estimate of the cost of the acquisition is to be identified (e.g., fee title purchase price). Where possible, staff should identify the costs and funding sources associated with the acquisition including the following:

- The cost of processing the acquisition
- The cost, if known of the fee title to the property.
- The costs, if any to close the negotiation (e.g., real estate commissions, and tax liabilities).

(See the procedural steps below for activities that could result in County expenses.) These costs should be forwarded to the Board of Supervisors as a part of any initial staff recommendations on the acquisition.

D. PRELIMINARY ANALYSIS OF COSTS OF OPERATIONS AND MAINTENANCE

Once the purpose of the acquisition has been identified, the cost to maintain, operate, secure, and protect the property should be determined. These costs should be identified as site development costs and ongoing operations and maintenance costs, if any. Exposure to liability should also be discussed as a part of any recommendations following consultation with County Counsel Risk Management.

E. ANALYSIS OF ACQUISITION AND OPERATION AND MAINTENANCE FUNDING SOURCES

The Lead Department should identify the funding sources for all costs associated with negotiating the acquisition and all costs associated with ongoing operations and maintenance expenses. If no funds are available, the Lead Department should identify potential funding sources for both acquisition and O/M costs over time. These recommendations should be forwarded to the Board of Supervisors as part of the staff's recommendations.

II. DISCLOSURE AND NEGOTIATION

An acquisition of property requires the careful evaluation of a number of issues: the cost of the land, the physical condition of the property, surrounding land uses, expectations of buyer/seller, and the identification of constraints or encumbrances that may affect the ability of the property to be used for the purpose identified by the Lead Department's preliminary evaluation. The following steps provide guidance on how to evaluate property for the many different types of acquisition that could be associated with an open space conservation program. During this phase negotiations with the property will also need to proceed to a point where an understanding is reached on price.

The steps are placed in a logical sequential order that should be evaluated on a case-by-case basis. Steps may be moved or eliminated depending upon the circumstances of the acquisition. Table 1 depicts a summary of these steps, including the tasks, required action(s), responsible department and expected timing.

A. **Refinement of Intended Purpose/Project Description** - Prior to proceeding with formal negotiations, the staff should develop a complete project description based upon the anticipated use of the property by the County. The information should be sufficient to describe how the property is to be used, how use of the property will modify the existing condition and what environmental impacts would result from its use and/or modification. The refined project description should be complete enough to be used for the initiation of an environmental review (if required) for the acquisition of the property.

B. **Initiation of Formal Negotiations and First Steps** - Following the receipt of the Board of Supervisors approval to proceed, the staff should contact the property owner to formalize negotiations to acquire the property. The process for acquisition should be clearly described. Contact persons should be identified. Lines of communication should be established. The expectations of all parties should be understood and clearly articulated. Where possible, the Lead Department and the property owner should identify a preliminary estimate of the purchase price of the land if a dedication or donation is not being considered.

C. **California Environmental Quality Act (CEQA)** – Open space and wildlife habitat acquisitions generally qualify for a CEQA exemption (ref. 15313, 15316 or 15317 of CEQA Guidelines).

CEQA documentation may be necessary to develop or modify the property after acquisition. Such activities may result in impacts on the environment that will need to be identified and mitigation measures developed. Additional information can be obtained from the Placer County Environmental Review Ordinance.

RESPONSIBILITY

The County will be responsible for determining CEQA compliance. The County will typically bear the cost of preparing the necessary CEQA documents. Where a dedication of land occurs, the cost of preparing the environmental documents will be the responsibility of the project proponent. For fee title acquisitions, it will be the responsibility of the Board of Supervisors to approve/certify the necessary environmental documents.

D. **Compliance with the zoning ordinance** - although strict compliance with the county's zoning is not mandatory for county land use activities, compliance is the policy of the County in order to insure compatibility with surrounding land uses and to insure that community standards are consistently applied. Consequently, it is important to understand how the many regulations within the zoning ordinance govern the use of the property. The lead department should contact the planning department for further

information. The key features of the zoning ordinance that apply to use of property by the county are described below.

1. **Setbacks** - Each zone district has unique setbacks. The setbacks should be evaluated for all structures that may be built

2. **Use of Land** - The Zoning Ordinance describes which land uses are allowed. The Lead Department should determine whether or not the intended use is a permitted use in the Zone District.

3. **Discretionary Approval Process** - The Zoning Ordinance provides the procedure for discretionary approvals (e.g., variances, and minor/conditional use permits). Even though the County is "exempt" from the County's zoning ordinance, it is County policy to apply the standards and requirements of the ordinance to most land use activities typically requiring such discretionary approval.

d. Status of any non-conforming uses and/or activities

RESPONSIBILITY

The County will be responsible for determining zoning ordinance compliance for existing structures and uses. If necessary a right-of-entry may need to be obtained from the property owner. The County should bear the cost of conducting the compliance evaluation.

E. Obtain Right of Entry – A right of entry from the property owner must be provided in order to conduct certain due diligence activities (e.g., Phase I and II ESA, zoning compliance, etc.)

RESPONSIBILITY

The County will provide the necessary documentation to be executed by the property owner.

F. Title Report - A current title report is to be obtained that addresses the title of the property in order to identify any restrictions on using the property for the purpose identified in the preliminary evaluation.

1. Existing financing (e.g., first or second deeds of trust)

2. Evaluate easements

3. Conditions, Covenants & Restrictions

4. Liens

5. Rights of other parties on the property (e.g., mineral rights)

The Lead Department should evaluate the impact of the encumbrances upon the potential use of the property. The Lead Department should then determine whether or not the encumbrances need to be modified and/or cleared from the title in order for the use of the property to be used for its intended purpose. If the encumbrance or similarly restriction cannot be removed or modified, the staff should evaluate the impact of the encumbrance upon the use of the property. If the encumbrance is restrictive to the point that the intended purpose cannot be met, the staff should determine whether or not negotiations should continue.

RESPONSIBILITY

The preparation cost of the purchase of the Title Report is to be negotiated between buyer and seller.

G. **Property Valuation** – The value of the property needs to be determined and listed with the Auditors Office. The approximate value of the property needs to be determined in order to list the property as a County asset with a determined net worth. An appraisal of the property may or may not be required. The property owner providing the property to the County may seek an appraisal in order to determine market value for tax purposes.

RESPONSIBILITY

The cost of determining the land value (e.g., property appraisal) should be negotiated between the County and property owner.

H. **Land Owner Disclosure** – The land owner must disclose any and all knowledge of activities on the property including construction activities, the condition of all facilities, structures and equipment and the potential for environmental contamination. Disclosure should also include information on water rights, easements, existing public rights to use of the property, property lines, fence line locations and any other features that need to be disclosed to fully describe how the property has been used and/or modified over time. This disclosure is in addition to the information identified in the title report.

RESPONSIBILITY

Any costs associated with providing property disclosures should be borne by the property owner.

I. **Environmental Site Assessment** – A Phase I Environmental Site Assessment (ESA) is a non-invasive physical examination of the property and a record search including public documents and aerial imagery in order to determine the likelihood of presence of environmental contaminants. Unless a significant amount of information is known about the property, a Phase I ESA is recommended.

Optional Phase II Environmental Site Assessment – A Phase II ESA will be required if the Phase I ESA has identified potential environmental contaminants. A Phase II ESA is intended to be invasive in order to determine the presence or absence of environmental

contaminants. If contaminants are present, the Phase II will determine the location and extent of the contamination and recommend actions for remediation.

RESPONSIBILITY

The cost of the Phase I ESA is typically borne by the County as a part of the due diligence investigation. Use of public revenues will be determined on a case-by-case basis. The cost of the Phase II ESA is typically to be borne by the property owner in order to remediate, or fully disclose potential environmental contaminants.

J. Land Survey – A survey of the property should be considered after the following questions can be answered: 1) Has a survey previously been conducted? 2) Has a record of survey been recorded? 3) Does existing survey information adequately provide information on the physical location of the property? If inadequate information exists, it should be determined whether or not a land survey is to be required prior to acquisition. The County's Surveyor's Office should be consulted if it is unclear as to the adequacy of available information.

RESPONSIBILITY

The property owner is responsible to provide, with certainty to the County, the physical limits of the property. The costs of providing the necessary survey data is typically borne by the property owner but may be subject to further negotiation depending on circumstances.

K. Fiscal Impact Analysis - The staff should conduct a fiscal impact analysis identifying all initial and ongoing costs associated with the acquisition of the property. The analysis should consider the following:

- Identify the revenue source(s) for the purchase of the property
- Evaluate the cost of operations and maintenance over time based upon the refined project description
- Identify revenue sources for ongoing operations and maintenance costs
- Identify potential losses in property, sales or other tax revenues
- Identify the potential revenue benefits, if any, associated with public ownership and use of the property (e.g., County lease to a farmer or business entity resulting in income generation)

RESPONSIBILITY

The Lead Department is responsible for obtaining the fiscal impact analysis. Such an evaluation may require the services of a fiscal/economic consultant. The cost of hiring a consultant to prepare a fiscal impact analysis should be negotiated.

III. BOARD OF SUPERVISORS ACTION AND FINAL NEGOTIATIONS

Once all of the above steps have been completed and information on the property has been collected or obtained, the Lead Department should complete negotiations with the property owner and proceed to the Board of Supervisors with recommendations on the acquisition.

The following section identifies the final steps prior to transfer of title.

A. **Board of Supervisors Action** - The Lead Department is to prepare a staff report to the Board of Supervisors with a recommendation to proceed with the acquisition and obtain the property. If the property is being received as part of a dedication or donation, the staff report will need to include the Board's decision to receive the property. The Board's action at this step will typically be the final action of the Board of Supervisors for all fee title acquisitions.

As explained in Section II, there are occasions where negotiations have occurred to this point without the Board's specific direction to proceed. This may occur due to a need to expeditiously process a purchase, or there are requests for anonymity/privacy from the property owner. In these instances, the staff report will need to be complete and thorough enough for the Board to adequately deliberate and take an action on the acquisition.

The Board of Supervisor's staff report should, at a minimum, include the following elements:

- Project description of the property and the surrounding environment
- Important features or characteristics of the property identified above in Section II
- Proposed purchase price
- Fiscal impact analysis conclusions/recommendations
- Figure depicting the general location of the property and a figure depicting the accurate boundaries of the property (e.g., surveyed plat map)
- A recommendation delegating the authority to close escrow to the Department Head of the Lead Department.
- CEQA documents with a recommendation for action
- Budget modifications if any to insure sufficient revenues are available to purchase the property and cover the costs during the balance of the fiscal year including construction costs and operations/maintenance costs.

The following steps are only necessary if the County is purchasing property through an escrow. If the property is being acquired through a donation or dedication the staff report required above will serve as the final action.

B. Contract to Purchase - The Lead Department should prepare the final contract to purchase the property. Such documents should be prepared with the assistance and review of County Counsel's Office and the Property Management Division of the Department of Facility Services. The contract to purchase is to be forwarded to the property owner for review and approval.

RESPONSIBILITY

Lead Department

C. Escrow - If the property is to be purchased the County and the property owner shall mutually agree upon the use of a title company to open an escrow account. The Lead Department shall determine whether or not title insurance is to be obtained. In most cases, title insurance is recommended.

D. Transfer of Funds - The Lead Department shall consult with the Auditor's Office on the appropriate form to transfer funds from the County to the title company.

RESPONSIBILITY

Lead Department in consultation with the Property Management Division of the Facility Services Department.

E. Property Transfer Documentation – The necessary property transfer documents (e.g., grant deeds) need to be prepared, executed, acknowledged and delivered. The documents should be reviewed by County Counsel and the Facility Services Department prior to final execution.

F. Pro-ration of Property Taxes and Payment of Assessments – All property taxes owed up to the date of sale and any outstanding bond debt must be paid prior to recordation of the grant deed.

RESPONSIBILITY

The property owner is responsible for paying pro-rated property taxes and any outstanding bond debt. The property owner will be responsible for paying any pro-rated assessments for public services provided to the property. The County will pay for ongoing assessments after property transfer has been completed for those public services that are provided in perpetuity.

G. Close of Escrow/Transfer of Title - Once the terms of the contract to purchase have been satisfied, the requirements of the escrow have been met and the Auditor's Office is prepared to transfer the revenues used to purchase the property, the County and property owner shall conclude the purchase of the property and transfer title to the County.

RESPONSIBILITY

All costs of recording documents are borne by the County. The cost of deed preparation is negotiated between County and property owner.

H. Real Estate Commissions – The property owner(s) or County may use the services of a real estate agent or broker to assist with the land transaction. The County will provide County staff or contract professionals for all land transactions.

RESPONSIBILITY

The cost of any real estate broker or agent working on behalf of the property owner shall be borne by the property owner. The County shall bear the cost of providing its professional representation at all levels of the land transaction.

CONSERVATION EASEMENT LAND ACQUISITION PROCEDURES

A conservation easement is a voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land. The easement insures that a particular open space feature or characteristic is to be conserved in perpetuity or for a specified duration of time. The use of conservation easements allow the County to satisfy a wide range of open space protection objectives without purchasing or owning large tracts of lands. Properties will remain within the private sector, and they can still be managed for revenue generating purposes (e.g., agricultural operations and hunting). Most importantly, the landowner's interests can be specifically identified and accommodated.

A conservation easement may be donated or purchased. Property owners who donate lands can receive a federal income tax deduction for the gift of a conservation easement. The Internal Revenue Service allows a deduction if the easement is perpetual and donated for "exclusively for conservation purposes". The amount of the tax deduction is determined by the value of the conservation easement. Additional tax relief may be available from estate taxes and property taxes.

This section of these guidelines addresses the process of obtaining a conservation easement over private property. This section is written with the intent of providing an expeditious method of identifying the conservation purpose, the cost of the easement, the type of restrictions imposed upon the property and the duration of the encumbrance. Table 2 depicts a summary of these steps, including the task, required action(s), the responsible department and expected timing.

I. PRELIMINARY DECISION-MAKING

A. Identification of Property - In most instances, the Lead Department will identify the property that they seek to protect. For example, the Placer Legacy program seeks to protect a wide range of open space resources in the County. The properties to be protected have been identified following a careful analysis of the open space resources present throughout Placer County. The acquisition of easements on these properties is one of the tools available to protect the identified resources.

It will be the responsibility of the Lead Department to identify the property and to establish the conservation purpose discussed below. In some cases, the County may be contacted by a landowner willing to sell or donate a conservation easement because of a desire to protect their property, to obtain revenues, tax relief, estate planning or some or all of the above.

B. Definition of the Conservation Purpose - The Lead Department should consider that a particular property has a group of property rights. These rights may differ from property to property. Some rights are perceived while others are well defined (e.g., uses permitted by the Zoning Ordinance.) The purchase or donation of a conservation easement will restrict or remove some of these rights. The conservation purpose should represent the "best-case-scenario" for an acquisition.

In order to negotiate with a landowner, it must be determined which rights are to remain and which rights are to be restricted or eliminated. This is accomplished through the identification of a *conservation purpose*. The conservation purpose should describe which features of the property are to be protected and the method by which they are to be protected. The conservation purpose should typically implement an existing program or objective.

C. Initiate Landowner Negotiation - Once the Lead Department has prepared the conservation purpose, the Lead Department should contact the property owner to determine if there is a willing seller. There may be circumstances where the County is approached by a landowner that wishes to sell or donate a conservation easement. If this occurs, a conservation purpose should be identified as quickly as possible in order to be responsive to the interest of the landowner. If no conservation purpose can be identified, no acquisition should occur.

It will be necessary for the Lead Department and landowner to agree on the conservation purposes and the associated restrictions in order to determine the value of the easement.

Willing Seller Restrictions - Placer Legacy
For Placer Legacy, all acquisitions may proceed only after the property owner has been identified as a willing seller. For property owners who express that they are interested in selling a conservation easement, the negotiations are concluded.

D. Title Report – It may be necessary to obtain a current title report. This is intended to protect the interests of the County and the seller. A title report will insure that holders of any deeds of trust can be notified of the encumbrance and the effect of the encumbrance upon th market value of the property. For the County, the title report will identify any existing encumbrances or rights that could detrimentally impact the conservation purpose.

E. Determination of Easement Terms and Value - The Lead Department and property owner will need to negotiate the specific terms of the conservation easement. These terms, including the anticipated restrictions will define the easement's value. It will also need to be determined if the easement is to run in perpetuity or if there is a sunset clause/termination date. Typically, the cost of the easement will increase as the amount or severity of the restrictions increase. It will likely require the services of a professional land appraiser in order to determine the value of the easement acquisition.

F. Fiscal Impacts and Budget Implications - The Lead Department is to identify the source of revenues for the purchase. If there are any anticipated fiscal impacts due to a loss of revenue to the County they should be identified. Potential losses include reduced sales taxes if the property had revenue generating activities that are restricted and loss of property taxes if the value of the property is reduced to the point where the property taxes paid are accordingly changed to reflect the new value.

G. Prepare Draft Conservation Easement - Once the terms of the easement have been agreed upon and a revenue source has been identified, the Lead Department is to prepare the draft language for the conservation easement. The language should be reviewed by County Counsel's Office prior to forwarding to the landowner. Once landowner authorization has been receiv

the Lead Department should forward the easement with a request for purchase to the Board of Supervisors.

II. APPROVAL AND PURCHASE

A. Board of Supervisors Action - Once a purchase price has been negotiated a staff report is to be written to the Board of Supervisors. The Board's action will grant the Lead Department the authority to purchase the easement and record the appropriate documents. At a minimum, the Board staff report should include the following elements:

- Description of the property (including current land use activities) and its surroundings
- Describe the conservation purpose
- Cost of the easement
- Source of revenues for the purchase
- Copy of the draft easement describing easement terms and location
- A recommendation delegating the authority to conclude the purchase to the Department Head of the Lead Department
- Fiscal impacts associated with the acquisition.

B. Purchase/Recordation - If the Board authorizes the purchase of the Conservation Easement the Lead Department is to conclude negotiations, transfer revenues to the landowner and record the conservation easement at the County Recorder's Office. A conformed copy of the recorded easement is to be held for the Lead Department's files and one copy is to be immediately forwarded to the landowner. Once the original documents are returned to the Lead Department from the Recorders Office, a copy of the original is to be forwarded to the landowner.

Table 1. Fee Title Acquisition Proposed Schedule

Task	Responsibility	Action	Time (days)
Purpose of Acquisition			
Determination of Public Benefit			
Preliminary Analysis of Costs of Acquisition			
Preliminary Analysis of Costs of Operations and Maintenance			
Analysis of Acquisition and Operation and Maintenance Funding Sources			
Refinement of Intended Purpose			
Initiation of Formal Negotiations and First Steps			
California Environmental Quality Act			
Compliance with the Zoning Ordinance			
Right of Entry			
Title Report			
Property Valuation			
Land Owner Disclosure			
Environmental Site Assessment			
Land Survey			
Fiscal Impact Analysis			
Board of Supervisors Action			
Contract to Purchase			
Escrow			
Transfer of Funds			
Property Transfer Documentation			
Pro-ration of Property Taxes and Payment of Assessments			
Close of Escrow/Transfer of Title			
Real Estate Commissions			

Table 2. Conservation Easement Acquisition Proposed Schedule

Task	Responsibility	Action	Time (days)
Identification of Property			
Definition of the Conservation Purpose			
Initiate Landowner Negotiation			
Title Report			
Determination of Easement Value			
Fiscal Impacts and Budget Implications			
Prepare Draft Conservation Easement			
Board of Supervisors Action			
Purchase			

Appendix I
SAMPLE CONSERVATION EASEMENTS

The following documents are actual examples of conservation easements, copied verbatim from the Marin Agricultural Land Trust and the Land Conservancy of San Luis Obispo. They represent two general types of easements where public access is not authorized. These examples are presented to depict typical conservation easement language. Depending on the objectives of a specific easement in Placer County, and the value paid for that easement, the terms and conditions may be more or less restrictive. For example, restrictions on allowed agricultural activities could be included in a conservation easement intended to protect sensitive species habitat.

Easement No. 1 – Marin Agricultural Land Trust agricultural conservation easement (Not for execution)

When Recorded Mail To:
MARIN AGRICULTURAL LAND TRUST
P.O. Box 809 Pt. Reyes Station, CA 94956
Telephone: (415) 663-1158

Deed of Agricultural Conservation Easement and Development Rights

THIS DEED OF AGRICULTURAL CONSERVATION EASEMENT AND DEVELOPMENT RIGHTS (the "Deed") is made by _____ and _____, husband and wife ("Grantors"), to MARIN AGRICULTURAL LAND TRUST, a California nonprofit public benefit corporation ("Grantee").

WITNESS THAT:

WHEREAS, Grantors are the owners in fee simple of certain real property in Marin County, California, more particularly described in Exhibit A attached hereto and incorporated herein by this reference (the "Property"); and

WHEREAS, the Property possesses agricultural, open space and scenic values of great importance to Grantors, the people of Marin County and the people of the State of California; and

WHEREAS, Grantors intend that the Property be maintained in agricultural production by the maintenance of the agricultural values thereof and that the open space and scenic values of the Property be preserved by the continuation of the agricultural and ranching uses that have proven historically compatible with such values; and

WHEREAS, the County of Marin (the "County") has established an Agricultural Conservation Easement Grant Program to help preserve Marin County's agricultural lands by making grants to Grantee for the acquisition of agricultural conservation easements using funds authorized by the California Wildlife, Coastal and Park Land Conservation Bond Act of 1988; and

WHEREAS, the County has made a grant to Grantee for the acquisition of this Deed of Agricultural Conservation Easement and Development Rights from Grantors; and
WHEREAS, Grantors intend, as owners of the Property, to convey to Grantee the right to preserve and protect the agricultural, open-space and scenic values of the property in perpetuity; and

WHEREAS, Grantee is a publicly supported, tax-exempt nonprofit organization qualified under Section 501(c)(3) and 170(h) of the Internal Revenue Code, whose primary purpose is the preservation and protection of agricultural, open space and scenic lands in Marin County, California; and

WHEREAS, Grantee intends, by acceptance of the grant made hereby, forever to hon the intentions of Grantors to preserve and protect in perpetuity the agricultural, open space an scenic values of the Property;

NOW, THEREFORE, for good and valuable consideration, and in consideration of the mutual covenants, terms, conditions, and restrictions contained herein, and pursuant to the laws of the State of California including, inter-alia, Sections 815-816 of the California Civil Code, Grantors do hereby voluntarily grant to Grantee an Agricultural Conservation Easement in gross in perpetuity over the Property of the nature and character and to the extent hereinafter set forth (the "Easement"). Grantors also grant to Grantee certain development rights associated with the Property as hereinafter described.

1. **Purpose.** It is the purpose of this Easement to enable the Property to remain in agricultural use for the production of food and fiber by preserving and protecting in perpetuity its agricultural values, character, use and utility, and to prevent any use of the Property that would significantly impair or interfere with its agricultural values, character, use or utility. To the extent that the preservation of the open space and scenic values of the Property is consistent with such use, it is within the purpose of this Easement to protect those values.

2. **Affirmative Rights and Interests Conveyed.** To accomplish the purpose of this Easement, the following rights and interests are conveyed to Grantee by this Easement:
   a. To identify, to preserve and to protect in perpetuity the agricultural values, character, use and utility, including the soil and water quality, and the open spa and scenic values of the Property. (The agricultural values, character, use and utility, and the open space and scenic values of the property are hereinafter referred to collectively as "the protected values".)
   b. To enter upon, inspect, observe, and study the Property for the purposes of (1) identifying the current uses and practices thereon and the baseline condition thereof, and (2) monitoring the uses and practices regarding the Property to determine whether they are consistent with this Easement. Such entry shall be permitted upon prior notice to Grantors, and shall be made in a manner that will not unreasonably interfere with Grantors' use and quiet enjoyment of the Property.
   c. To prevent any activity on or use of the Property that is inconsistent with the purpose of this Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use. However, it is the intention of this Easement not to limit Grantors' discretion to employ their choices of farm and ranch uses and management practices so long as those uses and practices are consistent with the purpose of this Easement.
   d. Subject to Grantors' consent, to erect and maintain a sign or other appropriate marker in a prominent location on the Property, visible from a public road, bearing information indicating that the Property is protected by Grantee. The wording of the information shall be determined by Grantee, but shall clearly indicate that the Property is privately owned and not open to the public. Grantee shall be responsible for the costs of erecting and maintaining such sign or mar

e. The development rights referred to in Paragraph 11 below.

3. **Uses and Practices.** Grantee and Grantors intend that this Easement shall confine the uses of the Property to agriculture, ranching, residential use associated with the agricultural use of the Property, and the other uses which are described herein. Examples of uses and practices which are consistent with the purpose of this Easement, and which are hereby expressly permitted, are set forth in Exhibit B, attached hereto and incorporated herein by this reference. Examples of uses and practices which are inconsistent with the purpose of this Easement, and which are hereby expressly prohibited, are set forth in Exhibit C, attached hereto and incorporated herein by this reference. The uses and practices set forth in Exhibits B and C are not necessarily exhaustive recitals of consistent and inconsistent activities, respectively. They are set forth both to establish specific permitted and prohibited activities, and to provide guidance in determining the consistency of other activities with the purpose of this Easement.

4. **Baseline Data.** In order to establish the present condition of the Protected Values, Grantee has examined the Property and prepared a report (the "Baseline Documentation Report") containing an inventory of the Property's relevant features and conditions, its improvements and its natural resources (the "Baseline Data"). A copy of the Baseline Documentation Report has been provided to Grantor, and another shall be placed and remain on file with Grantee. The Baseline Documentation Report has been signed by Grantors and Grantee, and thus acknowledged accurately to represent the condition of the Property at the date of the conveyance of this Easement. The parties intend that the Baseline Data shall be used by Grantee to monitor Grantors' future uses of the Property and practices thereon. The parties further agree that, in the event a controversy arises with respect to the condition of the Property or a particular resource thereof, the parties shall not be foreclosed from utilizing any other relevant document, survey, or report to assist in the resolution of the controversy. Grantors and Grantee recognize that changes in economic conditions, in agricultural technologies, in accepted farm and ranch management practices, and in the situations of Grantors may result in an evolution of agricultural uses of the Property, provided such uses are consistent with this Easement.

5. **Reserved Rights.** Grantors reserve to themselves, and to their personal representatives, heirs, successors, and assigns, all rights accruing from their ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement. Without limiting the generality of the foregoing, the following rights are expressly reserved: (i) all right, title, and interest in and to all tributary and non-tributary water, water rights, and related interests in, on, under, or appurtenant to the Property, provided that such water rights are used on the Property in a manner consistent with the purpose of this Easement; and (ii) all right, title, and interest in subsurface oil, gas and minerals; provided that the manner of exploration for, and extraction of any oil, gas or minerals shall be only by a subsurface method, and shall not damage, impair or endanger the protected values of the Property.

6. **Arbitration.** If a dispute arises between the parties concerning the consistency of any proposed use or activity with the purpose of this Easement, and Grantors agree not to proceed with the use or activity pending resolution of the dispute, either party may refer the dispute to arbitration by request made in writing upon the other. Within thirty (30) days of the receipt of such a request, the parties shall select a single arbitrator to hear the matter. If the parties are unable to agree on the selection of a single arbitrator, then each party shall name one arbitrator and the two arbitrators thus selected shall select a third arbitrator; provided, however, if either party fails to select an arbitrator, or if the two arbitrators selected by the parties fail to select the third arbitrator within fourteen (14) days after the appointment of the second arbitrator, then in each such instance a proper court, on petition of a party, shall appoint the second or third arbitrator or both, as the case may be. A judgment on the arbitration award may be entered in any court having jurisdiction thereof. The prevailing party shall be entitled, in addition to such other relief as may be granted, to a reasonable sum as and for all its costs and expenses related to such arbitration, including, without limitation, the fees and expenses of the arbitrator(s) and attorneys' fees, which shall be determined by the arbitrator(s) and any court of competent jurisdiction that may be called upon to enforce or review the award.

7. **Grantee's Remedies.** If Grantee determines that Grantors are in violation of the terms of this Easement or that a violation is threatened, Grantee shall give written notice to Grantors of such violation and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Property resulting from any use or activity inconsistent with the purpose of this Easement, to restore the portion of the Property so injured. If Grantors fail to cure the violation within thirty (30) days after receipt of notice thereof from Grantee, or under circumstances where the violation cannot reasonably be cured within a thirty (30) day period, fail to begin curing such violation within the thirty (30) day period, or fail to continue diligently to cure such violation until finally cured, Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Easement, to enjoin the violation by temporary or permanent injunction, to recover any damages to which it may be entitled for violation of the terms of this Easement or injury to any protected values, including damages for any loss thereof, and to require the restoration of the Property to the condition that existed prior to any such injury. If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the protected values of the Property, Grantee may pursue its remedies under this paragraph without waiting for the period provided for cure to expire. Grantee's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this Easement, and Grantors agree that Grantee's remedies at law for any violation of the terms of this Easement are inadequate and that Grantee shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other relief to which Grantee may be entitled, including specific performance of the terms of this Easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Grantee's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity.

7.1 Costs of Enforcement. Any costs incurred by Grantee in enforcing the terms of this Easement against Grantors, including, without limitation, costs of suit and attorneys' fees, and any costs or restoration necessitated by Grantors' violation of the terms of this Easement shall be borne by Grantors. If Grantors prevail in any action to enforce the terms of this Easement, Grantors' costs of suit, including, without limitation, attorneys' fees, shall be borne by Grantee.

7.2 Grantee's Discretion. Enforcement of the terms of this Easement shall be at the discretion of Grantee, and any forbearance by Grantee to exercise its rights under this Easement in the event of any breach of any term of this Easement by Grantors shall not be deemed or construed to be a waiver by Grantee of such term or of any subsequent breach of the same or any other term of this Easement or of any of Grantee's rights under this Easement. No delay or omission by Grantee in the exercise of any right or remedy upon any breach by Grantors shall impair such right or remedy or be construed as a waiver.

7.3 Acts Beyond Grantors' Control. Nothing contained in this Easement shall be construed to entitle Grantee to bring any action against Grantors for any injury to or change in the Property resulting from causes beyond Grantors' control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken by Grantors under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes.

8. **Costs and Taxes.** Grantors retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of the Property. Grantors shall pay any and all taxes, assessments, fees and charges levied by competent authority on the Property or on this Easement. It is intended that this Easement constitute an enforceable restriction within the meaning of Article XIII Section 8 of the California Constitution and that this Easement qualify as an enforceable restriction under the provisions of California Revenue and Taxation Code Section 402.1.

9. **Hold Harmless.** Grantors shall hold harmless, indemnify, and defend Grantee and its directors, officers, employees, agents, and contractors and the heirs, personal representatives, successors, and assigns of each of them (collectively "Indemnified Parties") from and against all liabilities, penalties, costs, losses, damages, expenses, causes of action, claims, demands, or judgments, including, without limitation, reasonable attorneys' fees, arising from or in any way connected with: (1) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, regardless of cause, except to the extent of the adjudicated proportionate fault of any of the Indemnified Parties; (2) the obligations specified in Paragraph 8.

10. **Access.** No right of access by the general public to any portion of the Property is conveyed by this Easement.

11. **Development Rights.** The parties acknowledge that under currently applicable zoning regulations of the County the property is so classified that upon receipt of required government approvals the Property could be developed to a density of (__) single family residential dwelling units ("the development rights"), and, further, that under certain circumstances the development rights may be transferred to and utilized on other property or properties. The parties agree to deal with the development rights as follows:
    a. Grantors retain one (l) of the (__) development rights associated with the Property. [The development right retained by Grantor shall apply and relate to the existing residential improvements on the Property which consist of . Grantors reserve the right to maintain, use, repair, and replace the existing improvements on the property with approval of appropriate governmental agencies and in conformity with Paragraph 3 of Exhibit B and all other applicable provisions of this Deed. The development right retained by Grantors shall not be used to support or enable the creation of any additional residential uses or units on the Property except as expressly provided in Paragraph 3 of Exhibit B hereto.] [If property has no existing residence: The development right retained by Grantors shall apply to and may be utilized on the Property. Grantors may build, use, maintain, repair and replace a residence on the Property with the approval of appropriate governmental agencies and in conformity with all applicable provisions of this Deed, provided that Grantors first obtain the express written approval of Grantee as to the exact size and location of such residence.]
    b. The ( ) development rights associated with the Property which are not retained by Grantors are conveyed to Grantee. Grantee shall have the right to use, sell or otherwise benefit from the development rights owned by it in accordance with applicable laws and regulations of the County, provided that such development rights shall not be used on the Property.
    c. Neither Grantors nor Grantee shall use or receive the benefit from any increase in allowable development rights associated with the Property resulting from future zoning changes.
    d. Grantors understand and acknowledge that any transfer of the development rights acquired herein by Grantee to another property is subject to the provisions of applicable laws including, inter alia, the County's Code which requires, among other things, a master plan of the Property and a conservation easement or restrictions recorded against it which reflect the conditions of approval of the master plan. Grantors covenant and agree to cooperate fully with Grantee in Grantee's attempts to obtain approval for transfer of development rights acquired herewith pursuant to the County's Code and other applicable laws including, without limitation, executing and delivering such consents, master plan applications, conservation easements or restrictions and other documents as may be required by the County for review and approval of such transfers, provided that any such master plan, conditions of approval, and/or conservation easement or restrictions do not materially differ with the terms and conditions of this Deed. Grantee shall be responsible for all fees and costs of preparing and processing documents required by the County for review and approval of such transfers.

12. **Conveyance of Separate Parcels; Merger.** Grantors acknowledge that the Property currently consists of ___ separate assessor's parcels (Numbers _____ and _) which under existing law and regulations might be sold or conveyed separately from one another as separate legal parcels. It is agreed that the sale or conveyance of either parcel separate or apart from the other is inconsistent with the purpose of this Easement. Therefore, Grantors covenant and agree:
    a. Grantors will apply for and pursue to completion an application to the County of Marin for consolidation or merger of the ___ parcels of the Property into one, or pursue such other applicable legal restrictions so that neither parcel may be separately sold or conveyed from the other.
    b. Whether or not the ___ parcels are merged, Grantors and their successors in interest will not, without the prior written consent of Grantee, sell, alienate or convey any such parcels separately or apart from the other, and Grantors and their successors in interest will at all times treat all parcels as a single integrated economic unit of property. Upon any request to Grantee for consent to a separate sale, alienation or conveyance of either parcel, such consent may be granted, withheld or conditioned by Grantee in the exercise of its sole discretionary judgment regarding the consistency or inconsistency of the proposed transaction with the purpose of this Easement, which judgment exercised in good faith will be final and binding.

13. **Extinguishment.** If circumstances arise in the future such as render the purpose of this Easement impossible to accomplish, this Easement can only be terminated or extinguished, whether in whole or in part, by judicial proceedings in a court of competent jurisdiction, and the amount of the compensation to which Grantee shall be entitled from any sale, exchange, or involuntary conversion of all or any portion of the Property subsequent to such termination or extinguishment, shall be determined, unless otherwise provided by California law at the time, in accordance with paragraph 13. Grantee shall use all such proceeds in a manner consistent with the purposes of Section 5709(b)(3)(P) of the California Wildlife, Coastal and Park Land Conservation Bond Act of 1988.

14. **Compensation.** This Easement constitutes a real property interest immediately vested in Grantee. For the purpose of paragraph 12, the parties stipulate that this Easement has a fair market value determined by multiplying (i) the fair market value of the property unencumbered by the Easement (minus any increase in value attributable to improvements made after the date of this grant) by (ii) the ratio of the value of the Easement at the time of this grant to the value of the Property, unencumbered by the Easement, at the time of this grant.

    For the purposes of this paragraph, Grantor and Grantee agree that the ratio of the value of the Easement to the value of the Property unencumbered by the Easement is . This ratio shall remain constant.

15. **Condemnation.** If the Easement is taken, in whole or in part, by exercise of the power of eminent domain, Grantee shall be entitled to compensation in accordance with applicable law.

16. **Assignment of Grantee's Interest.** Grantee may assign its interest in this Easement only to a "qualified organization", within the meaning of Section 170(h) of the Internal Revenue Code of 1954, as amended, or any successor provision, and which is authorized to acquire and hold conservation easements under California law, upon obtaining the prior written consent of Grantors and the County. Any assignment without such consents shall be void and of no effect. Such consents shall not be unreasonably withheld by Grantors and the County.

17. **Executory Limitation.** If Grantee shall cease to exist, or to be a qualified organization under section 170(h) of the Internal Revenue Code of 1954, as amended, or to be authorized to acquire and hold conservation easements under California law, then Grantee's rights and obligations under this Easement shall become immediately vested in the County.

18. **General Provisions.**
    a. Controlling Law. The interpretation and performance of this Easement shall be governed by the laws of the State of California.
    b. Liberal Construction. Any general rule of construction to the contrary not withstanding, this Easement shall be liberally construed in favor of the grant to effect the purpose of this Easement and the policy and purpose of the California Conservation Easement Act of 1979, as amended. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purpose of this Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.
    c. Severability. If any provision of this Easement, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Easement, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.
    d. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement, all of which are merged herein.
    e. No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.
    f. Joint Obligation. The obligations imposed by this Easement upon Grantors shall be joint and several.
    g. Successors. The covenants, terms, conditions, and restrictions of this Easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Property.
    h. Termination of Rights and Obligations. A party's rights and obligations under this Easement terminate upon transfer of the party's interest in the Easement or Property, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

i. Future Conveyance. Grantors agree that reference to this Deed will be made in any subsequent deed or other legal instrument by means of which they convey any interest in the Property (including but not limited to a leasehold interest).

j. Not Governmental Approval. No provision of this Easement nor the approval by the County of a grant for the acquisition of this Easement shall constitute governmental approval of any improvements, construction or other activities which may be permitted under this Easement.

IN WITNESS WHEREOF, Grantors have executed this Deed of Easement this ____ day of _____, 19___.

Grantors

By:_____

By: _____

Accepted: MARIN AGRICULTURAL LAND TRUST

By:_____

[Notarization of Grantors' signatures].

Exhibit B: Permitted Uses and Practices

Exhibit C: Prohibited Uses and Practices

Exhibit B

Permitted Uses and Practices

The following uses and practices, though not necessarily an exhaustive recital of consistent uses and practices, are expressly permitted under this Easement, and they are not to be precluded, prevented, or limited by this Easement.

1. To reside on the Property.

2. To engage in any and all agricultural uses of the Property in accordance with sound, generally accepted agricultural practices. For the purposes of this Easement "agricultural uses" shall be defined as: breeding, raising, pasturing, and grazing livestock of every nature and description for the production of food and fiber; breeding and raising bees, fish, poultry, and other fowl; planting, raising, harvesting, and producing agricultural, aquacultural, horticultural, and forestry crops and products of every nature and description; and the processing, storage, and sale, including direct retail sale to the public, of crops and products harvested and produced principally on the Property, provided that the processing, storage, and sale of any such crops or products that are not food or fiber shall require the consent of Grantee; provided, however, that such agricultural uses shall not result in significant soil degradation, or significant pollution or degradation of any surface or subsurface waters.

3. To maintain and repair existing structures, housing, fences, corrals, roads, ditches, and other improvements on the Property. Additional improvements accessory to the residential use of the Property, and additional structures, housing, facilities and roads reasonably necessary to the agricultural uses of the Property, shall be permitted, provided that Grantors obtain the express written approval of Grantee for the construction of any such additional improvements, structure, housing, facility or road, including the size, function, capacity and location, which consent should not be unreasonably withheld. Grantor shall provide Grantee written notice of Grantor's intention to undertake such construction, together with information on its size, function, capacity and location, not less than forty-five (45) days prior to the commencement thereof. Additional fencing deemed by Grantors to be reasonably necessary to ranching and agricultural activities may be constructed without Grantee's consent. In the event of destruction, deterioration or obsolescence of any improvements, structures, housing, fences, corrals, roads, or ditches, whether existing at the date hereof or constructed subsequently pursuant to the provisions of this paragraph, Grantors may replace the same with improvements or structures of similar size, function, capacity and location.

4. To develop and maintain such water resources on the Property as are necessary or convenient for ranching, agricultural, irrigation, and residential uses in a manner consistent with the purpose of this Easement.

5. To use agrichemicals, including, but not limited to, fertilizers and biocides in those amounts and with that frequency of application necessary to accomplish reasonable grazing and agricultural purposes. Such use shall be carefully circumscribed near surface water and during periods of high ground water.

6. To control predatory and problem animals by the use of selective control techniques.

7. To utilize the Property for recreational or educational purposes, including, without limitation, hiking, horseback riding, hunting and fishing, that require no surface alternation or other development of the land.

Exhibit C

Prohibited Uses and Practices

The following uses and practices, though not necessarily an exhaustive recital of inconsistent uses and practices, are inconsistent with the purposes of this Easement and are expressly prohibited upon or within the Property:

1. The impairment of the protected values, except as otherwise provided herein.

2. The establishment of commercial or industrial uses or the construction, placing, or erection of any signs or billboards; provided, however, that neither ranching, agriculture, nor the production or processing of food and fiber products as contemplated by the provisions of Exhibit B, shall be considered commercial or industrial uses.

3. The construction, reconstruction, or replacement of any road or structure except as provided in Paragraph 11(a) of this Easement or Paragraph 3 of Exhibit B.

4. The division, subdivision, or de facto subdivision of the Property, provided, however, that a lease of a portion of the Property for agricultural use shall not be prohibited by this paragraph.

5. The use of motorized vehicles, except by Grantors or others under Grantors' control for agricultural, ranching or attendant residential use of the Property. Any use of motorized vehicles off of roadways is prohibited except when necessary for agricultural and ranching purposes.

6. The commercial harvesting of timber; provided, however, that Grantors shall have the right (i) to cut or collect firewood for the heating of ranch and residential facilities on the Property; (ii) to cut trees as necessary or desirable for agricultural purposes, for the construction of fences, and for the repair and construction of such buildings or other improvements on the Property as are allowed hereunder; and (iii) to develop and implement a long-range plan for the growing and harvesting of plants and trees in a manner that is consistent with the purpose of this Easement, upon the express written consent of Grantee, which shall not be withheld unreasonably.

7. The dumping or other disposal of wastes, refuse or debris on the Property, except for organic material generated by permitted agricultural uses on the Property; provided, that any such dumping or disposal of organic material shall be in accordance with applicable law and generally accepted agricultural management practices.

8. Ranching, agricultural or other uses, otherwise permitted under this Easement, which result in significant degradation of topsoil quality.

Easement No. 2 – Land Conservancy of San Luis Obispo open space easement (Not for Execution)

DEED OF CONSERVATION EASEMENT THIS GRANT DEED OF CONSERVATION EASEMENT is made this _____ day of _____, 199__, by _____ and _____, husband and wife, having an address at _____ ("Grantors"), in favor of the Land Conservancy of San Luis Obispo, a non-profit California corporation qualified to do business in California, having an address at 743 Pacific St., San Luis Obispo, CA 93401 ("Grantee"). WITNESSETH:

WHEREAS, Grantors are the sole owners in fee simple of certain real property in San Luis Obispo County, California, more particularly described in Exhibit A attached hereto and incorporated by this reference (the "Property"); and

WHEREAS, the property possesses natural, scenic, and open space values (collectively, "conservation values) of great importance to Grantors, the people of San Luis Obispo County, and the people of the Sate of California; and

WHEREAS, San Luis Obispo Creek is an important part of the coastal ecosystem and as such provides important habitat for a wide variety of birds, fishes, and both marine and terrestrial mammals, plants; and

WHEREAS, the property has conservation values that both Owner and Grantee desire to preserve and conserve for the public benefit; and

WHEREAS, the specific conservation values of the Property are documented in an inventory of relevant features of the Property, dated _____, 199__, ____ on file at the offices of Grantee and attached hereto as Exhibit B and incorporated by this reference ("Baseline Documentation"), which consists of reports, maps, photographs, and other documentation that the parties agree provide, collectively, an accurate representation of the Property at the time of this grant and which is intended to serve as an objective information baseline for monitoring compliance with the terms of this grant; and

WHEREAS, Grantors intend that the conservation values of the Property be preserved and maintained by the continuation of land use patterns, including, without limitation, those relating to farming that do not significantly impair or interfere with those values; and

WHEREAS, Grantors further intend, as owners of the Property, to convey to Grantee the right to preserve and protect the conservation values of the Property in perpetuity; and

WHEREAS, Grantee is a publicly supported, tax-exempt non-profit organization, qualified under Section 501(c)(3) and 170(h) of the Internal Revenue Code, whose primary purpose is the preservation, protection, or enhancement of land in its natural, scenic, historical, agricultural, forested, and/or open space condition;

and

WHEREAS, Grantee agrees by accepting this grant to honor the intentions of Grantor stated herein and to preserve and protect in perpetuity the conservation values of the Property for the benefit of this generation and the generations to come;

NOW, THEREFORE, in consideration of the above and the mutual covenants, terms, conditions, and restrictions contained herein, and pursuant to the laws of California and in particular Sections 815 and 816 of the Civil Code - Conservation Easements, Grantors hereby voluntarily grant and convey to the Grantee a Conservation Easement in gross in perpetuity over the Property described in Attachment A and referred to hereinafter as the Easement Area.

1. **Purpose.** It is the purpose of this Easement to assure that the Property, subject to the existing uses described herein, will be retained forever in its natural, scenic, and open space condition and to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property. Grantors intend that this Easement will confine the use of the Property to such activities, including, without limitation, those involving farming, ranching, or education that are consistent with the purpose of this Easement.

2. **Rights of Grantee.** To accomplish the purpose of this Easement, the following rights are conveyed to Grantee by this Easement:

   (a) To preserve and protect the conservation values of the Property.
   (b) To enter upon the Property at reasonable times in order to monitor Grantors' compliance with and otherwise enforce the terms of this Easement; provided that such entry shall be upon prior reasonable notice to Grantors, and Grantee shall not unreasonably interfere with Grantors' use and quiet enjoyment of the Property; and
   (c) To enhance the habitat values along San Luis Obispo Creek by conducting grading, planting, irrigation, and other activities as may be necessary to restore and enhance the edge of the stream through the planting of native trees, shrubs, and other kinds of vegetation, all at Grantee's expense; and
   (d) To enter the Easement area for the purpose of study and to make scientific observations; and
   (e) To allow, at such times as the Grantee shall deem reasonable and appropriate, the visiting of the Property by the public and by public educational institutions (under such circumstances and according to such rules as the Grantee shall from time to time establish and modify.)
   (f) To prevent any activity on or use of the Property that is inconsistent with the purpose of this Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use, pursuant to paragraph 6.

(g) To place signs on the Property which identify the land as being protected by this Conservation Easement. The number and location of the signs are subject to Grantors' approval.

3. **Prohibited Uses.** Any activity on or use of the Property inconsistent with the purpose of this Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited; (These are typical restrictions. Each easement needs to be written on an individual basis to meet the needs of the landowners.)

(a) Subdivision for purposes of residential or industrial development,
(b) Industrial or residential uses,
(c) Parking lots, storage areas or waste dumps of any kind,
(e) Coverage of land by asphalt, concrete, or other material that does not constitute a natural cover for the land, except as necessary for access to and maintenance of agricultural activity on the adjoining land.
(f) New buildings, structures, or other improvements, other than those described in the purpose of this easement related to agricultural activity.
(g) Alteration of the land surface through grading or soil dumping or trenching, except as may be necessary for activities related to the purpose of this easement such as irrigation improvements or water development projects related to agricultural uses.
(h) Surface mineral development or mining.
(i) New advertising signs or billboards.
(j) Cutting or removal of trees, shrubs, or other vegetation, except as necessary for fire protection, thinning, elimination of diseased growth, and similar protective measures, or those activities related to farming.
(k) Introduction of nonnative plants and animal species within riparian area that may compete with and result in the decline or elimination of natural species. Any new plantings shall be confined to native plants characteristic of the riparian region.
(l) Any use that would cause, increase or substantially add to the risk of erosion.
(m) No dumping of any kind; trash, concrete, toxic materials, etc.

4. **Reserved Rights.** Grantors reserve to themselves, and to their personal representatives, heirs, successors, and assigns, all rights accruing from their ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement. Without limiting the generality of the foregoing, the following rights are expressly reserved: (These rights also have to be written carefully to meet the needs of individual owners.)

(a) Normal and accepted agricultural practices as related, for example, to apple farming.
(b) Use the property protected by this easement as credit against any future requirements by San Luis Obispo County that may be requested as part of a land use permit for the protection of open space or natural resources.

(c) The right to restore damage to the easement area that may be caused by fire, flood, storm, earth movements, or acts beyond the Grantor's control.

(d) The right to maintain all existing private roads, bridges, trails, and structures lawfully erected and maintained upon the property.

(e) All water rights within the Easement Area. This includes the right to construct water extraction facilities and related distribution facilities. Water rights reserved include but are not limited to riparian, groundwater, and appropriated water rights within the easement area.

(f) The right to approve any proposed restoration activities within the Easement, modification of restoration plans, and all activities necessary to carry out the restoration projects as granted under Paragraph 2.

4.2 **Conditional Rights**: The following uses and activities may be undertaken with approval of the Grantee as provided in Paragraph 5. (a) Construction of bridges and other creek crossings.

5. **Notice of Intention to Undertake Certain Permitted Actions.** The purpose of requiring Grantors to notify Grantee prior to undertaking certain permitted activities, as provided in paragraphs 4.2, is to afford Grantee an opportunity to ensure that the activities in question are designed and carried out in a manner consistent with the purpose of this Easement. Whenever notice is required, Grantors shall notify Grantee in writing not less than thirty (30) days prior to the date Grantors intend to undertake the activity in question. The notice shall describe the nature, scope, design, location, timetable, and any other material aspect of the proposed activity in sufficient detail to permit Grantee to make an informed judgment as to its consistence with the purpose of this Easement.

5.1 **Grantee's Approval.** Where Grantee's approval is required, as set forth in paragraph 5, Grantee shall grant or withhold its approval in writing within twenty (20) days of receipt of Grantors' written request therefor. Grantee's approval may be withheld only upon a reasonable determination by Grantee that the action as proposed would be inconsistent with the purpose of this Easement.

6. **Grantee's Remedies.** If Grantee determines that Grantors are in violation of the terms of this Easement or that a violation is threatened, Grantee shall give written notice to Grantors of such violation and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Property resulting from any use or activity inconsistent with the purpose of this Easement, to restore the portion of the Property so injured. If Grantors fail to cure the violation within a thirty (30) days after receipt of notice thereof from Grantee, or under circumstances where the violation cannot reasonably be cured within a thirty (30)-day period, fail to begin curing such violation within the thirty (30)-day period, or fail to continue diligently to cure such violation until finally cured, Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Easement, to enjoin the violation, ex parte as necessary, by temporary or permanent injunction, to recover any damages to which it may be entitled for violation of the terms of this Easement or injury to any conservation values protected by this Easement, including damages for the loss of scenic, aesthetic

environmental values, and to require the restoration of the Property to the condition that existed prior to any such injury.

Without limiting Grantors' liability therefor, Grantee, in its sole discretion, may apply any damages recovered to the cost of undertaking any corrective action on the Property. If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the Property, Grantee may pursue its remedies under this paragraph without prior notice to Grantors or without waiting for the period provided for cure to expire. Grantee's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this Easement, and Grantors agree that Grantee's remedies at law for any violation of the terms of this Easement are inadequate and that Grantee shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other relied to which Grantee may be entitled, including specific performance of the terms of this Easement, without the necessary of proving either actual damages or the inadequacy of otherwise available legal remedies. Grantee's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity.

6.1 **Costs of Enforcement.** Any costs incurred by Grantee in enforcing the terms of this Easement against Grantors, including, without limitation, costs of suit and attorneys' fees, and any costs of restoration necessitated by Grantors' violation of the terms of this Easement shall be borne by Grantors. If Grantors prevail in any action to enforce the terms of this Easement, Grantors' costs of suit, including, without limitation, attorneys' fees, shall be borne by Grantee.

6.2 **Grantee's Discretion.** Enforcement of the terms of this Easement shall be at the discretion of Grantee, and any forbearance by Grantee to exercise its rights under this Easement in the event of any breach of any term of this Easement by Grantors shall not be deemed or construed to be a waiver by Grantee of such term or of any of Grantee's rights under this Easement. No delay or omission by Grantee in the exercise of any right or remedy upon any breach by Grantors shall impair such right or remedy or be construed as a waiver.

6.3 **Waiver of Certain Defenses.** Grantors hereby waive any defense of laches, estoppel, or prescription.

6.4 **Acts Beyond Grantors' Control.** Nothing contained in this Easement shall be construed to entitle Grantee to bring any action against Grantors for any injury to or change in the Property resulting from causes beyond Grantors' control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken by Grantors under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes.

7. **Access.** No right of access by the general public to any portion of the Property is conveyed by this Easement without specific written authority from Grantor describing places, trails, and other conditions.

8. **Costs and Liabilities.** Grantors retain all responsibility and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property, including the maintenance of adequate comprehensive general liability insurance coverage. Grantors shall keep the Property free of any liens arising out of any work performed for, materials furnished to, or obligations incurred by Grantors.

8.1 **Taxes.** Grantors shall pay all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Property by competent authority (collectively "taxes"), including any taxes imposed upon, or incurred as a result of, this Easement, and shall furnish Grantee with satisfactory evidence of payment upon request.

8.2 **Hold Harmless.** Grantors shall hold harmless, indemnify, and defend Grantee and its members, directors, officers, employees, agents, and contractors and the heirs, personal representatives, successors, and assigns of each of them (collectively "Indemnified Parties") from and against all liabilities, penalties, costs, losses, damages, expenses, causes of action, claims, demands, or judgments, including, without limitation, reasonable attorneys' fees, arising from or in any way connected with: (1) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, regardless of cause, unless due solely to the negligence of any of the Indemnified Pa (2) the obligations specified in paragraphs 8 and 8.1; and (3) the existence or administration of this Easement.

9. **Extinguishment.** If circumstances arise in the future such as render the purpose of this Easement impossible to accomplish, this Easement can only be terminated or extinguished, whether in whole or in part, by judicial proceedings in a court of competent jurisdiction, and the amount of the proceeds to which Grantee shall be entitled, after the satisfaction or prior claims, from any sale, exchange, or involuntary conversion of all or any portion of the Property subsequent to such termination or extinguishment, shall be determined, unless other wise provided by California law at the time, in accordance with paragraph 9.1. Grantee shall use all such proceeds in a manner consistent with the conservation purposes of this grant.

9.1 **Proceeds.** This Easement constitutes a real property interest immediately vested in Grantee, which, for the purposes of paragraph 9, the parties stipulate to have a fair market value determined by multiplying the fair market value of the Property unencumbered by the Easement (minus any increase in value after the date of this grant attributable to improvements) by the ratio of the value of the Easement at the time of this grant to the value of the Property, without deduction for the value of the Easement, at the time of this grant. The values at the time of this grant shall be those values used to calculate the deduction for federal income tax purposes allowable by reason of this grant, pursuant to Section 170(h) of the Internal Revenue Code of 1954, as amended. For the purposes

this paragraph, the ration of the value of the Easement to the value of the Property unencumbered by the Easement shall remain constant.

9.2 **Condemnation.** If the Easement is taken, in whole or in part, by exercise of the power of eminent domain, Grantee shall be entitled to compensation in accordance with applicable law.

10. **Assignment.** This Easement is transferable, but Grantee may assign its rights and obligations under this Easement only to an organization that is a qualified organization at the time of transfer under Section 170(h) of the Internal Revenue Code of 1954, as amended (or any successor provision then applicable), and the applicable regulations promulgated thereunder, and authorized to acquire and hold conservation easements under state statute(or any successor provision then applicable). As a condition of such transfer, Grantee shall require that the conservation purposes of this grant is intended to advance continue to be carried out.

11. **Subsequent Transfers.** Grantors agree to incorporate the terms of this Easement in any deed or other legal instrument by which they divest themselves of any interest in all or a portion of the Property, including, without limitation, a leasehold interest. Grantors further agree to give written notice to Grantee of the transfer of any interest at least twenty (20) days prior to the date of such transfer. The failure of Grantors to perform any act required by this paragraph shall not impair the validity of this Easement or limit its enforceability in any way.

12. **Estoppel Certificates.** Upon request by Grantors, Grantee shall within twenty (20)days execute and deliver to grantors any document, including an estoppel certificate, which certifies Grantors' compliance with any obligation of Grantors contained in this Easement and otherwise evidences the status of this Easement as may be requested by Grantors.

13. **Notices.** Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and either served personally or sent by first class mail, postage prepaid, addressed as follows: To Grantors:

_____

_____ _____ To Grantee:

_____

_____ _____ or to such other address as either party from time to time shall designate by written notice to the other.

14. **Recordation.** Grantee shall record this instrument in timely fashion in the official records of San Luis Obispo County, California, and may re-record it at any time as may be required to preserve its rights in this Easement.

15. General Provisions.

(a) Controlling Law. The interpretation and performance of this Easement shall be governed by the laws of the State of California.

(b) Liberal Construction. Any general rule of construction to the contrary notwithstanding, this Easement shall be liberally construed in favor of the grant to effect the purpose of this Easement and the policy and purpose of the Conservation Act of 1979. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purpose of this Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) Severability. If any provision of this Easement, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Easement, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

(d) Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Easement and superseded all prior discussions, negotiations, understandings, or agreements relating to the Easement, all of which are merged herein.

(e) No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of Grantors' title in any respect.

(f) Joint Obligation. The obligations imposed by this Easement upon Grantors shall be joint and several

(g) Successors. The covenants, terms, conditions, and restrictions of this Easement shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running perpetually with the Property.

(h) Termination of Rights and Obligations. A party's rights and obligations under this Easement terminate upon transfer of the party's interest in the Easement or Property, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

(i) Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

(j) Counterparts. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

TO HAVE AND TO HOLD unto Grantee, its successors, and assigns forever.

IN WITNESS WHEREOF Grantors and Grantee have set their hands on the day and year first written above.

Grantors

Grantee

SCHEDULE OF EXHIBITS A. Legal Description of Property Subject to Easement B. Baseline Documentation

Appendix J
PLACER LEGACY QUANTITATIVE IMPLEMENTATION SCENARIOS

The following tables present the assumptions and the methodology used by the Planning Department staff and planning consultant, Thomas Reid Associates (TRA) to derive the inputs for the economic analysis conducted by Hausrath Economics Group in May of 2000. The narrative explains the purpose of the analysis, the methodology, and the sources.

Purpose

Three scenarios are developed: Low Involvement, Moderate Involvement, and High Involvement. These quantitative scenarios are based on the objectives set by the Citizens Advisory Committee and the Board of Supervisors, interpreted by staff to reflect a general priority of effort from low to high. The scenarios reflect staff estimates of the land area and management intensity needed to meet objectives at the various levels. The estimates take into account the extent of the resources and the geographic opportunities. They reflect the quantitative geographic inventory of Placer County, but they are **not** derived from a map of specific conservation areas or candidate management land parcels.

The quantitative scenarios, the discussion of implementation opportunities above, and the specific areas described in Chapter IV focus on the specific role of Placer Legacy in implementing Placer County General Plan policies. The scenarios do not include existing public land nor do they include the results of the regional wetland or endangered species permitting process described in the following Section. That permitting process leading to a Habitat Conservation Plan (HCP) and a Natural Communities Conservation Plan (NCCP) would provide additional preservation of biological resources to mitigate the effects of covered activities.

The acreage figures are intended to show a wide range of possible scenarios for Placer Legacy implementation to serve as a basis for the economic analysis. The reader is cautioned to bear in mind the purpose of these scenarios: to allow the County to consider the full range of possible costs associated with obtaining the public interest and managing the land. These are estimates. The actual areas, and of course the actual location of the land involved, would be based on a process of priority setting, establishment of objectives, and voluntary negotiations with land owners which would stretch over many years.

Methodology

In order to provide a complete basis for the economic analysis, the quantitative scenarios establish a series of area estimates by element and by study area for the low, moderate, and high levels of effort. The biology element is derived from estimates of possible conservation for riparian and creeks, foothill woodland, vernal pools and grassland, and Sierran habitats.

Four Table groups are presented here:

Group I.	Low Involvement
Group II.	Moderate Involvement
Group III.	High Involvement.
Group IV.	Summary

The first three Table groups follow the same organization and present the same information about each of the three scenarios. Within each group, Set A shows all of the Placer Legacy Elements and Set B shows the detail used to develop the Biological Resources totals which appear in Set A. The list of Tables below gives the Table number and title for Group I, Low Involvement. The list would be the same for Groups II and III for the Moderate and High Involvement scenarios, respectively. All of assumptions and all of the tables used as input to the economic analysis are presented here; several "helper" tables used for intermediate steps in calculations are not included to avoid confusion.

I.A. Low Effort Scenario: Placer Legacy Draft Conservation Targets

This set of tables establishes the conservation targets, estimates overlap, and calculates initial and ongoing costs using assumed cost factors.

Data are presented for each study area (refer to Placer Legacy Atlas of Maps, Map 4, Placer Legacy Study Areas):

1. Agricultural Valley
2. South Placer Urban
3. Loomis Basin
4. Sheridan / Garden Bar
5. Auburn / Bowman
6. American River Canyon
7. Lower Sierra
8. Foresthill
9. West Slope Sierra
10. East Slope Sierra

And for each Placer Legacy element:

A. Agriculture
B. Biological Resources
C. Outdoor Recreation
D. Cultural Resources
E. Scenic/ Urban Separators
F. Public Safety

I.A.1. Summary of Conservation Targets for All Elements (area in acres)

Lists area in acres that represent the conservation target for this scenario. The study areas are listed along with the total acreage of the study area. The targets for the elements come from staff estimates, for biology, the acreage comes from Table I.B.1, discussed below. The column totals for each element are rounded to give the values in Chapter III, Implementation Scenarios: Range of Overall Land Management Effort. The final columns sum the rows, and shows the sum as a % of the study area acreage. Note that the sum does not take into account overlap and does not represent the total acreage believed to be needed.

I.A.2. Element Overlap – Percent of Target that can be fulfilled by Biological Resources

Presents estimated overlap factors to help calculate total area needed for a multi-objective program. For each element except biology, the factor represents how much of the element's objectives are likely to be met by lands selected for or providing biological resources value. In the Low Involvement scenario, overlap is zero or low. For other scenarios, it is assumed to be high. For example, in the Moderate Involvement scenario, staff estimates that 80% of outdoor recreation needs in the Loomis Basin will be met on land also providing for biological resources there. Biology is listed as "n.a." not applicable, because it is the base against which overlap is estimated.

I.A.3. Element Overlap – Residual Area Needed In Addition to Biological Resources (area in acres)

The purpose of this table is to compile the total land area needed, taking into account the overlap between multiple objectives. The thinking behind the table is: if the biology element target is met, how much land will the other elements need, considering that some proportion of that need is met by the biology lands, according to the previous table? Thus, the Biology column is the same as in Table I.A.1 because it is the starting point, each other cell is equal to the maximum value of a) the element target times one minus the overlap factor, b) the element target minus the area sum without overlap times the element overlap factor, or for the High scenario c) the full element target if that target is the greatest area need for that study area. The logic allows an estimate of overlap, compensating for the size disparity between targets.

The values in each cell do not necessarily represent the effort that would need to be made to objectives for that element. A later table apportions cost on a pro-rata basis. The purpose is to avoid double counting the cost of obtaining the public interest, where the same acre will be meeting more than one objective. The final columns show the total acreage with overlap and that acreage as a percent of the total acreage in each study area.

I.A.4 Planning and Start-up Factors ($/acre)

Lists staff estimates of the initial costs in $ per acre to plan for and complete one-time improvements on the land base. Actual expenditures would probably be made over a period of a few years, but are distinct from annual operating costs estimated separately. Values are low for agriculture reflecting incidental costs such as fencing and minor water supply changes. Values for biology come from Table I.B.3, Planning and Start-up Costs – Biology, which takes into account the vastly different costs for different habitats such as riparian restoration v. foothill woodland. Values for recreation and cultural resource preservation are staff estimates based on data from existing County parks and historical sites, data from regional park and open space districts elsewhere, and data on facilities development costs. Scenic and public safety costs are low and reflect mostly planning for monitoring. The scale factor for the Low Involvement scenario is 1.60 compared with the Moderate scenario as the base case used in estimating costs. That means that when these per-acre costs are applied to the acreage for management, there is a 60% surcharge to reflect the reduced economies to scale for the Low Involvement scenario.

I.A.5. Planning and Start-up Costs ($1000)

The factors in the previous table, I.A.4., are multiplied times the area target values in Table I.A.1. to get a total initial cost. The full target acreage is used here rather than the residual area in Table I.A.3. because the element objectives will have particular planning and start-up costs. For example, a park site may need a parking area for recreation and star thistle control for biology.

I.A.6. Operating and Monitoring Factors ($/acre/year)

Lists staff estimates the annual operating costs in $ per acre per year to carry out management and monitoring (for biology). Values are very low for agriculture reflecting minor monitoring for easements. Values for biology come from Table I.B.4, Operating and Monitoring Costs – Biology, which takes into account the different costs for different habitats. Values for recreation and cultural resource preservation are staff estimates based on data from existing County parks and historical sites, data from regional park and open space districts elsewhere. Scenic and public safety costs reflect minor monitoring for easements. The scale factor for the Low Involvement scenario is 1.60 compared with the Moderate scenario as the base case used in estimating costs. That means that when these per-acre costs are applied to the acreage for management, there is a 60% surcharge to reflect the reduced economies to scale for the Low Involvement scenario.

I.A.7. Operating and Monitoring Costs ($1000)

The factors in the previous table, I.A.6., are multiplied times the area target values in Table I.A.1. to get a total initial cost. The full target acreage is used here rather than the residual area in Table I.A.3. because the element objectives will have particular operating costs. For example, a park site may need a ranger for public safety and also a wildlife biologist for monitoring.

I.A.8. Acquiring the Public Interest – Cost ($1000)

The first two data rows list assumptions on easements. Each element has an assumed proportion of the public interest that could be met by an easement, the balance is assumed to be fee title acquisition. Where an easement is used, the elements differ in the cost of an easement as a percentage of the full fee title acquisition cost. The first data column lists the present day land value for each study area. The transaction cost is a multiplier that adds 5% to the land cost for realty, title, etc.

The residual area values in Table I.A.3 are applied against a formula using the assumptions about easement proportion and cost to give the residual dollar value for the element's contribution to the overall public land management interest. These values are not individually meaningful, but do sum to give a grand total. The final columns give the area total and the percent of all expenditures that each study area represents.

I.A.9. Prorated Share of Acquiring the Public Interest – Cost

In order to estimate the proportional share of cost for the various Placer Legacy elements, a pro-

rata share is calculated. This is needed because the methodology used to calculate land area uses biology as a basis and the previous table, I.A.9. suggests a disproportionate cost for biology. For example, under the Moderate Involvement scenario, Table I.A.9. suggests that the 23,121 acres of biology costs $60,694,000 ($2625 per acre average), but that some 15,840 acres of outdoor recreation could be acquired for only $2,812,000 ($177 per acre average), which is unrealistic. This discrepancy is an artifact of the methodology which has the biology needs calculated first and recreation needs only make up the small balance of cost.

The "fair share" calculation takes each element target area as a percent of the sum of element targets from Table I.A.1. And multiplies this area proration times the total cost of obtaining the public interest. This has the effect of spreading total cost evenly across the land area.

It is assumed that the different elements have the same base land cost in the each study area, but they will differ in the cost and applicability of easements. Thus, farmland conservation can be accomplished with essentially 100% easement and at an easement cost of 50% of fee title and this makes an acre of agricultural conservation cheaper than an acre of biological conservation (50% easement and 75% of full price), even when the base land price is the same. The row "easement factor" shows the effective percent of full cost for each element due to the easement assumptions. This factor is applied to the flat prorated cost distribution to give the "leveraged cost". Leveraged cost is proportional to actual cost, but sums to less than the actual cost. The "easement scale factor" is the amount that must be multiplied times the leveraged cost sum to bring it back to the actual estimated cost for the scenario.

The value for "factored share" shows that calculation and is a fair guide to the distribution of total cost spread across the elements, taking into account the magnitude of the area targets and the different cost of easements.

I.B. Low Effort Scenario: Biological Resources Detail

The tables in this set provide habitat-specific results for the different study areas. Individual area estimates are made for each study area for the four overall habitat types:

Vernal Pool/ Grassland. Area reflects an emphasis on large vernal pool complexes, not the wetland area of the vernal pools themselves (refer to methodology of J. Glazner, vernal pool assessment).
Creeks/ Riparian. The channel, surrounding natural flood plain and in steeper lands, some adjacent upland.
Foothill Woodland. Includes all foothill habitats:, grassland, savanna, chaparral, blue oak, and lower mixed conifer woodland. Many smaller riparian areas are included in this type as part of the overall mosaic.
Sierra Nevada. The vast complex of Sierran habitats.

I.B.1. Conservation Targets by Habitat Group – Area (acres)

The values are staff conservation target estimates for each study area. The acreage value for riparian comes from the next table I.B.2. The values were selected to reflect differing levels of conservation, emphasizing the higher value and more imperiled resources first.

I.B.2. Conservation Targets For Riparian and Creek – Length and Area (acres)

Riparian acreage estimates are compiled by estimating the length of riparian corridor and its average width for each study area and for two levels of treatment: enhancement and protection. Enhancement would entail some channel restoration and revegetation. Protection is largely fencing, access control, and removal of minor in-stream barriers.

I.B.3. Planning and Start-up Costs – Biology

The first data row lists cost estimates in $ per acre for initial site preparation. Costs for biological protection are moderate; costs for restoration and enhancement are high. The emphasis of the Placer Legacy is on protection, not mitigation, and the overall approach is intended to reflect a philosophy of low intensity management. Cost data were derived from a variety of sources: TRA management projects, local biologists, and the cost model from the Center for Natural Lands Management. Without an actual tract of land to evaluate, cost estimation is speculative. In practice, actual costs of specific projects would be both far below and far above these average values.

I.B.4. Annual Operating Costs – Biology

The first data row lists cost estimates in $ per acre for annual operating and monitoring. Annual costs reflect a low intensity management for most areas. As with planning and start-up, actual cost for operations will depend on the specific project and will range widely about these mean values. Data sources are as in Table I.B.3.

II.A and B. Present the same information for the Moderate Involvement scenario. The scale factor in Tables II.A.4. and II.A.6. is 1.00, meaning that the Moderate scenario is the base case used in estimating costs.

III.A and B. Present the same information for the High Involvement scenario. The scale factor in Tables III.A.4. and III.A.6. is 0.90, meaning that the High Involvement scenario cost factors are given a 10% reduction over the Moderate scenario factors to reflect improved economies to scale from the larger program.

IV.A. Summary of Conservation Scenarios by Study Area

Table Group IV summarizes the previous tables and presents the three scenarios side-by-side.

IV.A.1. Extent of Public Interest by Study Area

Lists the area of public interest taking into account overlap with multiple objectives and gives the conservation acreage as a percentage of the total acreage in the study area.

IV.A.2. Planning for Public Interest Objectives and Start-up Costs (one-time)

Lists the planning and start-up costs by study area and gives the cost as a percentage of the total

cost under the scenario.

IV.A.3. Operations and Monitoring (Annual)

Lists the annual costs by study area and gives the cost as a percentage of the total cost under the scenario.

IV.A.4. Cost of Public Interest by Study Area

Lists the cost of acquiring the public interest in each study area and gives the cost as a percentage of the total cost under the scenario.

IV.A.5. Prorated Share of Public Interest Cost by Element

Lists the prorated or "factored" cost of acquiring the public interest for each Legacy element and gives that cost as a percentage of the total cost under the scenario. This table shows the relative emphasis on the various elements for each scenario as a proportion of cost.

IV.A.6. Summary of Area Management Targets by Element

Lists the area management targets for each Legacy element and gives that area as a percentage of the total cost under the scenario. This table shows the relative emphasis on the various elements for each scenario as a proportion of land area. Note that the sum of columns does not take into account overlap and is used here to calculate area proportion as a measure of emphasis.

IV.A.7. Tabulation of Area Management Targets

The same data as in the previous table, reformatted to match the table in Chapter III and without rounding.

Placer Legacy Quantitative Implementation Scenarios

I.A. Low Effort Scenario: Placer Legacy Draft Conservation Targets

I.A.1. Summary of Conservation Targets for All Elements (area in acres)

Name	Study Area Total	A. Agriculture	B. Biological Resources	C. Outdoor Recreation	D. Cultural Resources	E. Scenic/ Urban Separators	F. Public Safety	Sum Without Overlap	Sum as % of Area
1 Agricultural Valley	56,067	200	1,812	300	0	0	0	2,312	4.1%
2 South Placer Urban	67,730	0	212	200	0	0	0	412	0.6%
3 Loomis Basin	45,440	0	376	40	0	0	0	416	0.9%
4 Sheridan / Garden Bar	74,523	200	2,404	1,000	0	0	0	3,604	4.8%
5 Auburn / Bowman	27,991	100	308	700	0	0	0	1,108	4.0%
6 American River Canyon	26,753	0	0	0	0	0	0	0	0.0%
7 Lower Sierra	42,360	0	273	200	0	0	0	473	1.1%
8 Foresthill	31,018	0	303	50	0	0	0	353	1.1%
9 West Slope Sierra	428,688	0	48	50	0	0	0	98	0.0%
10 East Slope Sierra	159,115	0	48	50	0	0	0	98	0.1%
Total	**959,684**	**500**	**5,784**	**2,590**	**0**	**0**	**0**	**8,874**	**0.9%**

I.A.2. Element Overlap – Percent of Target that can be fulfilled by Biological Resources

Name	Study Area Total	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic/ Urban Separators	Public Safety
1 Agricultural Valley	56,067	1	n.a.	0	0	0	0
2 South Placer Urban	67,730	0		0	0	0	0
3 Loomis Basin	45,440	0		1	0	0	0
4 Sheridan / Garden Bar	74,523	1		1	0	0	0
5 Auburn / Bowman	27,991	0		1	0	0	0
6 American River Canyon	26,753	0		1	0	0	0
7 Lower Sierra	42,360	0		1	0	0	0
8 Foresthill	31,018	0		1	0	0	0
9 West Slope Sierra	428,688	0		1	0	0	0
10 East Slope Sierra	159,115	0		1	0	0	0
Total	**959,684**						

I.A.3. Element Overlap – Residual Area Needed In Addition to Biological Resources (area in acres)

Name	Study Area Total	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic	Public Safety	Total	% of Area
1 Agricultural Valley	56,067	100	1,812	300	0	0	0	2,212	3.9%
2 South Placer Urban	67,730	0	212	200	0	0	0	412	0.6%
3 Loomis Basin	45,440	0	376	20	0	0	0	396	0.9%
4 Sheridan / Garden Bar	74,523	100	2,404	500	0	0	0	3,004	4.0%
5 Auburn / Bowman	27,991	100	308	350	0	0	0	758	2.7%
6 American River Canyon	26,753	0	0	0	0	0	0	0	0.0%
7 Lower Sierra	42,360	0	273	100	0	0	0	373	0.9%
8 Foresthill	31,018	0	303	25	0	0	0	328	1.1%
9 West Slope Sierra	428,688	0	48	25	0	0	0	73	0.0%
10 East Slope Sierra	159,115	0	48	25	0	0	0	73	0.0%
Total	**959,684**	**300**	**5,784**	**1,545**	**0**	**0**	**0**	**7,629**	**0.8%**

Note: The open space and farmland conservation targets demonstrate one approach to implementation of the recommendations. Allocation among elements and between Study Areas would vary in application.

I.A.4 Planning and Start-up Factors ($/ac) 1.60 Economy of Scale Factor (except Recreation)

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1	Agricultural Valley	25	302	500	500	10	500
2	South Placer Urban	45	723	2,500	500	10	500
3	Loomis Basin	60	435	5,000	500	10	500
4	Sheridan / Garden Bar	35	223	400	500	10	500
5	Auburn / Bowman	60	282	321	500	10	500
6	American River Canyon	0	0		500	10	500
7	Lower Sierra	0	241	1,000	500	10	500
8	Foresthill	0	256	2,000	500	10	500
9	West Slope Sierra	0	825	1,000	500	10	500
10	East Slope Sierra	0	825	1,000	500	10	500

I.A.5. Planning and Start-up Costs ($1000)

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1	Agricultural Valley	8	876	150	0	0	0	1,034	22.3%
2	South Placer Urban	0	245	500	0	0	0	745	16.1%
3	Loomis Basin	0	262	200	0	0	0	462	10.0%
4	Sheridan / Garden Bar	11	858	400	0	0	0	1,269	27.4%
5	Auburn / Bowman	10	139	225	0	0	0	374	8.1%
6	American River Canyon	0	0	0	0	0	0	0	0.0%
7	Lower Sierra	0	105	200	0	0	0	305	6.6%
8	Foresthill	0	124	100	0	0	0	224	4.8%
9	West Slope Sierra	0	63	50	0	0	0	113	2.4%
10	East Slope Sierra	0	63	50	0	0	0	113	2.4%
	Total	29	2,735	1,875	0	0	0	4,639	%

I.A.6. Operating and Monitoring Factors ($/ac/year) 1.60 Scale Factor

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1	Agricultural Valley	3	51	89	1,000	1	5
2	South Placer Urban	5	58	385	1,000	1	5
3	Loomis Basin	6	50	385	1,000	1	5
4	Sheridan / Garden Bar	4	46	89	1,000	1	5
5	Auburn / Bowman	6	37	89	1,000	1	5
6	American River Canyon	0	0	385	1,000	1	5
7	Lower Sierra	0	34	133	1,000	1	5
8	Foresthill	0	36	385	1,000	1	5
9	West Slope Sierra	0	63	385	1,000	1	5
10	East Slope Sierra	0	63	385	1,000	1	5

I.A.7. Operating and Monitoring Costs ($1000)

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1	Agricultural Valley	1	148	43	0	0	0	191	19.0%
2	South Placer Urban	0	20	123	0	0	0	143	14.2%
3	Loomis Basin	0	30	25	0	0	0	55	5.4%
4	Sheridan / Garden Bar	1	177	142	0	0	0	320	31.9%
5	Auburn / Bowman	1	18	100	0	0	0	119	11.8%
6	American River Canyon	0	0	0	0	0	0	0	0.0%
7	Lower Sierra	0	15	43	0	0	0	57	5.7%
8	Foresthill	0	17	31	0	0	0	48	4.8%
9	West Slope Sierra	0	5	31	0	0	0	36	3.5%
10	East Slope Sierra	0	5	31	0	0	0	36	3.5%
	Total	3	435	567	0	0	0	1,005	1.0%

I.A.8. Acquiring the Public Interest – Cost ($1000)

105.0% Transaction Cost

	Land Cost $/ac	A. Agriculture	B. Biological Resources	C. Outdoor Recreation	D. Cultural Resources	E. Scenic/ Urban Separators	F. Public Safety	Area Total	Area as % of All
Extent of Easement (% of area)		1	1	0	0	1	1		
Easement Cost (% of Fee)		1	1	1	1	1	1		
1 Agricultural Valley	1,800	95	2,997	524	0	0	0	3,616	18.3%
2 South Placer Urban	6,000	0	1,169	1,166	0	0	0	2,334	11.8%
3 Loomis Basin	4,500	0	1,555	87	0	0	0	1,642	8.3%
4 Sheridan / Garden Bar	2,600	137	5,743	1,263	0	0	0	7,142	36.1%
5 Auburn / Bowman	6,000	315	1,698	2,040	0	0	0	4,052	20.5%
6 American River Canyon	2,400	0	0	0	0	0	0	0	0.0%
7 Lower Sierra	1,250	0	314	121	0	0	0	435	2.2%
8 Foresthill	1,250	0	348	30	0	0	0	378	1.9%
9 West Slope Sierra	1,250	0	55	30	0	0	0	85	0.4%
10 East Slope Sierra	1,250	0	55	30	0	0	0	85	0.4%
Total	**28,300**	**546**	**13,932**	**5,292**	**0**	**0**	**0**	**19,770**	**100.0%**

I.A.9. Prorated Share of Acquiring the Public Interest – Cost

	A. Agriculture	B. Biological	C. Recreation	D. Cultural	E. Scenic	F. Safety	Area Total	Area as % of All
Area proration	0	1	0	0	0	0		
Prorated cost distribution	1,114	12,886	5,770	0	0	0		
Easement factor	1	1	1	1	1	1		
Leveraged cost*	557	11,275	5,337	0	0	0	17,170	115.1%
Factored share ($1000)	641	12,983	6,146	0	0	0	19,770	
Share as % of Total	0	1	0	0	0	0		

* Percentage shown is "easement scale"

I.B. Low Effort Scenario: Biological Resources Detail

I.B.1. Conservation Targets by Habitat Group (area in acres)

			— Habitat —				
No.	**Name**		**Vernal Pool/ Grass land**	**Creeks/ Riparian**	**Foothill Woodland**	**Sierra Nevada**	**Total**
1	Agricultural Valley	56,096	1,000	812			1,812
2	South Placer Urban	67,748	100	112			212
3	Loomis Basin	42,298		276	100		376
4	Sheridan / Garden Bar	77,743	1,000	1,004	400		2,404
5	Auburn / Bowman	27,986		108	200		308
6	American River Canyon	26,753		0			0
7	Lower Sierra	42,360		73	200		273
8	Foresthill	31,018		103		200	303
9	West Slope Sierra	428,688		48		0	48
10	East Slope Sierra	159,115		48		0	48
	Total	959,805	2,100	2,584	900	200	5,784

Note: The targets reflect a reasonable expectation for public funding and do NOT reflect the effect of a regional mitigation p

I.B.2. Conservation Targets For Riparian and Creek – Length and Area (ac)

	Creeks/ Riparian	**Enhancement**			**Protection**			**Total**	
No.	**Name**	**Miles**	**Avg Width (ft)**	**Acres**	**Miles**	**Avg Width (ft)**	**Acres**	**Miles**	**Acres**
1	Agricultural Valley	5	140	85	20	300	727	25	812
2	South Placer Urban	3	140	51	5	100	61	8	112
3	Loomis Basin	2	140	34	10	200	242	12	276
4	Sheridan / Garden Bar	2	140	34	40	200	970	42	1,004
5	Auburn / Bowman	1	140	17	5	150	91	6	108
6	American River Canyon							0	0
7	Lower Sierra	1	100	12	5	100	61	6	73
8	Foresthill	1	100	12	5	150	91	6	103
9	West Slope Sierra	1	100	12	2	150	36	3	48
10	East Slope Sierra	1	100	12	2	150	36	3	48
	Total	17		269	94		2,315	111	

I.B.3 Planning and Start-up Costs – Biology

		---- Habitat ----						
		Vernal Pool/ Grassland	**Riparian Enhancement**	**Riparian Protection**	**Foothill Woodland**	**Sierra Nevada**	**Total**	**Avg per ac**
	Factor ($/ac)	125	2400	300	94	107		
1	Agricultural Valley	125,000	204,000	218,100	0	0	547,100	302
2	South Placer Urban	12,500	122,400	18,300	0	0	153,200	723
3	Loomis Basin	0	81,600	72,600	9,400	0	163,600	435
4	Sheridan / Garden Bar	125,000	81,600	291,000	37,600	0	535,200	223
5	Auburn / Bowman	0	40,800	27,300	18,800	0	86,900	282
6	American River Canyon	0	0	0	0	0	0	0
7	Lower Sierra	0	28,800	18,300	18,800	0	65,900	241
8	Foresthill	0	28,800	27,300	0	21,400	77,500	256
9	West Slope Sierra	0	28,800	10,800	0	0	39,600	825
10	East Slope Sierra	0	28,800	10,800	0	0	39,600	825
	Total	262,500	645,600	694,500	84,600	21,400	1,708,600	295

I.B.4 Annual Operating Costs – Biology

		---- Habitat ----						
		Vernal Pool/ Grassland	**Riparian Enhancement**	**Riparian Protection**	**Foothill Woodland**	**Sierra Nevada**	**Total**	**Avg per ac**
	Factor ($/ac)	45	85	55	25	25		
1	Agricultural Valley	45,000	7,225	39,985	0	0	92,210	51
2	South Placer Urban	4,500	4,335	3,355	0	0	12,190	58
3	Loomis Basin	0	2,890	13,310	2,500	0	18,700	50
4	Sheridan / Garden Bar	45,000	2,890	53,350	10,000	0	111,240	46
5	Auburn / Bowman	0	1,445	5,005	5,000	0	11,450	37
6	American River Canyon	0	0	0	0	0	0	0
7	Lower Sierra	0	1,020	3,355	5,000	0	9,375	34
8	Foresthill	0	1,020	5,005	0	5,000	11,025	36
9	West Slope Sierra	0	1,020	1,980	0	0	3,000	63
10	East Slope Sierra	0	1,020	1,980	0	0	3,000	63
	Total	94,500	22,865	127,325	22,500	5,000	272,190	47

II.A. Medium Effort Scenario: Placer Legacy Draft Conservation Targets

II.A.1. Summary of Conservation Targets for All Elements (area in acres)

	Name	Study Area Total	A. Agriculture	B. Biological Resources	C. Outdoor Recreation	D. Cultural Resources	E. Scenic/ Urban Separators	F. Public Safety	Sum Without Overlap	Sum as % of Area
1	Agricultural Valley	56,067	4,000	3,260	500	0	3,000	1,200	11,960	21.3%
2	South Placer Urban	67730	650	827	100	5	200	100	1,882	2.8%
3	Loomis Basin	45440	100	472	40	5	200	25	842	1.9%
4	Sheridan / Garden Bar	74523	8,000	11,206	12,000	5	2,000	250	33,461	44.9%
5	Auburn / Bowman	27991	200	3,108	2,000	10	1,500	25	6,843	24.4%
6	American River Canyon	26,753	0	12	50	0	0	0	62	0.2%
7	Lower Sierra	42,360	0	2,133	1,000	0	500	10	3,643	8.6%
8	Foresthill	31,018	0	303	50	0	200	25	578	1.9%
9	West Slope Sierra	428,688	0	869	50	0	0	50	969	0.2%
10	East Slope Sierra	159,115	0	931	50	0	0	50	1,031	0.6%
	Total	959,684	12,950	23,121	15,840	25	7,600	1,735	61,271	6.4%

II.A.2. Element Overlap – Percent of Target that can be fulfilled by Biological Resources

	Name	Study Area Total	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic/ Urban Separators	Public Safety
1	Agricultural Valley	56,067	50%	n.a.	80%	0%	80%	90%
2	South Placer Urban	67730	60%	n.a.	60%	0%	50%	70%
3	Loomis Basin	45440	60%	n.a.	80%	0%	60%	90%
4	Sheridan / Garden Bar	74523	80%	n.a.	95%	0%	90%	90%
5	Auburn / Bowman	27991	80%	n.a.	95%	0%	80%	90%
6	American River Canyon	26,753	0%	n.a.	50%	0%	0%	0%

7	Lower Sierra	42,360	0%	n.a.	90%	0%	80%	70%
8	Foresthill	31,018	0%	n.a.	50%	0%	80%	70%
9	West Slope Sierra	428,688	0%	n.a.	50%	0%	0%	70%
10	East Slope Sierra	159,115	0%	n.a.	50%	0%	0%	70%
	Total	959,684						

II.A.3. Element Overlap – Residual Area Needed In Addition to Biological Resources (area in acres)

	Name	Study Area Total	Agriculture	Biological Resources	Outdoor Recreation	Cultural Resources	Scenic	Public Safety	Total	% of Area
1	Agricultural Valley	56,067	2,000	3,260	100	0	600	120	6,080	10.8%
2	South Placer Urban	67,730	260	827	40	5	100	30	1,262	1.9%
3	Loomis Basin	45,440	40	472	8	5	80	3	608	1.3%
4	Sheridan / Garden Bar	74,523	1,600	11,206	600	5	200	25	13,636	18.3%
5	Auburn / Bowman	27,991	40	3,108	100	10	300	3	3,561	12.7%
6	American River Canyon	26,753	0	12	25	0	0	0	37	0.1%
7	Lower Sierra	42,360	0	2,133	100	0	100	3	2,336	5.5%
8	Foresthill	31,018	0	303	25	0	40	8	376	1.2%
9	West Slope Sierra	428,688	0	869	25	0	0	15	909	0.2%
10	East Slope Sierra	159,115	0	931	25	0	0	15	971	0.6%
	Total	959,684	3,940	23,121	1,048	25	1,420	221	29,775	3.1%

Note: The open space and farmland conservation targets demonstrate one approach to implementation of the recommendations.

Allocation among elements and between Study Areas would vary in application.

II.A.4 Planning and Start-up Factors ($/ac)

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1	Agricultural Valley	25	416	1,875	500	10	500

2 South Placer Urban	45	410	31,250	500	10	500
3 Loomis Basin	60	396	31,250	500	10	500
4 Sheridan / Garden Bar	35	116	208	500	10	500
5 Auburn / Bowman	60	113	625	500	10	500
6 American River Canyon	0	23,492	6,250	500	10	500
7 Lower Sierra	0	119	1,250	500	10	500
8 Foresthill	0	256	12,500	500	10	500
9 West Slope Sierra	0	291	6,250	500	10	500
10 East Slope Sierra	0	309	6,250	500	10	500

II.A.5. Planning and Start-up Costs ($1000)

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1 Agricultural Valley	100	1,356	938	0	30	600	3,024	16.8%
2 South Placer Urban	29	339	3,125	3	2	50	3,548	19.8%
3 Loomis Basin	6	187	1,250	3	2	13	1,460	8.1%
4 Sheridan / Garden Bar	280	1,300	2,500	3	20	125	4,227	23.6%
5 Auburn / Bowman	12	351	1,250	5	15	13	1,646	9.2%
6 American River Canyon	0	282	313	0	0	0	594	3.3%
7 Lower Sierra	0	254	1,250	0	5	5	1,514	8.4%
8 Foresthill	0	78	625	0	2	13	717	4.0%
9 West Slope Sierra	0	253	313	0	0	25	590	3.3%
10 East Slope Sierra	0	288	313	0	0	25	625	3.5%
Total	427	4,687	11,875	13	76	868	17,945	100.0%

II.A.6. Operating and Monitoring Factors ($/ac/year)

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1 Agricultural Valley	3	53	89	1,000	1	5
2 South Placer Urban	5	52	385	1,000	1	5
3 Loomis Basin	6	39	385	1,000	1	5
4 Sheridan / Garden Bar	4	28	89	1,000	1	5
5 Auburn / Bowman	6	26	89	1,000	1	5
6 American River Canyon	0	85	385	1,000	1	5
7 Lower Sierra	0	27	133	1,000	1	5
8 Foresthill	0	36	385	1,000	1	5
9 West Slope Sierra	0	45	385	1,000	1	5
10 East Slope Sierra	0	45	385	1,000	1	5

II.A.7. Operating and Monitoring Costs ($1000)

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1 Agricultural Valley	12	173	44	0	3	6	238	9.8%
2 South Placer Urban	3	43	39	5	0	1	90	3.7%
3 Loomis Basin	1	18	15	5	0	0	40	1.6%
4 Sheridan / Garden Bar	32	314	1,067	5	2	1	1,421	58.6%
5 Auburn / Bowman	1	81	178	10	2	0	271	11.2%
6 American River Canyon	0	1	19	0	0	0	20	0.8%
7 Lower Sierra	0	58	133	0	1	0	191	7.9%
8 Foresthill	0	11	19	0	0	0	30	1.3%
9 West Slope Sierra	0	39	19	0	0	0	59	2.4%
10 East Slope Sierra	0	42	19	0	0	0	61	2.5%
Total	49	779	1,553	25	8	9	2,423	100.0%

II.A.8. Acquiring the Public Interest – Cost ($1000)

105.0% Transaction Cost

	Land Cost $/ac	A. Agriculture	B. Biological Resources	C. Outdoor Recreation	D. Cultural Resources	E. Scenic/ Urban Separators	F. Public Safety	Area Total	Area as % of All
Extent of Easement (% of area)		100.0%	50.0%	30.0%	0.0%	100.0%	100.0%		
Easement Cost (% of Fee)		50.0%	75.0%	75.0%	75.0%	75.0%	75.0%		
1 Agricultural Valley	1,800	1,890	5,391	175	0	851	170	8,477	11.7%
2 South Placer Urban	6000	819	4,559	233	32	473	142	6,257	8.6%
3 Loomis Basin	4500	95	1,951	35	24	284	9	2,397	3.3%
4 Sheridan / Garden Bar	2600	2,184	26,768	1,515	14	410	51	30,942	42.5%
5 Auburn / Bowman	6000	126	17,133	583	63	1,418	12	19,334	26.6%
6 American River Canyon	2,400	0	26	58	0	0	0	85	0.1%
7 Lower Sierra	1,250	0	2,450	121	0	98	3	2,672	3.7%
8 Foresthill	1,250	0	348	30	0	39	7	425	0.6%
9 West Slope Sierra	1,250	0	998	30	0	0	15	1,043	1.4%
10 East Slope Sierra	1,250	0	1,069	30	0	0	15	1,114	1.5%
Total		5,114	60,694	2,812	132	3,571	424	72,746	100.0%

II.A.9. Prorated Share of Acquiring the Public Interest – Cost

	A. Agriculture	B. Biological	C. Recreation	D. Cultural	E. Scenic	F. Safety	Area Total
Area proration	21.1%	37.7%	25.9%	0.0%	12.4%	2.8%	
Prorated cost distribution	15,375	27,451	18,806	30	9,023	2,060	

Easement factor	50.0%	87.5%	92.5%	100.0%	75.0%	75.0%		
Leveraged cost	7,688	24,020	17,396	30	6,767	1,545	57,445	126.6% easement scale factor
Factored share ($1000)	9,735	30,417	22,029	38	8,570	1,956	72,746	
Share as % of Total	13.4%	41.8%	30.3%	0.1%	11.8%	2.7%		

II.B. Medium Effort Scenario: Biological Resources Detail

II.B.1. Conservation Targets by Habitat Group – Area (ac)

No.	Name		---- Habitat ---- Vernal Pool/ Grassland	Creeks/ Riparian	Foothill Woodland	Sierra Nevada	Total
1	Agricultural Valley	56,096	1,500	1,760			3,260
2	South Placer Urban	67,748	500	327			827
3	Loomis Basin	42,298		172	300		472
4	Sheridan / Garden Bar	77,743	1,000	206	10,000		11,206
5	Auburn / Bowman	27,986		108	3,000		3,108
6	American River Canyon	26,753		12			12
7	Lower Sierra	42,360		133	2,000		2,133
8	Foresthill	31,018		103		200	303
9	West Slope Sierra	428,688		569		300	869
10	East Slope Sierra	159,115		581		350	931
	Total	959,805	3,000	3,971	15,300	850	23,121

Note: The targets reflect a reasonable expectation for public funding and do NOT reflect the effect of a regional mitigation program.

II.B.2. Conservation Targets For Riparian and Creek – Length and Area (ac)

Creeks/ Riparian	Enhancement	Protection	Total

No.	Name	Miles	Avg Width (ft)	Acres	Miles	Avg Width (ft)	Acres	Miles	Acres
1	Agricultural Valley	18	140	305	40	300	1,455	58	1,760
2	South Placer Urban	5	140	85	10	200	242	15	327
3	Loomis Basin	3	140	51	5	200	121	8	172
4	Sheridan / Garden Bar	5	140	85	5	200	121	10	206
5	Auburn / Bowman	1	140	17	5	150	91	6	108
6	American River Canyon	1	100	12			0	1	12
7	Lower Sierra	1	100	12	10	100	121	11	133
8	Foresthill	1	100	12	5	150	91	6	103
9	West Slope Sierra	2	100	24	30	150	545	32	569
10	East Slope Sierra	3	100	36	30	150	545	33	581
	Total	40		639	140		3,332	180	3,971

II.B.3 Planning and Start-up Costs – Biology

	---- Habitat ----						
	Vernal Pool/ Grassland	Riparian Enhancement	Riparian Protection	Foothill Woodland	Sierra Nevada	Total	Avg per ac
Factor ($/ac)	125	2400	300	94	107		
1 Agricultural Valley	187,500	732,000	436,500	0	0	1,356,000	416
2 South Placer Urban	62,500	204,000	72,600	0	0	339,100	410
3 Loomis Basin	0	122,400	36,300	28,200	0	186,900	396
4 Sheridan / Garden Bar	125,000	204,000	36,300	940,000	0	1,305,300	116
5 Auburn / Bowman	0	40,800	27,300	282,000	0	350,100	113
6 American River Canyon	0	28,800	0	0	0	28,800	2400
7 Lower Sierra	0	28,800	36,300	188,000	0	253,100	119
8 Foresthill	0	28,800	27,300	0	21,400	77,500	256

9 West Slope Sierra	0	57,600	163,500	0	32,100	253,200	291
10 East Slope Sierra	0	86,400	163,500	0	37,450	287,350	309
Total	375,000	1,533,600	999,600	1,438,200	90,950	4,437,350	192

II.B.4 Annual Operating Costs – Biology

	---- Habitat ----						
	Vernal Pool/ Grassland	Riparian Enhancement	Riparian Protection	Foothill Woodland	Sierra Nevada	Total $	Avg $/ac
Factor ($/ac)	45	85	55	25	25		
1 Agricultural Valley	67,500	25,925	80,025	0	0	173,450	53
2 South Placer Urban	22,500	7,225	13,310	0	0	43,035	52
3 Loomis Basin	0	4,335	6,655	7,500	0	18,490	39
4 Sheridan / Garden Bar	45,000	7,225	6,655	250,000	0	308,880	28
5 Auburn / Bowman	0	1,445	5,005	75,000	0	81,450	26
6 American River Canyon	0	1,020	0	0	0	1,020	85
7 Lower Sierra	0	1,020	6,655	50,000	0	57,675	27
8 Foresthill	0	1,020	5,005	0	5,000	11,025	36
9 West Slope Sierra	0	2,040	29,975	0	7,500	39,515	45
10 East Slope Sierra	0	3,060	29,975	0	8,750	41,785	45
Total	135,000	54,315	183,260	382,500	21,250	776,325	34

III.A.. High Effort Scenario: Placer Legacy Draft Conservation Targets

III.A.1. Summary of Conservation Targets for All Elements (area in acres)

Name	A. Study Area Total	B. Agriculture	C. Biological Resources	D. Outdoor Recreation	E. Cultural Resources	F. Scenic/ Urban Separators	Public Safety	Sum Without Overlap	Sum as % of Area	Largest Element

1 Agricultural Valley	56,067	25,000	4,497	1,800	5	4000	1,200	36,502	65.1%	2
2 South Placer Urban	67,730	650	863	400	5	7200	100	9,218	13.	
3 Loomis Basin	45,440	400	955	400	5	3000	25	4,785	10.5%	
4 Sheridan / Garden Bar	74,523	12,000	12,982	12,000	10	3000	250	40,242	54.0%	1
5 Auburn / Bowman	27,991	2,000	3,267	2,500	10	3600	25	11,402	40.7%	
6 American River Canyon	26,753	0	17	400	0	2500	0	2,917	10.9%	
7 Lower Sierra	42,360	0	3,413	1,000	10	1200	10	5,633	13.3%	
8 Foresthill	31,018	0	1,383	400	10	2200	25	4,018	13.0%	
9 West Slope Sierra	428,688	0	5,049	400	0	1500	50	6,999	1.6%	
10 East Slope Sierra	159,115	0	1,861	400	0	1000	50	3,311	2.1%	
Total	959,684	40,050	34,287	19,700	55	29,200	1,735	125,027	13.0%	66

III.A.2. Element Overlap – Percent of Target that can be fulfilled by Biological Resources

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1 Agricultural Valley	50%	n.a.	80%	0%	80%	90%
2 South Placer Urban	60%		60%	0%	50%	70%
3 Loomis Basin	60%		80%	0%	60%	90%
4 Sheridan / Garden Bar	80%		95%	0%	90%	90%
5 Auburn / Bowman	80%		95%	0%	80%	90%
6 American River Canyon	0%		50%	0%	0%	0%
7 Lower Sierra	0%		90%	0%	80%	70%
8 Foresthill	0%		50%	0%	80%	70%
9 West Slope Sierra	0%		50%	0%	0%	70%
10 East Slope Sierra	0%		50%	0%	0%	70%
Total						

III.A.3. Element Overlap – Residual Area Needed In Addition to Biological Resources (area in acres)

	Name		Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	Total as % of Area
1	Agricultural Valley	56,067	19,218	4,497	360	5	800	120	25,000	44.6%
2	South Placer Urban	67,730	260	863	160	5	5,882	30	7,200	10.6%
3	Loomis Basin	45,440	160	955	80	5	1,798	3	3,000	6.6%
4	Sheridan / Garden Bar	74,523	2,400	12,982	600	10	300	25	16,317	21.9%
5	Auburn / Bowman	27,991	400	3,267	125	10	720	3	4,525	16.2%
6	American River Canyon	26,753	0	17	200	0	2,500	0	2,717	10.2%
7	Lower Sierra	42,360	0	3,413	100	10	240	3	3,766	8.9%
8	Foresthill	31,018	0	1,383	200	10	600	8	2,200	7.1%
9	West Slope Sierra	428,688	0	5,049	200	0	1,500	15	6,764	1.6%
10	East Slope Sierra	159,115	0	1,861	200	0	1,000	15	3,076	1.9%
	Total	959,684	22,438	34,287	2,225	55	15,339	221	74,565	7.8%

Note: The open space and farmland conservation targets demonstrate one approach to implementation of the recommendations. Allocation among elements and between Study Areas would vary in application.

III.A.4 Planning and Start-up Factors ($/ac) 0.90 Economy of Scale Factor (except Recreation)

	Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1	Agricultural Valley	25	584	1,042	500	10	500
2	South Placer Urban	45	493	7,813	500	10	500
3	Loomis Basin	60	322	6,250	500	10	500
4	Sheridan / Garden Bar	35	191	208	500	10	500
5	Auburn / Bowman	60	165	500	500	10	500
6	American River Canyon	0	25,345	1,563	500	10	500
7	Lower Sierra	0	114	1,250	500	10	500
8	Foresthill	0	140	1,563	500	10	500

9 West Slope Sierra	0	139	1,563	500	10	500
10 East Slope Sierra	0	208	1,563	500	10	500

III.A.5. Planning and Start-up Costs ($1000)

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1 Agricultural Valley	563	2,364	1,875	2	36	540	5,379	21.7%
2 South Placer Urban	26	383	3,125	2	65	45	3,646	14.7%
3 Loomis Basin	22	277	2,500	2	27	11	2,839	11.4%
4 Sheridan / Garden Bar	378	2,232	2,500	5	27	113	5,254	21.2%
5 Auburn / Bowman	108	485	1,250	5	32	11	1,891	7.6%
6 American River Canyon	0	388	625	0	23	0	1,035	4.2%
7 Lower Sierra	0	350	1,250	5	11	5	1,620	6.5%
8 Foresthill	0	174	625	5	20	11	835	
9 West Slope Sierra	0	632	625	0	14	23	1,293	
10 East Slope Sierra	0	348	625	0	9	23	1,005	4.1%
Total	1,096	7,632	15,000	25	263	781	24,797	100.0%

A6. Operating Factors ($/ac/year) 0.90 Scale Factor

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety
1 Agricultural Valley	3	56	89	1,000	1	5
2 South Placer Urban	5	53	385	1,000	1	5
3 Loomis Basin	6	37	385	1,000	1	5
4 Sheridan / Garden Bar	4	32	89	1,000	1	5
5 Auburn / Bowman	6	28	89	1,000	1	5
6 American River Canyon	0	85	385	1,000	1	5
7 Lower Sierra	0	26	133	1,000	1	5

8 Foresthill	0	27	385	1,000	1	5	
9 West Slope Sierra	0	29	385	1,000	1	5	
10 East Slope Sierra	0	35	385	1,000	1	5	

A7. Operating Costs ($1000)

Name	Agriculture	Biological	Recreation	Cultural	Scenic	Safety	Total	% of Total
1 Agricultural Valley	68	227	144	5	4	5	452	12.8%
2 South Placer Urban	3	41	139	5	6	0	194	5.5%
3 Loomis Basin	2	32	139	5	3	0	180	5.1%
4 Sheridan / Garden Bar	43	374	960	9	3	1	1,390	39.4%
5 Auburn / Bowman	11	82	200	9	3	0	306	8.7%
6 American River Canyon	0	1	139	0	2	0	142	4.0%
7 Lower Sierra	0	80	120	9	1	0	210	5.9%
8 Foresthill	0	34	139	9	2	0	183	5.2%
9 West Slope Sierra	0	132	139	0	1	0	272	7.7%
10 East Slope Sierra	0	59	139	0	1	0	198	5.6%
Total	127	1,061	2,255	50	26	8	3,527	100.0%

III.A.8. Acquiring the Public Interest – Cost ($1000)

105.0% Transaction Cost

	Land Cost $/ac	A. Agriculture	B. Biological Resources	C. Outdoor Recreation	D. Cultural Resources	E. Scenic/ Urban Separators	F. Public Safety	Area Total	Area as % of All
Extent of Easement (% of area)		100.0%	50.0%	30.0%	0.0%	100.0%	100.0%		
Easement Cost (% of Fee)		50.0%	75.0%	75.0%	75.0%	75.0%	75.0%		
1 Agricultural Valley	1,800	18,161	7,437	629	9	1,134	170	27,541	17.7%
2 South Placer Urban	6,000	819	4,757	932	32	27,792	142	34,474	22.1%
3 Loomis Basin	4500	378	3,948	350	24	6,370	9	11,078	7.1%

4	Sheridan / Garden Bar	2,600	3,276	31,011	1,515	27	614	51	36,495	23.4%
5	Auburn / Bowman	6000	1,260	18,009	728	63	3,402	12	23,475	15.1%
6	American River Canyon	2,400	0	37	466	0	4,725	0	5,229	3.4%
7	Lower Sierra	1,250	0	3,920	121	13	236	3	4,293	2.8%
8	Foresthill	1,250	0	1,588	243	13	590	7	2,442	1.6%
9	West Slope Sierra	1,250	0	5,798	243	0	1,477	15	7,533	4.8%
10	East Slope Sierra	1,250	0	2,137	243	0	984	15	3,379	2.2%
	Total	28,300	23,894	78,644	5,471	181	47,325	424	155,938	100.0%

III.A.9. Prorated Share of Acquiring the Public Interest – Cost

	A. Agriculture	B. Biological	C. Recreation	D. Cultural	E. Scenic	F. Safety	Area Total	
Area proration	32.0%	27.4%	15.8%	0.0%	23.4%	1.4%		
Prorated cost distribution	49,952	42,764	24,571	69	36,419	2,164		
Easement factor	50.0%	87.5%	92.5%	100.0%	75.0%	75.0%		
Leveraged cost	24,976	37,419	22,728	69	27,315	1,623	114,128	13
Factored share ($1000)	34,126	51,127	31,054	94	37,321	2,218	155,938	
Share as % of Total	21.9%	32.8%	19.9%	0.1%	23.9%	1.4%		

III.B. High Effort Scenario: Biological Resources Detail

III.B.1. Conservation Targets by Habitat Group – Area (ac)

			— Habitat —			
		Vernal Pool/ Grassland	Creeks/ Riparian	Foothill Woodland	Sierra Nevada	Total
No.	Name	Acres		Acres	Acres	Acres
1	Agricultural Valley	56,096	1,800	2,697		4,497
2	South Placer Urban	67,748	500	363		863
3	Loomis Basin	42,298		315	640	955
4	Sheridan / Garden Bar	77,743	1,800	1,182	10,000	12,982
5	Auburn / Bowman	27,986		267	3,000	3,267
6	American	26,753		17		17

	River Canyon						
7	Lower Sierra	42,360		133	2,000	1,280	3,413
8	Foresthill	31,018		103		1,280	1,383
9	West Slope Sierra	428,688		569		4,480	5,049
10	East Slope Sierra	159,115		581		1,280	1,861
	Total	959,805	4,100	6,227	15,640	8,320	34,287

Note: The targets reflect a reasonable expectation for pub ic funding and do NOT reflect the effect of a regional mitigation program.

III.B.2. Conservation Targets For Riparian and Creek – Length and Area (ac)

No.	Creeks/ Riparian Name	Enhancement Miles	Avg Width (ft)	Acres	Protection Miles	Avg Width (ft)	Acres	Total Miles	Acres
1	Agricultural Valley	25	250	758	40	400	1,939	65	2,697
2	South Placer Urban	5	200	121	10	200	242	15	363
3	Loomis Basin	3	200	73	10	200	242	13	315
4	Sheridan / Garden Bar	15	250	455	20	300	727	35	1,182
5	Auburn / Bowman	5	140	85	10	150	182	15	267
6	American River Canyon	1	140	17			0	1	17
7	Lower Sierra	1	100	12	10	100	121	11	133
8	Foresthill	1	100	12	5	150	91	6	103
9	West Slope Sierra	2	100	24	30	150	545	32	569
10	East Slope Sierra	3	100	36	30	150	545	33	581
	Total	61		1,593	165		4,634	226	6,227

III.B.3 Planning and Start-up Costs – Biology

		— Habitat —						
		Vernal Pool/ Grassland	Riparian Enhancement	Riparian Protection	Foothill Woodland	Sierra Nevada	Total	Avg per ac
	Factor ($/ac)	125	2400	300	94	107		
1	Agricultural Valley	225,000	1,819,200	581,700	0	0	2,625,900	584
2	South Placer Urban	62,500	290,400	72,600	0	0	425,500	493
3	Loomis Basin	0	175,200	72,600	60,160	0	307,960	322
4	Sheridan / Garden Bar	225,000	1,092,000	218,100	940,000	0	2,475,100	191
5	Auburn / Bowman	0	204,000	54,600	282,000	0	540,600	165
6	American River Canyon	0	40,800	0	0	0	40,800	2400
7	Lower Sierra	0	28,800	36,300	188,000	136,960	390,060	114
8	Foresthill	0	28,800	27,300	0	136,960	193,060	140
9	West Slope Sierra	0	57,600	163,500	0	479,360	700,460	139
10	East Slope Sierra	0	86,400	163,500	0	136,960	386,860	208
	Total	512,500	3,823,200	1,390,200	1,470,160	890,240	8,086,300	236

III.B.4 Annual Operating Costs – Biology

— Habitat —

	Vernal Pool/ Grassland	Riparian Enhancement	Riparian Protection	Foothill Woodland	Sierra Nevada	Total	Avg per ac
Factor ($/ac)	45	85	55	25	25		
1 Agricultural Valley	81,000	64,430	106,645	0	0	252,075	56
2 South Placer Urban	22,500	10,285	13,310	0	0	46,095	53
3 Loomis Basin	0	6,205	13,310	16,000	0	35,515	37
4 Sheridan / Garden Bar	81,000	38,675	39,985	250,000	0	409,660	32
5 Auburn / Bowman	0	7,225	10,010	75,000	0	92,235	28
6 American River Canyon	0	1,445	0	0	0	1,445	85
7 Lower Sierra	0	1,020	6,655	50,000	32,000	89,675	26
8 Foresthill	0	1,020	5,005	0	32,000	38,025	27
9 West Slope Sierra	0	2,040	29,975	0	112,000	144,015	29
10 East Slope Sierra	0	3,060	29,975	0	32,000	65,035	35
Total	184,500	135,405	254,870	391,000	208,000	1,173,775	34

IV.A. Summary of Conservation Scenarios by Study Area

IV.A.1. Extent of Public Interest by Study Area

Name	Study Area Total	A. Low Involvement (acres)	B. Low Involvement (%)	C. Medium Involvement (acres)	D. Medium Involvement (%)	E. High Involvement (acres)	F. High Involvement
1 Agricultural Valley	56,067	2,212	3.9%	6,080	10.8%	25,000	44.6%
2 South Placer Urban	67730	412	0.6%	1,262	1.9%	7,200	10.6%
3 Loomis Basin	45440	396	0.9%	608	1.3%	3,000	6.6%
4 Sheridan / Garden Bar	74523	3,004	4.0%	13,636	18.3%	16,317	21.9%
5 Auburn / Bowman	27991	758	2.7%	3,561	12.7%	4,525	16.2%
6 American River Canyon	26,753	0	0.0%	37	0.1%	2,717	10.2%
7 Lower Sierra	42,360	373	0.9%	2,336	5.5%	3,766	8.9%
8 Foresthill	31,018	328	1.1%	376	1.2%	2,200	7.1%
9 West Slope Sierra	428,688	73	0.0%	909	0.2%	6,764	1.6%
10 East Slope Sierra	159,115	73	0.0%	971	0.6%	3,076	1.9%
Total	959,684	7,629	0.8%	29,775	3.1%	74,565	7.8%

IV.A.2. Planning for Public Interest Objectives and Start-up Costs (one-time)

Name	A. Low Involvement ($1000)	B. Low Involvement (% of Total)	C. Medium Involvement ($1000)	D. Medium Involvement (% of Total)	E. High Involvement ($1000)	F. High Involvement (% of T
1 Agricultural Valley	1,034	22.3%	3,024	16.8%	5,379	21.7%
2 South Placer Urban	745	16.1%	3,548	19.8%	3,646	14.7%
3 Loomis Basin	462	10.0%	1,460	8.1%	2,839	11.4%
4 Sheridan / Garden Bar	1,269	27.4%	4,227	23.6%	5,254	21.2%
5 Auburn / Bowman	374	8.1%	1,646	9.2%	1,891	7.6%
6 American River Canyon	0	0.0%	594	3.3%	1,035	4.2%
7 Lower Sierra	305	6.6%	1,514	8.4%	1,620	6.5%

8 Foresthill	224	4.8%	717	4.0%	835	3.4%
9 West Slope Sierra	113	2.4%	590	3.3%	1,293	5.2%
1 East Slope Sierra 0	113	2.4%	625	3.5%	1,005	4.1%
Total	4,639	100.0%	17,945	100.0%	24,797	100.0%

Note: Does not include Program start-up or Regulatory Compliance planning costs.

IV.A.3. Operations and Monitoring (Annual)

Name	A. Low Involvement ($1000)	B. Low Involvement (% of Total)	C. Medium Involvement ($1000)	D. Medium Involvement (% of Total)	E. High Involvement ($1000)	F. High Involvement (% of Total)
1 Agricultural Valley	191	19.0%	238	9.8%	452	12.8%
2 South Placer Urban	143	14.2%	90	3.7%	194	5.5%
3 Loomis Basin	55	5.4%	40	1.6%	180	5.1%
4 Sheridan / Garden Bar	320	31.9%	1,421	58.6%	1,390	39.4%
5 Auburn / Bowman	119	11.8%	271	11.2%	306	8.7%
6 American River Canyon	0	0.0%	20	0.8%	142	4.0%
7 Lower Sierra	57	5.7%	191	7.9%	210	5.9%
8 Foresthill	48	4.8%	30	1.3%	183	5.2%
9 West Slope Sierra	36	3.5%	59	2.4%	272	7.7%
1 East Slope Sierra 0	36	3.5%	61	2.5%	198	5.6%
Total	1,005	100.0%	2,423	100.0%	3,527	100.0%

IV.A.4. Cost of Public Interest by Study Area ($1000)

Name	A. Low Involvement (acres)	B. Low Involvement (%)	C. Medium Involvement (acres)	D. Medium Involvement (%)	E. High Involvement (acres)	F. High Involvement (%)
1 Agricultural Valley	3,616	18.3%	8,477	11.7%	27,541	17.7%
2 South Placer Urban	2,334	11.8%	6,257	8.6%	34,474	22.1%
3 Loomis Basin	1,642	8.3%	2,397	3.3%	11,078	7.1%
4 Sheridan / Garden Bar	7,142	36.1%	30,942	42.5%	36,495	23.4%
5 Auburn / Bowman	4,052	20.5%	19,334	26.6%	23,475	15.1%
6 American River Canyon	0	0.0%	85	0.1%	5,229	3.4%
7 Lower Sierra	435	2.2%	2,672	3.7%	4,293	2.8%
8 Foresthill	378	1.9%	425	0.6%	2,442	1.6%
9 West Slope Sierra	85	0.4%	1,043	1.4%	7,533	4.8%
1 East Slope Sierra 0	85	0.4%	1,114	1.5%	3,379	2.2%
Total	19,770	100.0%	72,746	100.0%	155,938	100.0%
Average Cost ($/ac)	2,591		2,443		2,091	

IV.A.5. Prorated Share of Public Interest Cost by Element

	A. Agriculture	B. Biological	C. Recreation	D. Cultural	E. Scenic	F. Safety	Total
Low Effort Scenario							
Factored share ($1000)	641	12,983	6,146	0	0	0	19,770
Share as % of Total	3%	66%	31%	0%	0%	0%	

Medium Effort Scenario							
Factored share ($1000)	9,735	30,417	22,029	38	8,570	1,956	7
Share as % of Total	13%	42%	30%	0%	12%	3%	
High Effort Scenario							
Factored share ($1000)	34,126	51,127	31,054	94	37,321	2,218	15
Share as % of Total	22%	33%	20%	0%	24%	1%	

IV.A.6. Summary of Area Management Targets by Element

	A. Agriculture	B. Biological	C. Recreation	D. Cultural	E. Scenic	F. Safety	
Low Effort Scenario							
Target (acres)	500	5,784	2,590	0	0	0	
Target as % of Sum	6%	65%	29%	0%	0%	0%	
Medium Effort Scenario							
Target (acres)	12,950	23,121	15,840	25	7,600	1,735	6
Target as % of Sum	21%	38%	26%	0%	12%	3%	
High Effort Scenario							
Target (acres)	40,050	34,287	19,700	55	29,200	1,735	12
Target as % of Sum	32%	27%	16%	0%	23%	1%	

IV.A.7. Tabulation of Area Management Targets

Element	Scenario Low Involvement	Medium Involvement	High Involvement
Agriculture	500	12,950	40,050
Biological	5,784	23,121	34,287
Recreation	2,590	15,840	19,700
Cultural	0	25	55
Scenic	0	7,600	29,200
Safety	0	1,735	1,735
Total Area, accounting for Overlap	7,629	29,775	74,565

Appendix K
SENSITIVE SPECIES LIST

The attached list was compiled by Dr. Peter Brussard, University of Nevada at Reno, with input from Brian Williams, Garcia and Associates. The species listed herein are associated with Placer County habitats and have been identified as potentially sensitive or declining. This working list represents the current state of knowledge, and is likely to change as new information is collected and further biological research is conducted throughout the course of this Program. The inclusion of a species in this appendix simply means that the Program has recognized its potential sensitivity and dependence upon Placer County natural communities. It does not necessarily imply that Placer Legacy will (or can) develop specific implementation measures to address the conservation or recovery of that species. Sensitive species identified by the FWS and DFG as high priority for HCP/NCCP planning are presented in bold.

Appendix K. Sensitive Species List

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
FISHES								
SALMONIDAE								
Onchohynchus mykiss spp.	Central Valley steelhead	yes	proposed endangered / none	2	drainage basin	GV	VFAR	Sacramento River and tributaries; late fall run and perhaps early winter run are in Dry Creek and possibly Bear River
Oncorhynchus tshawytscha	Spring-run chinook salmon	yes	none / candidate endangered	2	drainage basin	GV, SNF	VFAR	Sacrament River and tributaries; Bear River in Placer county
Oncorhynchus tshawytscha	Fall-run chinook salmon	yes	none / SC	2	drainage basin	GV, SNF	VFAR	Sacramento River and tributaries; Bear River and Dry Creek in Placer County
Oncorhynchus tshawytscha	Winter-run chinook salmon	historical	endangered / endangered	3	drainage basin	GV, SNF	VFAR	Sacramento River and tributaries; not currently known from Placer County
Salmo clarki henshawi	Lahontan cutthroat trout	yes	threatened / none	2	drainage basin	SN	MAR	East slope streams of Lahontan drainage; wide habitat tolerance; need flowing streams with clean, gravel bottoms to spawn
CYPRINIDAE								
Pogonichthyes macrolepidotus	Sacramento splittail	?	proposed threatened / SC	3	regional	GV	VFAR	slow-moving stretches of the main rivers and delta; probably not in Placer County
AMPHIBIANS								
AMBYSTOMATIDAE								
Ambystoma californiense	California tiger salamander	?	candidate / SC	3	local	GV	VGVP	annual grassland and in grassy understory of valley-foothill habitats; breeds in vernal pools
PELOBATIDAE								
Scaphiopus hammondii	Western spadefoot toad	yes	SC / SC	1c	local	GV, SNF		annual grassland, montane-hardwood, orchard vinyard habitats below 1360 m. Breeds in any shallow standing water
RANIDAE								
Rana aurora draytonii	California red-legged frog	historical	threatened / SC	3	local	GV, SNF	VFAR	near quiet, permanent pools of streams, marshes, and occasionally ponds

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Rana boylii	**Foothill yellow-legged frog**	**yes**	**SC / SC**	**2**	**local**	**SNF**	**VFAR**	**In or near rocky streams in a variety of foothill habitats**
Rana muscosa	**Mountain yellow-legged frog**	**yes**	**SC / SC**	**2**	**local**	**SN**	**MAR**	**within a few feet of water in montane riparian, lodepole pine, subalpine conifer, and wet meadow habitats**
Hydromantes platycephalus	Mount Lyell salamander	?	SC / SC					
REPTILES								
EMYDIDAE								
Clemmys marmorata marmorata	Northwestern pond turtle	yes	SC / SC			GV, SNF, SN		permanent or nearly permanent water below 1830 m; lays egges in sandy banks or hillsides with high humidity
IGUANIDAE								
Phrynosoma coronatum frontale	CA. horned lizard	yes	SC / SC	1c	local	GV, SNF		valley-foothill hardwood, conifer, riparian, annual grassland; needs loose soil for eggs
BOIDAE								
Charina bottae	Rubber boa	yes	SC / protected	2	local	SN	SNF	montane forest habitats near streams or wet meadows
COLUBRIDAE								
Thammophis gigas	**Giant garter snake**	**no**	**threatened / threatened**	3	local	GV	**VFAR**	streams with dense vegetative cover, irrigation ditches, and ricefields
BIRDS								
PODICIPEDIDAE								
Podiceps nigricollis	Eared grebe	historical	may be CSC in future					
ARDEIDAE								
Ardea alba	Great egret (rookery)	yes	none / none				VFAR	
Ardea herodias	Great blue heron (rookery)	yes	none / none				VFAR	
Botaurus lentiginosus	American bittern	yes	tracked by CNDDB				VFAR	
Egretta thula	Snowy egret (rookery)	?	none / none				VFAR	
Ixobrychus exilis	Least bittern	?	SC / SC				VFAR	

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Nycticorax nycticorax	Black-crowned night heron (rookery)	?	none / none				VFAR	
ANATIDAE								
Anser albifrons gambelli	Tule white-fronted goose	?	may be CSC in future					
Branta canadensis leucopareia	Aleutian Canada goose (wintering)	yes	threatened / none					
Branta canadensis minima	Cackling Canada goose		may be CSC in future					
Aythya valisineria	Canvasback	?	none / SC					
Aythyaamericana	Redhead	?	may be CSC in future					
Histrionicus histrionicus	Harlequin duck (nesting)	yes	SC / SC					
Bucephala islandica	Barrow's goldeneye	historical	none / SC					
ACCIPITRIDAE								
Accipiter cooperi	Cooper's hawk (nesting)	yes	none / SC					
Accipiter gentilis	**Northern goshawk**	**yes**	**SC / SC**	2	landscape	SN	**SNF**	middle and high elevation LSOG conifer forests interspersed with meadows, other openings, and riparian areas
Accipiter striatus	Sharp-shinned hawk (nesting)	yes	none / SC					
Aquila chrysaetos	Golden eagle	yes	none / SC					
Buteo regalis	Ferruginous hawk (wintering)	yes	SC / SC					
Buteo swainsoni	**Swainson's hawk**	**yes**	**none / threatened**	1b	landscape	SN	**VGVP**	grassland or cropland with scattered, large trees or small groves; nests in open riparian or oak savanna
Buteo lagopus	Rough-legged hawk (wintering)	yes	none / none					
Circus cyaneus	Northern harrier (nesting)	yes	none / SC					
Elanus leucurus	White-tailed kite (nesting)	yes	none / DFG protected					

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Haliaeetus leucocephalus	**Bald eagle (nesting, wintering)**	**yes**	**threatened / endangered**	1b	local	GV, SNF, SN		large bodies of water or free-flowing rivers with abundant fish and adjacent snags and other perches. Nest in large trees.
Pandion haliaetus	Osprey (nesting)	yes	none / SC					
FALCONIDAE								
Falco columbarius	Merlin	yes	none / SC					
Falco mexicanus	Prairie falcon (nesting)	yes	none / SC					
Falco peregrinus	**Peregrine falcon**	**yes**	**threatened / endangered**	2	local	GV, SNF, SN		riparian areas and wetlands with nearby cliffs and ledges; breed near wetlands, lakes, and rivers on high cliffs
RALLIDAE								
Laterallus jamaicensis coturniculus	**California black rail**	**yes**	**SC / threatened**	2	local	GV	**VFAR**	salt, brackish, and freshwater emergent wetlands
Porzana carolina	Sora	yes	may be CSC in future					
CHARADRIIDAE								
Charadrius montanus	**Mountain plover**	**no**	**candidate / SC**	3	local	GV	**VGVP/AG**	short grasslands and plowed fields
LARIDAE								
Chlidonias niger	Black tern	?	SC / SC					
CUCULIDAE								
Coccyzus americanus	Yellow-billed cuckoo (nesting)	historical	none / endangered					
Geococcys californianus	Greater roadrunner	yes	none / none					
STRIGIDAE								
Asio flammeus	Short-eared owl (nesting)	?	none / SC				VGVP	
Asio otus	Long-eared owl (nesting)	yes	none / SC					
Athene cunicularia	**Burrowing owl**	**yes**	**SC / SC**	1b	local	GV, SNF, SN	**VGVP/AG**	open, dry habitats with perches and mammal burrows
Strix nebulosa	Great grey owl	?	none / endangered				SNF	
Strix occidentalis occidentalis	**California spotted owl**	**yes**	**SC / SC**	1b	landscape	SNF, SN	**SNF**	dense, LSOG forests on north-facing slopes in summer; may move downslope into oak habitats in winter

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
CAPRIMULGIDAE								
Chordeiles acutipennis	Lesser nighthawk	?	none / none					
Chordeiles minor	Common nighthawk	yes						
APODIDAE								
Chaetura vauxi	Vaux's swift	yes	none / SC					
Cypseloides niger	Black swift (nesting)	yes	none / SC					
TYRANNIDAE								
Empidonax traillii	**Willow flycatcher**	**yes**	**none / endangered**	1b	local	SN	MAR	broad, open river valleys or large mountain meadows with dense willow thickets
LANIIDAE								
Lanius ludovicianus	Loggerhead shrike	yes	SC / SC					
ALAUDIDAE								
Eremophila alpestris rubia	Lassen County horned lark	yes	may be CSC in future				VGVP	
HIRUNDINIDAE								
Progne subis	Purple martin (nesting)	historical	none / SC					
Riparia riparia	**Bank swallow (nesting)**	**yes**	**none / threatened**	3	local	SN	VFAR	riparian habitats with vertical cliffs and banks with fine-textured or sandy soil
MUSCICAPIDAE								
Catharus ustulatus	Swainson's thrush	yes	may be CSC in future					
PARULIDAE								
Dendroica petechia brewsteri	Yellow warbler (nesting)	yes	none / SC					
Icteria virens	Yellow-breasted chat (nesting)	yes	none / SC					
EMBERIZIDAE								
Ammodramus savannarum	Grasshopper sparrow	yes	may be CSC in future					
Amphispiza belli belli	Bell's sage sparrow	yes	SC / SC					
Spizella atrogularis	Black-chinned sparrow	yes	may be CSC in future					
Spizella breweri	Brewer's sparrow	yes	tracked by CNDDB					
Spizella passerina	Chipping sparrow	yes	may be CSC in future					
Poo[illegible] gramineus affinis	Oregon vesper sparrow	?	none / none					

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Melospiza melodia mailliardi	Sacramento Valley song sparrow	yes	may be CSC in future					
ICTERIDAE								
Agelaius tricolor	Tricolored blackbird (nesting)	yes	SC / SC					
Xanthocephalus xanthocephalus	Yellow-headed blackbird	yes	may be CSC in future					
FRINGILIDAE								
Leucosticte arctoa dawsoni	SN gray-crowned rosy finch	yes	may be CSC in future					
Pinicola enucleator californica	California pine grosbeak	yes	may be CSC in future					
Carduelis lawrencei	Lawrence's goldfinch	yes	may be CSC in future					
MAMMALS								
VESPERTILIONIDAE								
Antrozous pallidus	Pallid bat	?	none / SC					
Plecotus townsendii townsendii	Townsend's big-eared bat	historical	SC / SC					
Euderma maculatum	Spotted bat	?	SC / SC					
Myotis ciliolabrum	Small-footed myotis	?	SC / none					
Myotis evotis	Long-eared myotis	historical	SC / none					
Myotis thysanodes	Fringed myotis	historical	SC / none					
Myotis volans	Long-legged myotis	historical	SC / none					
Myotis yumanensis	Yuma myotis	yes	SC / SC					
MOLOSSIDAE								
Eumops perotis	Western mastiff bat	?	SC / SC					
LEPORIDAE								
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	yes	SC / SC				SNF	
Lepus townsendii	White-tailed hare	historical	none / SC				SNF	
APLODONTIDAE								
Aplodontia rufa californica	Sierra Nevada mountain beaver	yes	SC / SC				MAR	
SCIURIDAE								
Tamias speciosus speciosus	Lodgepole chipmunk	yes	SC / none				SNF	
HETEROMYIDAE								

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Dipodomys californicus eximus	Marysville Kangaroo Rat	?	SC / SC				VFAR	
Perognathus inornatus inornatus	San Joaquin pocket mouse	yes	SC / none				VFAR	
CANIDAE								
Vulpes vulpes necator	**Sierra Nevada red fox**	**historical**	**SC / threatened**	2	landscape	SN	SNF	variety of alpine zone and montane zone habitats; prefers forests interspersed with meadows or alpine fell-fields
PROCYONIDAE								
Bassariscus astutus	Ringtail	yes	none / none					
MUSTELIDAE								
Gulo gulo luteus	**California wolverine**	**historical**	**SC / threatened**	3	regional	SN	SNF	mixed conifer, red fir, lodgepole pine, subalpine conifer, alpine dwarf shrub, wet meadow, and montane riparian
Martes americana	Pine marten	yes	none / none				SNF	
Martes pennanti pacifica	Pacific fisher	historical	SC / SC				SNF	
Taxidea taxus	American badger	yes	None / None					
INVERTEBRATES								
HELMINTHOGLYPTIDAE								
Monadenia mormonum buttoni	Button's Sierra sideband snail	no	SC / none					
BRANCHYNECTIDAE								
Branchinecta lynchi	**Vernal pool fairy shrimp**	**?**	**threatened / none**	1c	local	GV	VGVP	deeper vernal pools that retain water throughout the spring
TRIOPSIDAE								
Lepidurus packardi	**Vernal pool tadpole shrimp**	**?**	**endangered / none**	1c	local	GV	VGVP	deeper vernal pools that retain water throughout the spring
LINDERIELLIDAE								
Linderiella occidentalis	California linderiella	?	none / none				VGVP	
CAPNIIDAE								
Capnia lacustra	Lake Tahoe benthic stonefly	yes	SC / none			SN		
RYACOPHILIDAE								
Ryacophila spinata	Spiny rhyacophilan caddisfly	?	SC / none					
CER ICAE								

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Desmocerus californicus dimorphus	**Valley elderberry longhorn beetle**	**yes**	**threatened / none**	1c	local	GV	**VFAR**	stands of elderberry in riparian areas and nearby grasslands and oak woodlands
PLANTS								
APIACEAE								
Perideridia bacigalupi	Bacigalupi's perideridia	yes	none / none					perennial forb; chaparral, pine woodland 450-1000 m, UNCOMMON
ASTERACEAE								
Balsamorhiza macrolepis var. macrolepis	Big-scale balsamroot	yes	none / none					perennial forb; open grassy slopes, valleys < 1400 m
Erigeron miser	Starved daisy	?	none / none					perennial forb; rocky sites, 1900-2300 m; UNCOMMON
Pyrrocoma (Haplopappus) lucida	Sticky haplopappus	yes	none / none					perennial forb; alkaline clay flats, open forest, 700-1600 m
BERBERIDACEAE								
Berberis aquifolium var. repens	**Truckee barberry**	**yes**	**endangered / endangered**	1c	local	SN		slopes and in canyons in coniferous forest, oak woodland, and chaparrral from 1000 to 7000 feet in elevation
BRASSICACEAE								
Arabis rigidissima var. demota	Carson Range rock cress	?	SC / none					perennial forb; rocky areas at edges of aspen groves, 2300-2400 m
Draba asterophora var. asterophora	Tahoe draba	yes	none / none					perennial forb, rock crevices, alpine barrens, > 2500 m; RARE
Rorippa subumbulata	**Tahoe yellow-cress**	**yes**	**SC / endangered**	1c	regional	SN		shifting, sandy beaches near the lake margin
CAMPANULACEAE								
Downingia pusilla (humilis)	Dwarf downingia	?	none / none					annual forb; vernal pools, roadside ditches, < 150 m
Legenere limosa	Legenere	?	SC / none					annual forb; wet areas, vernal pools; emergent or terrestrial; RARE
CARYOPHYLLACEAE								
Silene invisa	Hidden-petaled campion	yes	none / none					perennial herb; open areas, coniferous forest 900-2800 m; UNCOMMON

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
CISTACEAE								
Helianthemum scoparium (suffrutescens)	Peak rush rose	yes	none / none					perennial evergreen shrub; dry sandy or rocky soil of hills, slopes, ridges, < 1500 m
DROSERACEAE								
Drosera anglica	English sundew	yes	none / none					annual or perennial forb; swamps, bogs, 1300-2000 m, RARE
ERICACEAE								
Arctostaphylos mewukka ssp. truei	True's manzanita	yes	none / none					shrub; chaparral, coniferous forest 500-850 m, UNCOMMON
FABACEAE								
Astragalus pauperculus	Depauperate milkvetch	yes	none / none					annual forb; open, vernally moist volcanic clay, 150-600 m; RARE
HYDROPHYLLACEAE								
Phacelia stebbinsii	Stebbins phacelia	?	SC / none					annual forb; gravelly soils, meadows, coniferous forest, 1000-1600 m, RARE
ONAGRACEAE								
Clarkia mildrediae	Mildred's clarkia	yes	none / none					annual forb; yellow pine forest, 500-1600 m; UNCOMMON
POLYMONIACEAE								
Navarretia eriocephala	Hoary navarretia	yes	none / none					annual forb; heavy soil of seasonally wet flats, < 400 m; UNCOMMON
POLYGONACEAE								
Eriogonum umbellatum var. torreyanum	Donner Pass buckwheat	yes	SC / none					perennial subshrub; rocky meadows, outcrops; 2100-2400 m; RARE
PORTULACACEAE								
Lewisia cantelovii (serrata)	Saw-toothed Lewisia	yes	SC / none					perennial forb; granite cliff faces, rocky outcrops; 400-1300 m; RARE
Lewisia longipetala	Long-petaled Lewisia	?	SC / none					perennial forb; crevices in granitic rocks, 2500-2800 m; RARE
ROSACEAE								
Ivesia sericoleuca	Plumas ivesia	yes	SC / none					perennial forb; dry, generally volcanic meadows; 1500-2200 m, RARE
SCROPHULARIACEAE								
Cord[illegible]s mollis ssp.	Hispid bird's-beak	?	SC / none					annual root parasite; salin[illegible]hes and flats, < 10 m, RARE

SCIENTIFIC NAME	COMMON NAME	PLACER COUNTY?	FED / STATE STATUS	PRIORITY	CONSERVATION SCALE	ECO-REGIONS	HABITAT TYPE	HABITAT DETAILS
Gratiola heterosepala	**Boggs Lake hedge-hyssop**	**yes**	**none / endangered**	**1c**	local	GV, SNF		shallow water and along the margins of vernal pools at elevations lower than 4000 feet
VIOLACEAE								
Viola tomentosa	Wooly violet	?	none / none					annual or perennial forb; dry, gravelly places 1500-2000 m, RARE
ALISMATACEAE								
Sagittaria sanfordii	Sanford's arrowhead	?	SC / none					tuberous perennial forb; ponds, ditches, < 300 m, UNCOMMON
JUNCACEAE								
Juncus leiospermus var. ahartii	Ahart's dwarf rush	?	SC / none					annual forb; vernal pool margins, 50-100 m; RARE
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	?	none / none					annual forb; vernal pool margins, wet places in chaparral, woodland, 50-500 m, RARE
LILIACEAE								
Chlorogalum grandiflorum	Red Hills soaproot	yes	SC / none					bulbous perennial forb; serpentine outcrops, open shrubby or wooded hills, 300-500 m, RARE
Fritillaria agrestis	Stinkbells	yes	none / none					bulbous perennial forb; clay depressions or other low, heavy soils, < 500 m, UNCOMMON
Fritillaria eastwoodiae	Butte County fritillary	?	SC / none					bulbous perennial forb; dry benches and slopes, 500-1500 m, UNCOMMON
ORCHIDACEAE								
Cypripedium fasciculatum	Clustered lady-slipper	yes	SC / none					perennial forb; open coniferous forest, 100-1700 m, RARE
POACEAE								
Glyceria grandis	American mannagrass	?	none / none					rhizomatous perennial grass; wet places, meadows, lake and stream margins, < 500 m, RARE in CA

Appendix L
SUMMARY OF GIS DATA

The Geographic Information System (GIS) data listed in Table L-1 provide the basis for many of the analyses and conclusions in this report. For further information regarding availability and descriptions of datasets, please contact Diana Stralberg, Placer County Planning Department.

Appendix L
SUMMARY OF GIS DATA

The Geographic Information System (GIS) data listed in this table provide the basis for many of the analyses and conclusions in this report. For further information regarding availability and descriptions of datasets, please contact Diana Stralberg, Placer County Planning Departmen

Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Base maps							
Landsat TM satellite image (3 spectral bands)	California Department of Forestry and Fire Protection (CDF/FRAP)	3 spectral bands (visual)	Placer, Nevada, El Dorado Counties	Mark Rosenberg, CDF	916-227-2658	1996	30 meters
Color aerial photos (21 flight lines, 298 photos)	Geoimagery	10,000ft x 10,000ft photos, 70mm format, flown June 1999	Placer County, east of Colfax	Diana Stralberg, Placer County	530-889-7470	1999	2.5 ft pixels / 2" = 10,000 ft
Color aerial photos (16 flight lines, 245 photos)	Foothill Associates (flown by Geoimagery)	10,000ft x 10,000ft photos, 70mm format, flown April-June 1999	Placer County, east of Hwy 49	Diana Stralberg, Placer County	530-889-7470	1999	16ft (2ft pixels) / 2" = 10,000 ft
Placer County parcel base map and assessor's tax and landuse data	Placer County Planning Department / Assessor's Office	Assessor's landuse codes, taxability codes, business codes, owner addresses, water agency customers, parks and recreation	Placer County (excluding Roseville)	Diana Stralberg, Placer County	530-889-7470	1998	
Public Land Survey	Teale Data Center	Township/range/section numbers	Placer County	Roger Ewers, Teale Data Center	916-263-1488	1998	
City boundaries	Placer County Planning Department	Roseville, Rocklin, Lincoln, Loomis, Auburn, Colfax boundaries	Placer County	Diana Stralberg, Placer County	530-889-7470	1999	
City spheres of influence	Placer County Planning Department	Roseville, Rocklin, Lincoln, Loomis, Auburn, Colfax spheres of influence	Placer County	Diana Stralberg, Placer County	530-889-7470	1999	
Roads	Teale Data Center	Public roads	Placer, Nevada, El Dorado, Sacramento, Sutter, Yuba and Yolo Counties	Roger Ewers, Teale Data Center	916-263-1488	1996 (1993 roads)	1:100,000
Ecological Subregions	USDA Forest Service (USFS)	Ecological sections and subsections, Miles and Goudey	Placer County	Brian Schwind, USFS	916-454-0805		

Appendix L
SUMMARY OF GIS DATA

Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Landuse							
Landuse category	Department of Water Resources	Landuse (including crop types) and water availability	Placer, Sacramento, Sutter, Yuba and Yolo Counties	Steve Turner, DWR	916-653-4041	1993-1998	1:24,000
Government Ownership	Teale, updated with new information from Forest Service	Public ownership	Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:100,000
Placer County Composite General Plan	Placer County Planning Department	General plan landuse designations from Placer County General Plan, County community plans and City general plans (original and generalized designations)	Placer County	Diana Stralberg, Placer County	530-889-7470	2000	
Sacramento Area General Plans	Sacramento Area Council of Governments (SACOG)	General plan landuse designations	Sacramento, Yolo, Sutter, Yuba, El Dorado and Placer Counties	Ken Gebert, SACOG	916-733-3215		
Nevada County General Plan	Nevada County GIS Division	General plan landuse designations	Nevada County	Diana Carolan, Nevada County	530-265-1411		
Williamson Act Properties	Placer County Planning Department	Williamson Act contract information (current and expired) by parcel	Western Placer County (excluding Roseville)	Diana Stralberg, Placer County	530-889-7470	1999	
Water agency customers	Placer County Water Agency (PCWA), Nevada Irrigation District (NID), South Sutter Irrigation District	Current raw water customers in Placer County by parcel	Western Placer County	Diana Stralberg, Placer County	530-889-7470		
Important Farmlands	California Department of Conservation (DOC)	Prime and other special status farmlands; current urban areas	Placer, Nevada, El Dorado, Sacramento, Sutter, Yuba Counties	Blake Rushworth, FMMP	916-324-0859	1996/ 1998	1:24,000

Appendix L
SUMMARY OF GIS DATA

Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Topography, Soils and Hydrography							
30m DEM	U.S. Geological Survey (USGS)	Mosaic generated from 1:24000 quads	Placer County	Diana Stralberg, Placer County	530-886-3383		30 meters
Geology	California Division of Mines and Geology	Major geologic units	Placer County				
Soil survey geographic (SSURGO) database	Natural Resource Conservation Service (NRCS)	Soil types and various attributes, including texture, slope, permeability, etc.	Western Placer County	Daryl Lund, NRCS	916-792-5631	1998 (1980 soil survey)	1:24,000
State soil geographic (STATSGO) database	Natural Resource Conservation Service (NRCS)	Soil types and various attributes, including texture, slope, permeability, etc.	Placer County			1997	1 kilometer grids
Sierra Nevada soil types	USDA Forest Service (USFS)	Soil types	Tahoe National Forest	Brian Schwind, USFS	916-454-0805		1:24,000
Sierra Nevada soil attributes	USDA Forest Service (USFS)	Rangeland Emphasis, Low Site Timberland, Sensitive Soils, Timber Yield, Unsuitable Forest Land, Land Suitability Class	Tahoe and El Dorado National Forests; Tahoe Management Unit	Brian Schwind, USFS	916-454-0805		1:24,000
Mehrten volcanic mudflow areas	California Department of Fish and Game (CDFG)		Western Placer County	Monica Parisi, CDFG	916-327-8822	1994	1:24,000
Floodplains	Federal Emergency Management Agency (FEMA)	100-year floodplains	Placer County	FEMA Mitigation Directorate	800-358-9616	1996	1:24,000
Hydrography	Teale Data Center	Water features, including streams (perennial and intermittent) and canals	Placer County and parts of surrounding counties	Roger Ewers, Teale Data Center	916-263-1488	1998	1:24,000
Water delivery infrastructure	Placer County Water Agency (PCWA)	Raw water canals (PCWA, NID, PG&E) and PCWA zones	Placer County	Harry Oliver or David Crosby, PCWA	530-823-4892		
Watershed boundaries	California Department of Forestry and Fire Protection (CDF/FRAP)	Watershed boundaries	Placer, El Dorado, Nevada, Yuba, Sutter, Sacramento and Yolo Counties	Andy Richardson, CDF	916-263-3649	1999	1:24,000

Appendix L
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Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Western Placer watershed boundaries	Placer County Department of Public Works	Coon Creek, Auburn Ravine, Markham Ravine, Pleasant Grove and Dry Creek watershed and subshed boundaries	Western Placer County	Diana Stralberg, Placer County	530-886-3383		
Vegetation and Landcover							
National Wetlands Inventory	Environmental Protection Agency (EPA)	Wetland classifications	Western Placer County (twelve 7.5" quad sheets)	Chief Cartographer, National Wetlands Inventory	813-570-5411		1-3 acres
Central Valley Wetlands and Riparian Vegetation	California Department of Fish and Game (CDFG)	Vegetation/landcover	Valley portion of Placer County	Kari Lewis, CDFG	916-322-1869	1997 (1993 satellite imagery)	30 meters
Central Sierra Vegetation	California Department of Forestry and Fire Protection (CDF/FRAP) and Pacific Meridian Resources (PMR)	Vegetation/landcover by Calveg and WHR types	Foothill portion of Placer County	Mark Rosenberg, CDF	916-227-2658	1998 (1996 satellite imagery)	30 meters
Sierra Nevada Vegetation	USDA Forest Service (USFS)	Vegetation/landcover by Calveg type	Tahoe and Eldorado National Forests, Tahoe Management Unit	Brian Schwind, USFS Remote Sensing Lab	916-454-0805	1993	2.5 acres
Martis Valley Vegetation	Placer County Planning Department	Martis Valley vegetation	Martis Valley	Diana Stralberg, Placer County	530-889-7470	1974	
Foothill Riparian Zones	California Department of Forestry and Fire Protection (CDF/FRAP)	Hardwood rangeland, within 375 meters of streams	Foothill portion of Placer County	Shawn Saving, CDF/FRAP	916-227-2655	1996	40 acres
Riparian woodland delineations	Foothill Associates	Riparian zone extent with species composition, structure and quality attributes	Placer County, west of Hwy 49	Diana Stralberg, Placer County Planning Dept.	530-886-3383	1999	
Vernal Pools (in progress)	North Fork Associates (Jeff Glazner)	Vernal pool mapping and characterization	Western Placer County	Diana Stralberg, Placer County Planning Dept.	530-886-3383	1999	
[illegible]nal pool complexes	California Department of Fish and Game (CDFG)		[illegible]estern Placer County	Monica Parisi, CDFG	916-327-8822	1998	4[illegible]

Appendix L
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Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Vernal Pools	California Department of Fish and Game (CDFG)	Centroids of delineated vernal pools (created and natural)	Western Placer County	Monica Parisi, CDFG	916-327-8822		
Grassland Habitat	Placer County Planning Department	"Best" remaining grasslands for wildlife habitat	Western Placer County	Diana Stralberg, Placer County	530-886-3383	1999	1:100,000
Wet meadows	USDA Forest Service (USFS)	Wet meadow locations	Tahoe and El Dorado National Forests	Alan Doerr, USFS	530-478-6252	1999	1:24,000
Old growth forest significance	USDA Forest Service (USFS)	Old growth ranking	Tahoe and El Dorado National Forests	Brian Schwind, USFS	916-454-0805		1:24,000
Fuel hazard ranking	California Department of Forestry and Fire Protection (CDF/FRAP)		Placer County	Mark Rosenberg, CDF	916-227-2658		30m
Fire history	California Department of Forestry and Fire Protection (CDF/FRAP)		Placer County	Mark Rosenberg, CDF	916-227-2658	1998	10-300 acres
California change detection project	California Department of Forestry and Fire Protection (CDF/FRAP) and USDA Forest Service (USFS)	Vegetation change over 5-year period	Placer, Nevada Counties	Lisa Levin, USFS	916-454-0803	1999	2.5 acres
Other National Forest biological resource information	USDA Forest Service (USFS)	Wilderness areas, critical plant habitat areas, streamside/riparian management zones, enhanced riparian zones, fire history, et al.	Tahoe and El Dorado National Forests; Tahoe Management Unit	Brian Schwind, USFS	916-454-0805		
Weislander historic vegetation	California Department of Forestry and Fire Protection (CDF/FRAP)	Historic vegetation (1949)	Placer County	Mark Rosenberg, CDF	916-227-2658	1949	1:100,000
Kuchler potential vegetation	California Department of Forestry and Fire Protection (CDF/FRAP)	Potential vegetation	Placer County	Mark Rosenberg, CDF	916-227-2658	1976	1:1,000,000
Forest Service historic vegetation	USDA Forest Service (USFS)	Historic vegetation (1934)	California	Brian Schwind, USFS	916-454-0805		
Species							
California Academy of Science zoological specimens	California Academy of Science	Zoological specimens by collection location	Placer County	Diana Stralberg, Placer County Planning Dept.	530-886-3383	1999	
California Spotted Owl territories	California Department of Fish and Game (DFG)		Sierra Nevada	Gordon Gould, CDFG	916-654-4264	1998	

Appendix L
SUMMARY OF GIS DATA

Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Critical plant habitat	USDA Forest Service (USFS)		Tahoe National Forest	Brian Schwind, USFS	916-454-0805		
Owl locations	USDA Forest Service (USFS)		Tahoe and El Dorado National Forests	Brian Schwind, USFS	916-454-0805		
Bird nest sites	USDA Forest Service (USFS)	Goshawk, Osprey nest sites	Tahoe National Forest	Brian Schwind, USFS	916-454-0805		
Deer management areas	USDA Forest Service (USFS)		Tahoe and El Dorado National Forests	Brian Schwind, USFS	916-454-0805		
Goshawk nest groves	USDA Forest Service (USFS)		Tahoe and El Dorado National Forests	Brian Schwind, USFS	916-454-0805		
Willow Flycatcher and Great Gray Owl locations	USDA Forest Service (USFS)	Known Willow Flycatcher and Great Gray Owl territories	Tahoe National Forest	Alan Doerr, USFS	530-478-6252		
Natural Diversity Database (NDDB) polygons	California Department of Fish and Game (CDFG)		Placer County			1999	
Natural Diversity Database (NDDB) points	California Department of Fish and Game (CDFG)		Placer County			1999	
Anadromous fish locations	Placer County Planning Department	Stream reaches with known Chinook Salmon populations (reoccurring or occasional use)	Western Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:100,000
Swainson's Hawk locations	Placer County Planning Department	Known Swainson's Hawk territories and nest sites	Western Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:100,000
Burrowing Owl locations	Placer County Planning Department	Known Burrowing Owl territories	Western Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:100,000
Spadefoot Toad location	Placer County Planning Department	Spadefoot Toad sighting	Western Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:100,000
Placer County vertebrate species records	Placer County Planning Department	Recorded locations of several sensitive species (collected from local biologists and consultants by Brian Williams)	Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:24,000
Birdi pots	Placer County Planning Department	Birding "hotspots" as identi	stern Placer County	Diana Stralberg, Placer County	530-889-7470	1999	1:

SUMMARY OF GIS DATA

Theme	Source	Major Attributes	Extent	Contact	Phone	Date	Minimum mapping unit / scale of capture
Central Valley Steelhead Evolutionarily Significant Unit (ESU)	National Marine Fisheries Service (NMFS)			Steve Stone, NOAA	503-231-2317		1:100,000 to 1:250,000
Central Valley Chinook Salmon Evolutionarily Significant Unit (ESU)	National Marine Fisheries Service (NMFS)			Steve Stone, NOAA	503-231-2317		1:100,000 to 1:250,001
Vertebrate Species Distributions	GAP Analysis Project (UCSB, USGS, CDFG)	Species habitat suitability by Calveg polygon	Placer County	Frank Davis, UCSB	805-893-7044	1999	
WHR species range maps	California Department of Fish and Game (CDFG)		California	Monica Parisi, CDFG	916-327-8822		
Recreational, Scenic and Cultural Resources							
Wild and Scenic Rivers	USDA Forest Service (USFS)	Wild, scenic and recreational rivers, existing and proposed	Tahoe and Eldorado National Forests	Brian Schwind, USFS Remote Sensing Lab	916-454-0805	1992	1:24,000
Forest Service roads and trails	USDA Forest Service (USFS)		Tahoe and Eldorado National Forests, Tahoe Management Unit	Brian Schwind, USFS Remote Sensing Lab	916-454-0806	1985/86	1:24,000
Sierra Nevada trails, trailheads and recreational resources	Tahoe National Forest		Tahoe National Forest	Rich Johnson, TNF, Foresthill Ranger District	530-367-2224	1999	
Major trailheads	Placer County Planning Department	Locations of major, marked trailheads	Placer County	Diana Stralberg, Placer County	530-886-3383	1999	1:100,000
National Register of Historic Places	Placer County Planning Department	Names and national register ID numbers	Placer County	Diana Stralberg, Placer County	530-886-3383	1999	
California Historical Landmarks (statewide importance)	Placer County Planning Department	Names and state register ID numbers	Placer County	Diana Stralberg, Placer County	530-886-3383	1999	
California Points of Historical Interest (local importance)	Placer County Planning Department	Names	Placer County	Diana Stralberg, Placer County	530-886-3383		
Historic districts	Placer County Planning Department	Names	Placer County	Diana Stralberg, Placer County	530-886-3383		
Unregistered places of historical/cultural significance (Placer County treasures)	Placer County Planning Department	Names	Placer County	Diana Stralberg, Placer County	530-886-3383		
Historic Lincoln Highway (Taylor & Sisley Roads)	Placer County Planning Department		Western Placer County	Diana Stralberg, Placer County	530-886-3383		

Appendix M
SETTING ACQUISITION PRIORITIES

This document outlines the criteria and procedures that have been developed to guide Placer Legacy acquisitions in the initial implementation stages of the Program. Placer Legacy acquisition efforts will first be focused on high priority resource types, as indicated in Table 3-5, Prioritization of Resource Types, which may be modified as the Program develops. Lower priority resource types will be conserved on a case-by-case basis, as opportunities arise, and may be protected as secondary conservation objectives in land acquisitions for other purposes. The preliminary acreage targets established in Chapter III, Section C (explained in detail in Appendix J), represent alternative acquisition scenarios at various levels of investment, and are based primarily on the conservation of these priority resources. The targets represent order-of-magnitude conservation scenarios, rather than upper or lower limits on acquisition. Inasmuch as the success of the Placer Legacy Program is ultimately determined by its funding level, the acquisition targets represent hypothetical distributions of land management under various funding scenarios.

Figure 1 outlines a general decision-making framework for land acquisition and easement purchases, indicating the key decision-making points, as well as staff-level activities for prioritizing and pursuing land acquisitions. In general, two types of easements and acquisitions will be pursued—those that are landowner initiated and those that are initiated by the Placer Legacy Program, based on objective resource criteria. The relative importance of each of these acquisition routes will be determined, in part, by the level of funding available.

The analysis of resource values represents a two-tiered approach, involving a "coarse-filter" analysis of available GIS data, followed by a "fine-filter" analysis of site-level information, once acquisition/easement opportunities have been identified. The coarse-filter GIS analysis will be applied to high priority **agricultural** and **biological** resources, for which County-wide inventories exist. Existing **recreational, cultural/historic, scenic, urban separator** and **public safety** resources (to the extent they are represented by GIS data) will be treated as ancillary resource values in this analysis (see Table 1). Analyses will be guided by input from scientific experts and agency staff, as well as public feedback regarding resource priorities.

Other acquisition priorities for **recreational, cultural, scenic,** and **urban separator** resources will be identified largely from adopted goals of the Placer County General Plan, existing community plan or city general plan policies and programs, and the expertise of staff, other agencies and consultants. GIS datasets will aid this process by providing spatial visualization and analysis of opportunities, but will not be relied upon to generate priorities, until such time as more comprehensive datasets are available. In the future, efforts to comprehensively inventory and map existing recreational trails, as well as historic and archeological sites, may result in new opportunities for GIS analysis.

Coarse-filter analyses will result in a set of ***priority resource areas***, which must then be evaluated with respect to cost and landowner interest to determine where opportunities for acquisition of fee title or conservation easements exist. Real estate multiple listings will be

to identify for-sale properties, which, of the ***priority resource areas*** emerging from the coarse-filter analysis, will be investigated first. Properties offered by landowners independently of this process, provided they meet the minimum size criteria (to be established) and contain potentially valuable open space resources (as determined by cursory air photo evaluation), will be added to the pool of ***potential properties for acquisition***. As funding becomes available, acquisition opportunities will be assessed individually, using the criteria outlined in Table 2.

These ***candidate properties for acquisition*** will be presented by staff to the Placer Legacy Open Space Advisory Commission for review at regular intervals (frequency to be determined). For each property, the advisory commission, with staff input, will make a determination of public benefit and reject, approve or postpone the initiation of negotiations with the landowner for a conservation easement or acquisition of fee title. Once a property has been approved, acquisition activities will proceed according to the guidelines provided in Appendix H. The final expenditure of public funds will require approval by the Advisory Commission and Governing Board of the Placer Legacy Program.

As willing sellers come forward, many types of resources will be protected on a largely opportunistic basis. This applies primarily to cultural/historic and scenic resources, which are not well inventoried, as well as recreational resources, which have specific management and facilities requirements. In most cases, the Placer Legacy Program will partner with other agencies and jurisdictions to conserve land specifically for these objectives (e.g., various park departments and special districts for recreational resources, and County Department of Museums for cultural resources).

With respect to biological resources, small-patch ecosystems (e.g., native grasslands and ephemeral aquatic habitats) will also need to be conserved on a largely opportunistic basis, as they are discovered and mapped. Many of these ecosystems may be identified in the site-level evaluation of properties brought forward by willing sellers, emphasizing the need to rely on landowner-identified resource values, not just those derived by methodical GIS analyses. Future biological research efforts (described in greater detail in Appendix E), developed as part of comprehensive regulatory permitting for endangered species (HCP/NCCP), will improve the knowledge and understanding of small patch ecosystems.

To the extent that sensitive species habitat requirements can be defined and mapped, biological resource acquisitions will emphasize the incorporation of areas with the necessary habitat characteristics for sensitive species, especially those species for which significant impacts are anticipated under the HCP/NCCP. The configuration of habitat, as it relates to the preservation of metapopulation dynamics and species' range requirements, will also be considered to the extent possible under a system of voluntary landowner participation.

Geographic Information System (GIS) Analysis of Acquisition Priorities

For each of the high priority resource types, two additional factors will be considered: the scale(s) of the required conservation effort (site, watershed or landscape/regional) and the type(s) of conservation action required (preservation, enhancement or creation of new resources). The scale of conservation determines the scale of analysis. Site-scale resources will be evaluated only according to the conditions at the particular locations in which the resources occur. For watershed-scale resources, upstream and upslope (i.e., watershed) conditions will also be evaluated. Landscape- and regional-scale resources will be evaluated across the appropriate ecoregion, into other counties if necessary. For each resource type, priorities for preservation, enhancement and creation will be determined separately (if applicable).

Terms are defined as follows:

- ***Site-scale*** conservation is most appropriate for resources that are patchily distributed and restricted to small areas, and for which local conservation opportunities are largely independent of conditions in the surrounding watershed, landscape or region. One example is cultural and historic resources, with fixed locations and primarily local values. With respect to biological resources, small, unique habitats, such as native grasslands and ephemeral aquatic habitats, are examples of resources with site-scale conservation needs.

- ***Watershed-scale*** conservation is important for creek, river and lake resources, which are affected by upstream conditions, as well as upland land uses within the watershed. Downstream conditions are also important for fish passage. This scale of analysis/conservation is only relevant for biological resources and public safety resources (floodplains).

- ***Landscape-scale*** conservation is important for most terrestrial biological resources, especially where landscape linkages are required for wildlife migration, dispersal and other movements, or wildlife inhabitants have large range requirements. Resources for which landscape connectivity is vital include vernal pool and other valley grasslands, foothill oak woodlands, and Sierra Nevada conifers. Landscape-scale conservation is also important for intensive agriculture and timber activities, because large connected areas are important for economic viability, and these activities are largely incompatible with certain urban land uses.

- ***Regional-scale*** conservation is important in instances where Placer County lands are important to the overall regional integrity and persistence of a resource, e.g., migratory waterfowl or carnivore habitat. In such cases, large, multi-county areas are needed, and inter-county cooperation is important.

- ***Preservation*** applies to resources that can/should be preserved as-is, and managed to maintain existing conditions, with minor improvements/alterations in some cases. Most agricultural resources fall into this category, as do most biological resources.

- ***Enhancement*** applies to several resources, including biological resources that have been severely degraded and may be enhanced by physical manipulation, including creeks, riparian corridors, wetlands and vernal pool grasslands. Recreational resources may also be enhanced, by clearing, marking and linking trails and other recreational facilities. Cultural and historic structures in need of repair are also candidates for enhancement.

- ***Creation*** is relevant where significant construction of new habitat or facilities are proposed, primarily with respect to biological resources (e.g., wetlands and vernal pool grasslands) and recreational resources (e.g., new parks, trails and trailheads).

Each priority resource type will be evaluated and mapped, at the appropriate scale, according to the criteria listed in Table 1. A parcel-level analysis will then be conducted to determine the locations of priority resource areas.

Each parcel will be evaluated according to four general sets of criteria:

- Primary resource value (rank with respect to resource in question, see Table 1)
- Secondary resource value (rank with respect to scenic, urban separator, public safety, historic/cultural and recreation resources, see Table 1)
- Combined vegetation/landcover score (based on priorities in Table 3-5)
- Acquisition/easement suitability, consisting of the following factors:
  - Parcel size
  - Adjacency to existing protected areas
  - Subdivision potential
  - Development pressures (e.g., proximity to new highways)
  - Development status (improved or not)
  - Roadedness
  - Land value/cost
  - Market status (i.e., higher priority given to for-sale properties)

Figure 1. Diagram of Placer Legacy Property Acquisition Procedure

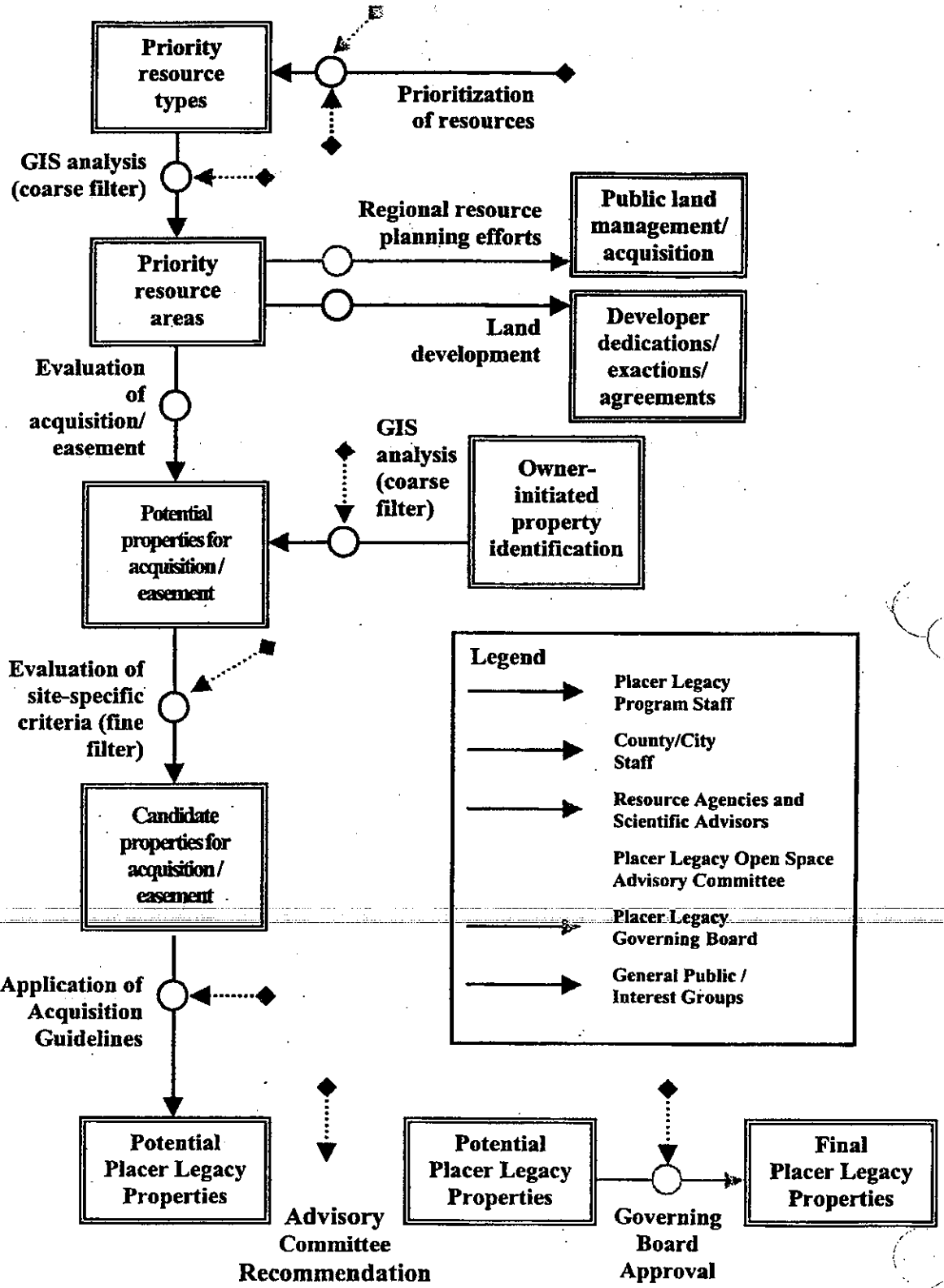


Table 1. GIS Criteria for Setting Biological and Agricultural Acquisition Priorities

Open Space Resource Types	Action ***	Conservation Scale	Primary Resource Criteria	Compatible Secondary Resources **
Agriculture				
Intensive agriculture (rice, row crops, orchards)	Preservation / Programs	Landscape (Valley, Foothills)	• Soil capability class • Potential water availability • Compatibility of surrounding land uses (agricultural or rural residential) • Current productivity *	• Floodplains • Riparian/aquatic • Wetlands • Historic sites
Rangelands	Preservation / Programs	Landscape (Valley, Foothills)	N/A (Secondary Resource)	• Floodplains • Vernal pools • Oak woodlands • Riparian/aquatic • Historic sites
Western Sierra timber	Programs	Landscape (Sierra Nevada)	N/A	
Biological				
Small patch ecosystems	Preservation	Site	See site criteria for biological resources	Variable
Mehrten vernal pools	Preservation/ Enhancement	Site	See site criteria for biological resources	• Urban-agriculture buffers • Community separators • Rangelands • Outdoor recreation/education • Historic sites
Hardpan vernal pools	Preservation / Enhancement	Landscape (Valley)	• Size of vernal pool complex • Pool size and depth diversity * • Pool density * • Position in watershed * • Proximity to other vernal pool complexes • Natural condition / extent of disturbance • Landuse compatibility within surrounding area (more natural, less urban)	• Urban-agriculture buffers • Community separators • Rangelands • Outdoor recreation/education • Historic sites
Valley grasslands (non vernal pool)	Preservation / Enhancement	Landscape (Valley)	• Area of interconnected habitat / level of fragmentation • Natural condition / extent of disturbance * • Landuse compatibility within surrounding area (more natural, less urban)	• Urban-agriculture buffers • Community separators • Rangelands • Outdoor recreation/education • Historic sites

Open Space Resource Types	Action **	Conservation Scale	Primary Resource Criteria	Compatible Secondary Resources
Valley riparian/aquatic Foothill riparian/aquatic	Enhancement	Watershed	• Presence of reoccurring anadromous fish populations • Natural (non-urban) condition of surrounding sub-watershed • Natural (non-cultivated and non-urban) conditions within 100-200ft of centerline • Gap in canopy connectivity (no woody or emergent vegetation)	• Urban-agriculture buffers • Community separators • Rangelands • Intensive Agriculture • Floodplains • Historic sites • Outdoor recreation/education
Valley riparian/aquatic Foothill riparian/aquatic	Preservation	Watershed	• Area and structural complexity of riparian vegetation • Urban encroachment potential	See previous
Valley wetlands	Enhancement / Creation	Landscape (Valley)	• Hydric soils • Proximity to other wetlands, flooded agriculture	• Urban-agriculture buffers • Community separators • Rangelands • Intensive Agriculture • Floodplains
Valley wetlands	Preservation	Site	See site criteria for biological resources	See previous
Oak woodland (Blue Oak / Live Oak)	Preservation / Programs	Landscape (Foothills)	• Area of interconnected habitat / level of fragmentation • Age structure • Presence of riparian corridor • Level of human disturbance * • Road density • Landuse and parcel sizes within surrounding area	• Urban-agriculture buffers • Community separators • Rangelands • Outdoor recreation/education • High fire risk areas
Chaparral & Montane hardwoods (Black Oak / Live Oak) & West slope conifers	Preservation	Landscape (Sierra Nevada)	• Area of interconnected habitat / level of fragmentation * • Age structure • Level of human disturbance * • Road density • Landuse and parcel sizes within surrounding area	• Historic resources • High fire risk areas • Outdoor recreation/education

Open Space Resource Types	Action **	Conservation Scale	Primary Resource Criteria	Compatible Secondary Resources
Major rivers	Preservation / Enhancement	Watershed	• Natural (non-urban) condition of surrounding sub-watershed • Upstream position	• Historic resources • Outdoor recreation/education
Sagebrush / east slope conifers	Preservation	Landscape	• Area of interconnected habitat / level of fragmentation • Extent of human disturbance * • Road density • Landuse and parcel sizes within surrounding area	• Historic resources • Outdoor recreation/education • High fire risk areas • Community separators
Montane riparian	Preservation	Watershed	• Area and structural complexity of riparian vegetation • Natural (non-urban) condition of surrounding sub-watershed • Presence of reoccurring anadromous fish populations *	• Outdoor recreation/education
Wet meadow	Preservation	Site	See site criteria for biological resources	• Outdoor recreation/education
Outdoor Recreation				
Environmental education	Creation	Site	See site criteria for outdoor recreation	• All biological resources
Passive recreation in valley/foothill region (hiking, biking, horseback riding)	Creation	Landscape	• Proximity to urban population * • Accessibility * • Topographic diversity • Scenic quality *	• Urban-agriculture buffers • Community separators • Valley/foothill riparian • Grasslands • Floodplains
Back-country passive recreation	Creation	Landscape	• Gaps in existing trail network or trail segments without formal public access * • Access points without developed trailheads *	• High fire hazard areas • Sage brush / east slope conifers • West slope conifers • Montane riparian • Wet meadows • Historic sites
River and lake recreation (boating, rafting, swimming)	Programs	Watershed	N/A	
Cultural Resources				
Historic landmarks, buildings and roads	Preservation	Site	See site criteria for cultural resources	
Native American artifacts, petroglyphs and paleontological sites	Preservation	Site	See site criteria for cultural resources	

Open Space Resource Types	Action **	Conservation Scale	Primary Resource Criteria	Compatible Secondary Resources
Scenic Resources / Urban Separators				
Scenic transportation corridors	Preservation	Site	N/A (Secondary Resource)	
Scenic vista points	Preservation	Site	N/A (Secondary Resource)	
Community separators / greenbelts	Preservation	Landscape	N/A (Secondary Resource)	
Buffers between agricultural and urban activities	Preservation	Landscape	N/A (Secondary Resource)	
Public Safety				
Floodplains	Preservation	Watershed	N/A (Secondary Resource)	
High fire hazard areas	Preservation	Landscape	N/A (Secondary Resource)	
Avalanche zones	Preservation	Site	N/A (Secondary Resource)	

*** ***Preservation, Enhancement*** and ***Creation*** are acquisition/easement-oriented. ***Programs*** indicate non-acquisition-oriented conservation strategies.
** Scenic resources are generally compatible with all other resource types
* Data not currently available

Table 2. Site-specific Criteria by Resource Element*

Site must possess at least one of the following primary resource criteria:	...or two of the following secondary resource criteria:	...and must meet all of the following constraints:
Biological resources • Field-verified high priority resource values, as determined by GIS analysis (see Table 1) • Known populations of special status species present • High quality habitat for special status species present (as determined by biological experts) • Particularly high species diversity (as determined by biological experts) • Presence of unique and/or undisturbed vegetation communities (e.g., native grasslands, old growth tree stands) • Presence of unique and/or undisturbed geophysical characteristics (e.g., serpentine soils) • Presence of unique and/or undisturbed aquatic habitats (wetlands, seeps, springs, ephemeral creeks)	• Presence of historical structures/artifacts • High scenic value • Presence of recreational trails (or potential to develop) • Part of property in agricultural production • Within floodplain, high fire hazard or avalanche zone • Imminent threat to resources	• Compatible surrounding land uses • Not already protected in perpetuity
Agricultural Resources • Field-verified high priority resource values, as determined by GIS analysis (see Table 1) • Irrigation water available on-site • Particularly deep or fertile soil conditions (as determined by agricultural experts) • Particularly high productivity / economic value • High value waterfowl habitat (rice fields)	• Presence of historical structures/artifacts • Particularly high scenic value • Imminent threat to resources • High biological resource values (see primary biological resources criteria)	• Compatible surrounding land uses • Not already protected in perpetuity
Recreational Resources: • Opportunity to connect existing trails, thereby providing recreational greater recreational access • Presence of existing informal trails • Presence of unique scenic vistas	• Particularly high scenic value • Presence of recreational trails (or potential to develop) • Part of property in agricultural production	• Compatible surrounding land uses • No other agencies/organizations with available resources to develop • No particularly sensitive habitats/species present, or ability to avoid impacts • Publicly accessible with potential available parking

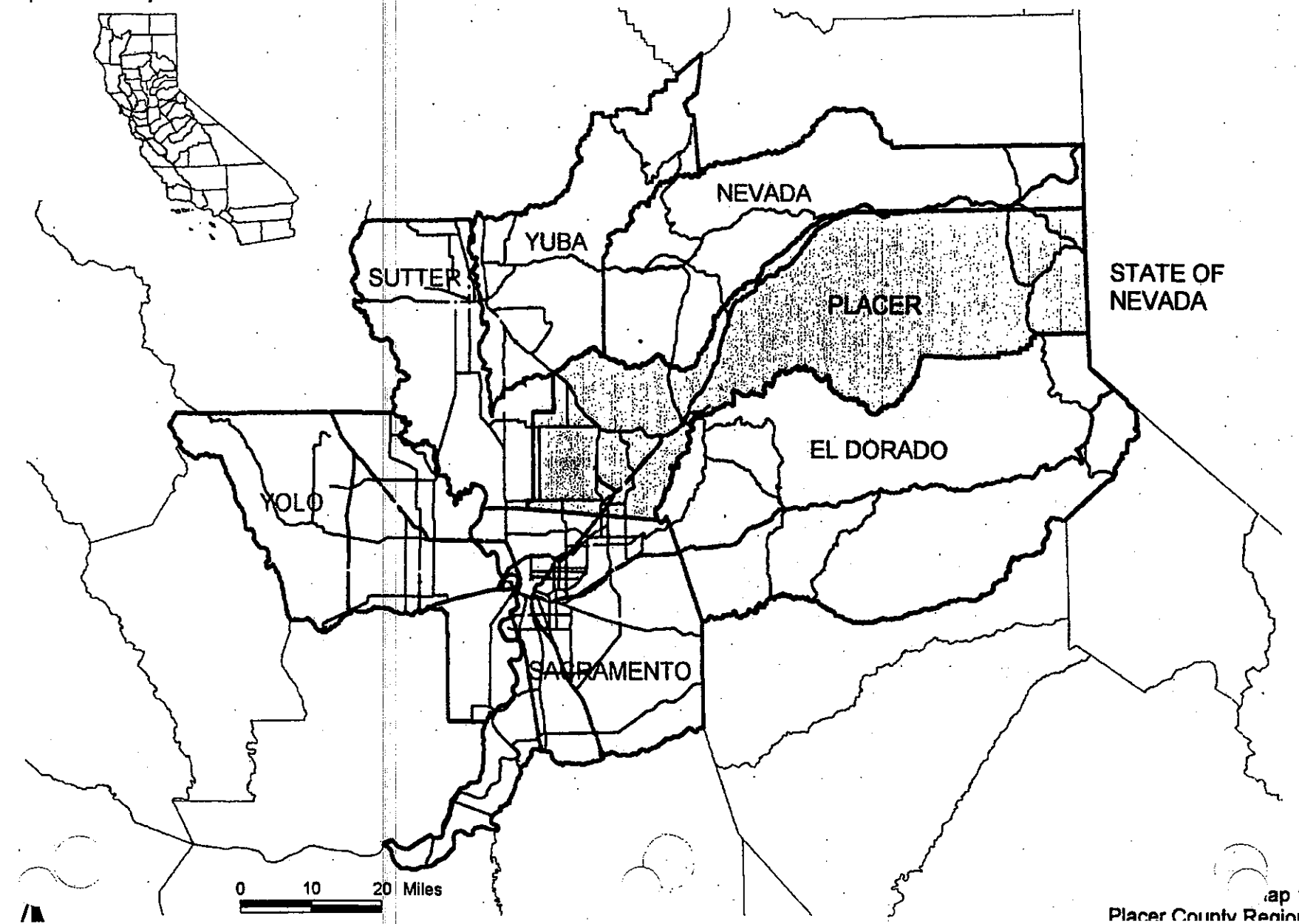
Site must possess at least one of the following primary resource criteria:	**...or two of the following secondary resource criteria:**	**...and must meet all of the following constraints:**
Cultural Resources: • Presence of historical structures or landmarks (especially State, Federal or County listed sites) • Presence of Native American artifacts • Presence of petroglyphs	• Imminent threat to resources • Resources in a state of disrepair (with potential to restore) • Particularly high scenic value • Presence of recreational trails (or potential to develop) • Part of property in agricultural production • High biological resource values (see primary biological resources criteria)	• Existing protection limited or lacking • No other agencies/organizations with available resources to protect
Scenic Resources / Urban Separators: • Unique scenic vista • Unique scenic transportation corridor • High conflict between agricultural and urban landuse	• Presence of recreational trails (or potential to develop) • Part of property in agricultural production • Imminent threat to resources • High public accessibility (via roads or trails) • High biological resource values (see primary biological resources criteria)	• Not already protected in perpetuity • No other agencies/organizations with available resources to protect
Public Safety Resources: • Extreme public safety hazard	• Particularly high scenic value • Presence of recreational trails (or potential to develop) • Part of property in agricultural production • High biological resource values (see primary biological resources criteria)	• No other agencies/organizations with available resources to protect

* Table does not include geographic criteria, which are analyzed at an earlier phase of property evaluation. The criteria listed will be evaluated in conjunction with the cost of the property's encumbrance, and the terms of the easements, if applicable.

Placer Legacy Atlas of Maps

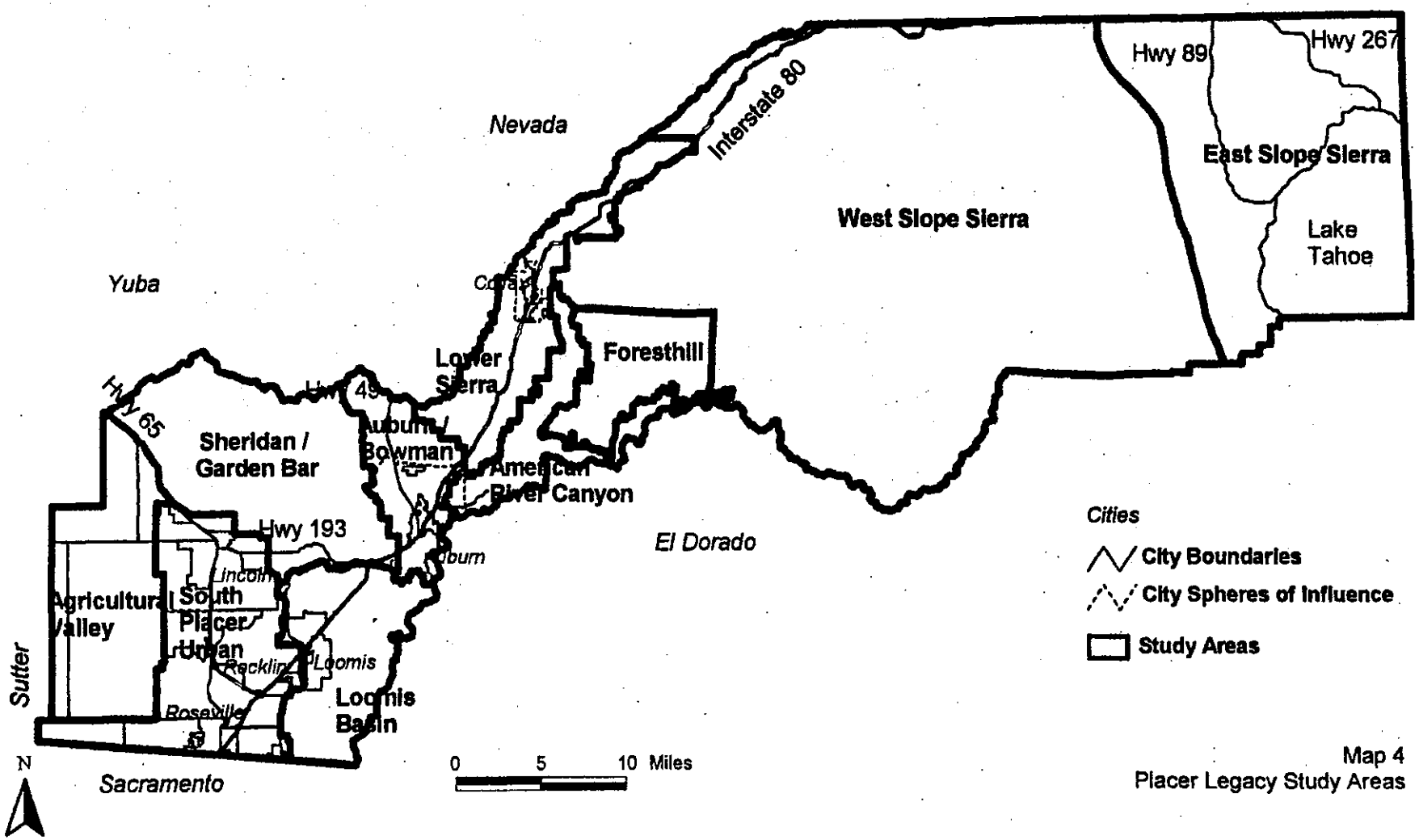
Map	Title
1	Placer County Region
2	Placer County
3	Western Placer
4	Placer Legacy Study Areas
5	Existing Land Use in Western Placer
6	Existing Lane Use in Eastern Placer
7	General Plan for County and Cities
8	General Plan Designations in Western Placer
9	General Plan Designations in Eastern Placer
10	Public Land Ownership and General Plan Open Space Designations
11	Potential Urban and Rural Residential Growth
12	Agriculture in Western Placer
13	Water Source for Existing Agriculture in Western Placer
14	Ecoregions of Placer County
15	Natural Vegetation Communities with Ecoregions
16	Special Status Species
17	Hydrology in Western Placer
18	Riparian Canopy in Western Placer
19	Vernal Pool Complexes and Grasslands
20	Foothill Oak Woodland and Grasslands
21	Recreation, Trails and Public Land
22	Historic Sites and Points of Interest
23	Scenic Corridors
24	Public Safety Constraints

April 13, 2000

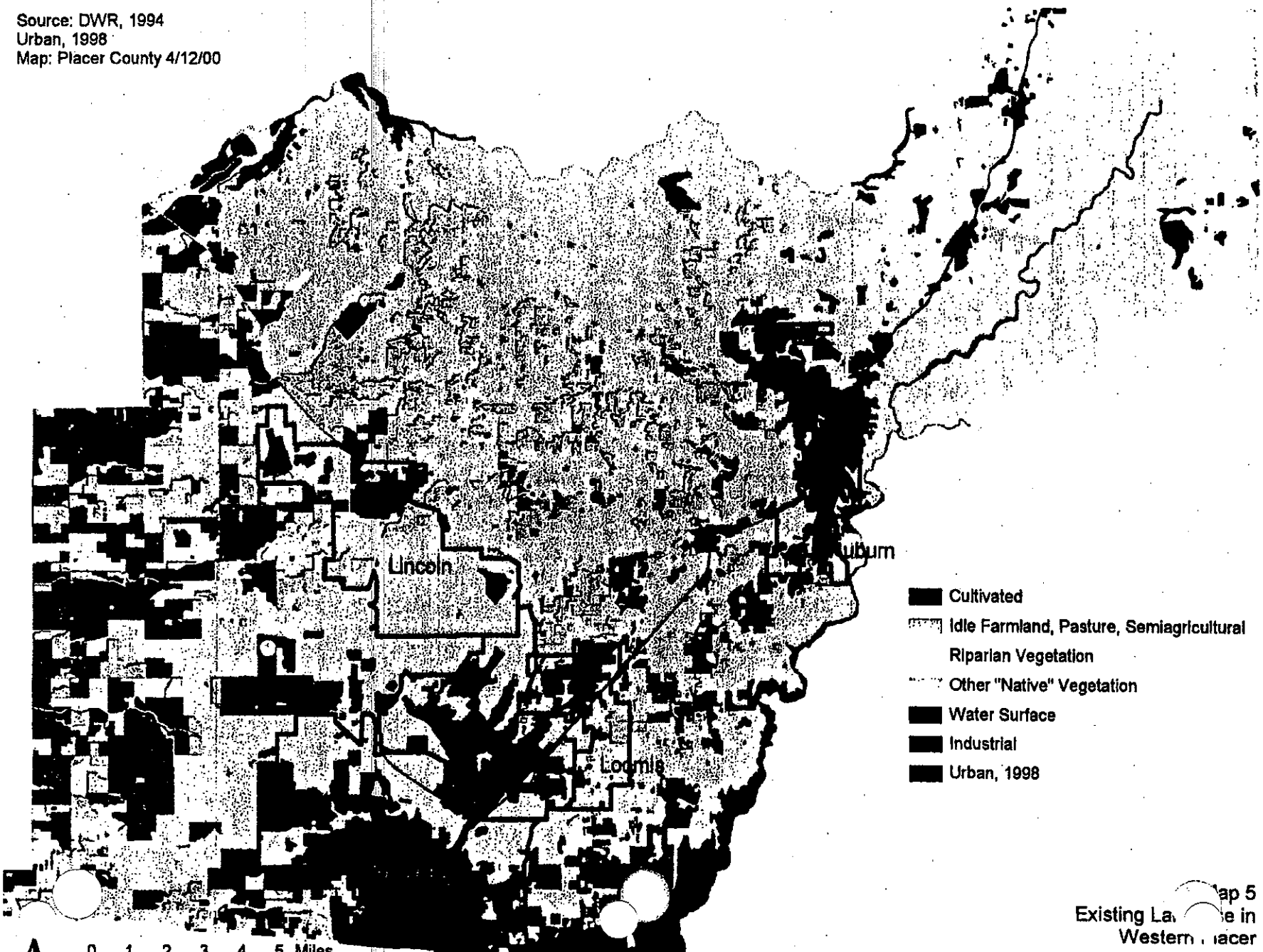


ap 1
Placer County Region

Map: Placer County 4/13/00

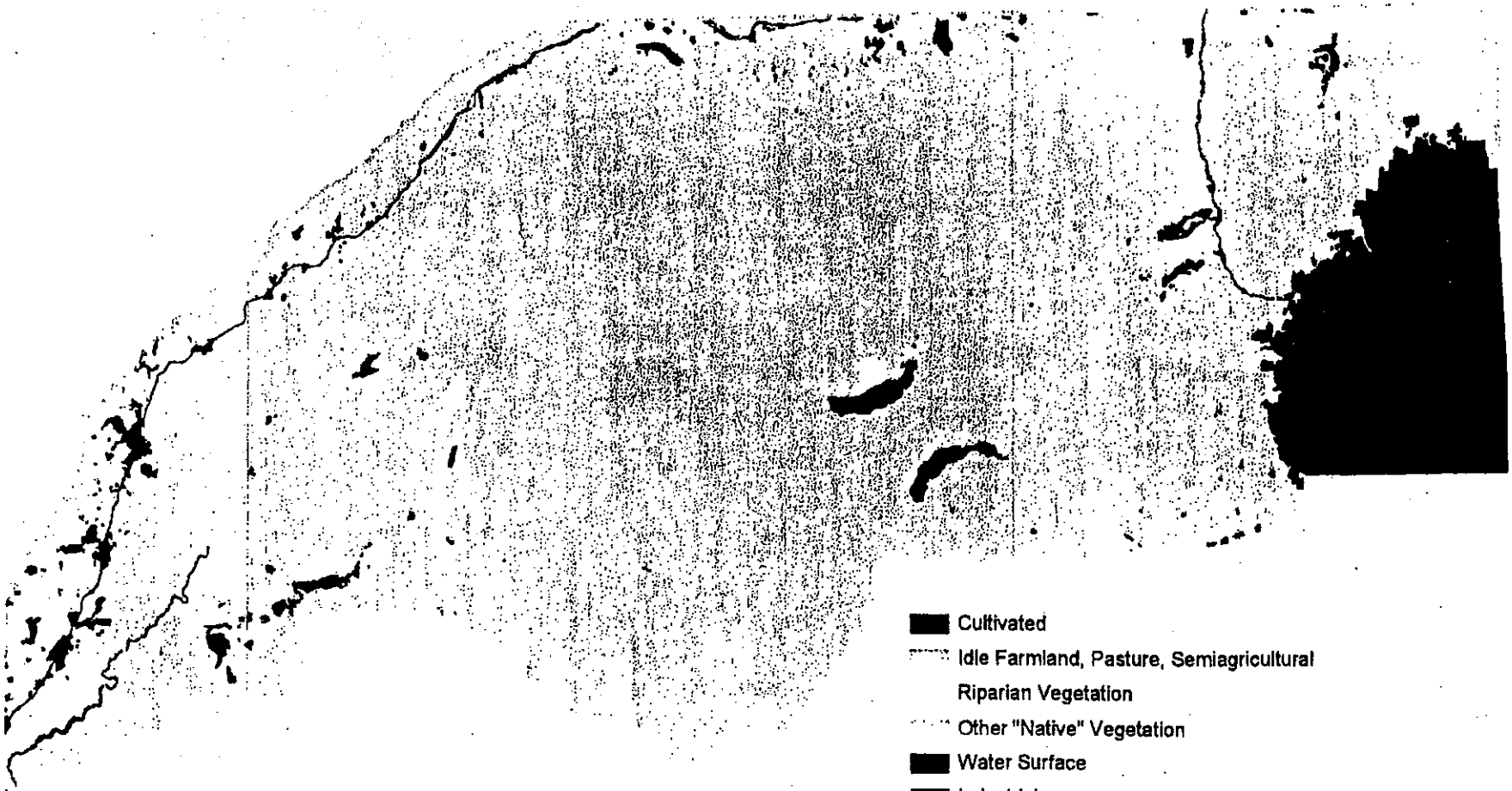


Map 4
Placer Legacy Study Areas



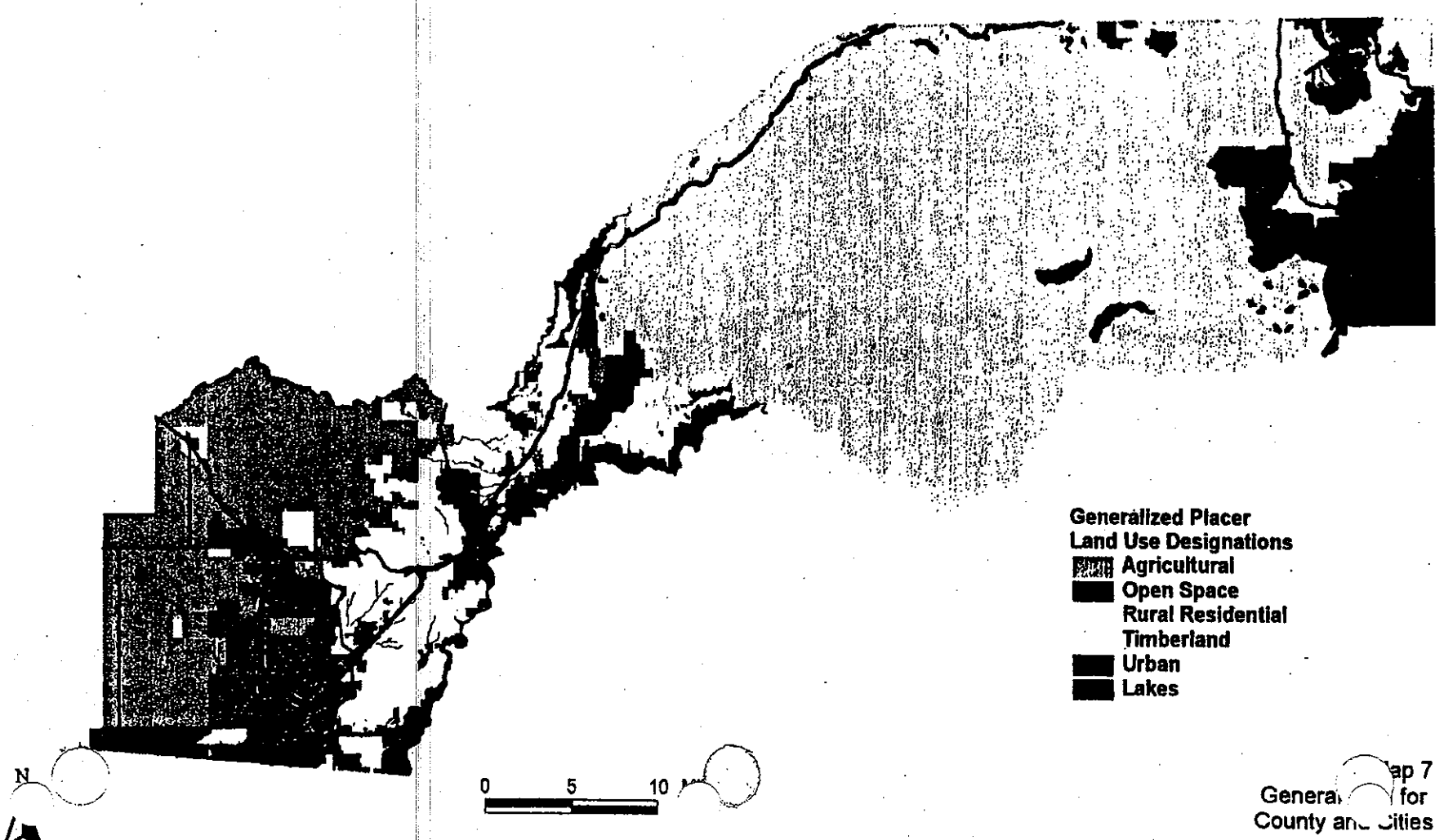
Map 5
Existing La e in
Western acer

Source: DWR, 1994
Urban, 1998
Map: Placer County 4/12/00

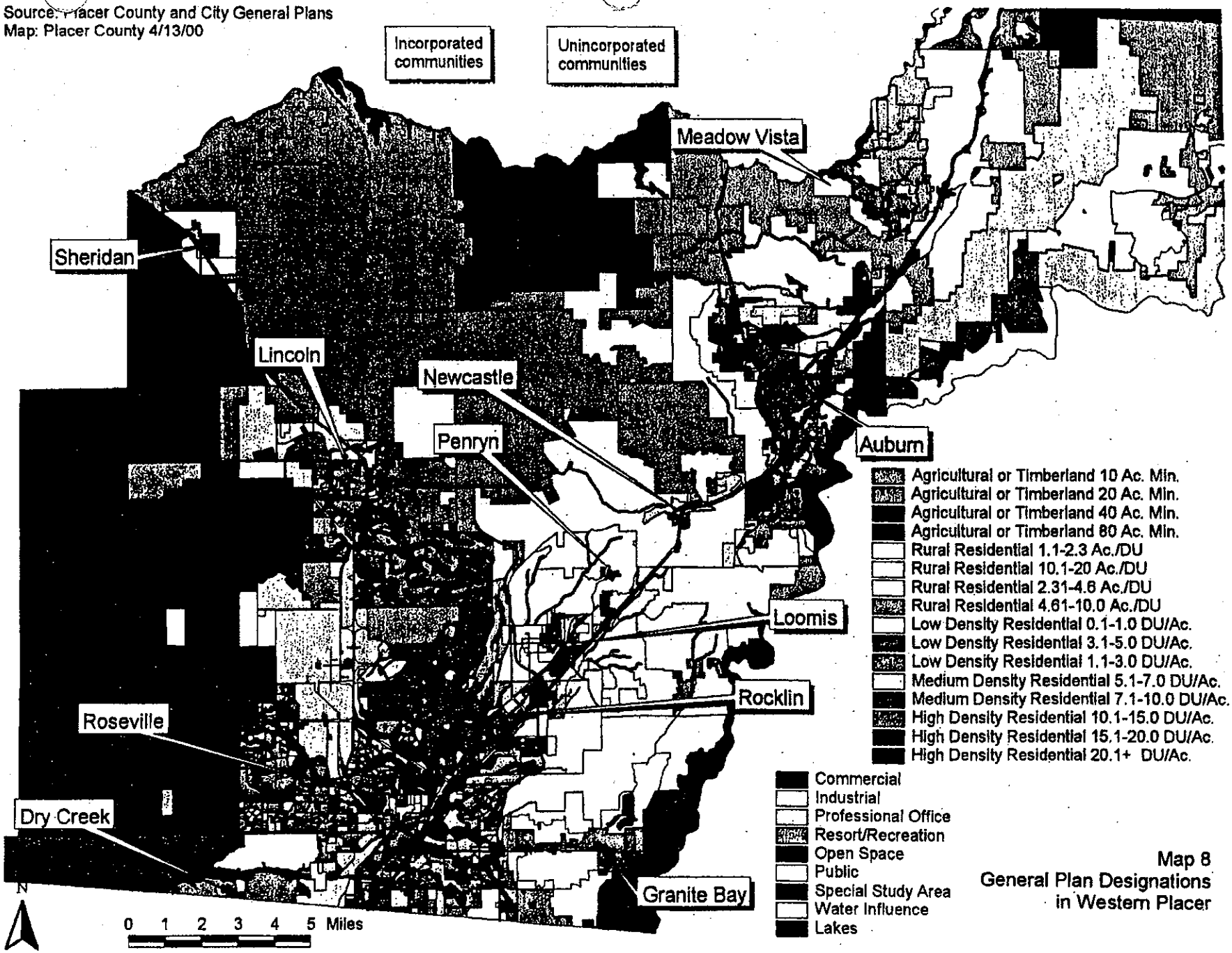


Map 6
Existing Land Use in
Eastern Placer

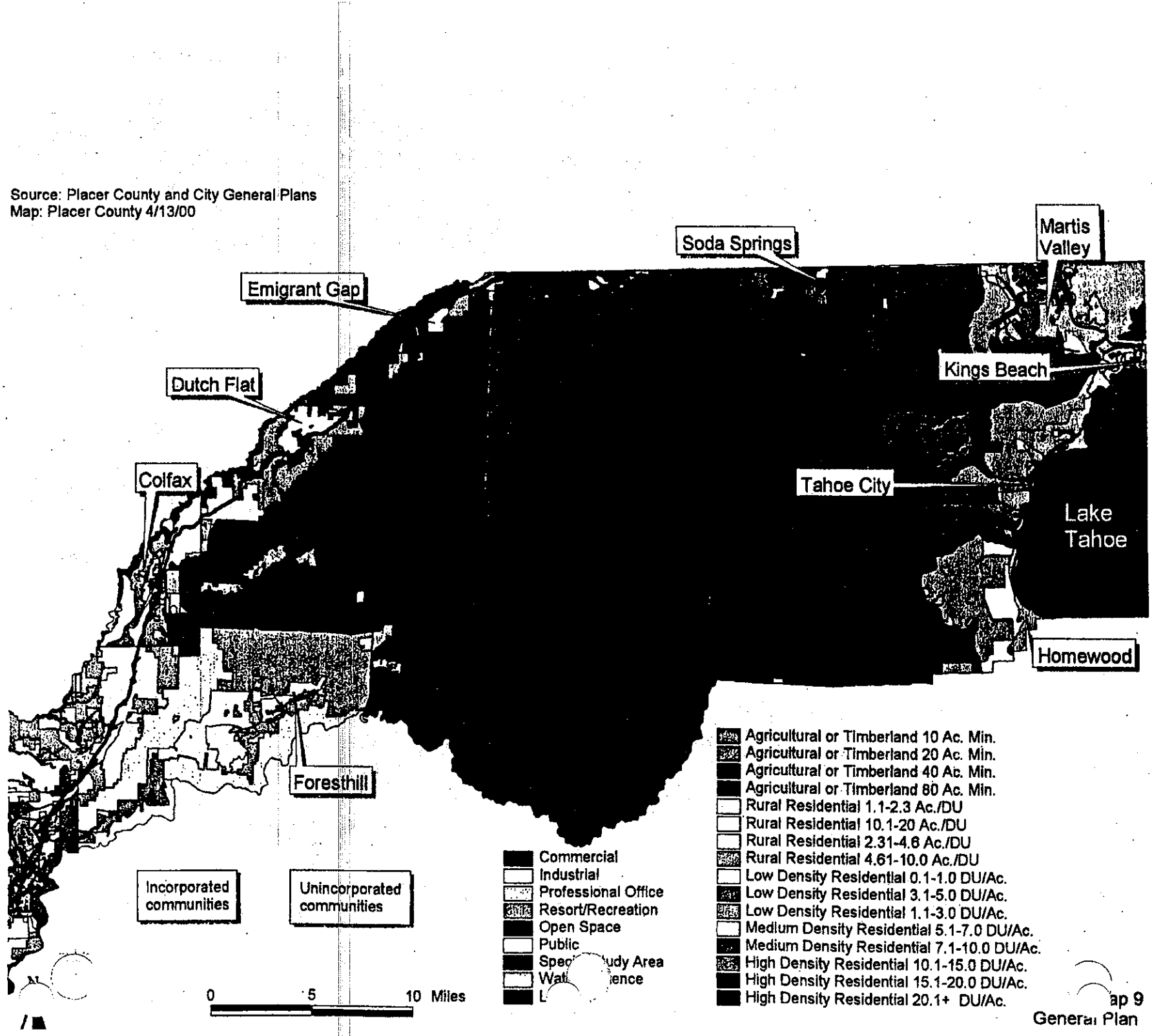
Source: Placer County and City General Plans
Map: Placer County 4/13/00



Map 7
General for
County and Cities

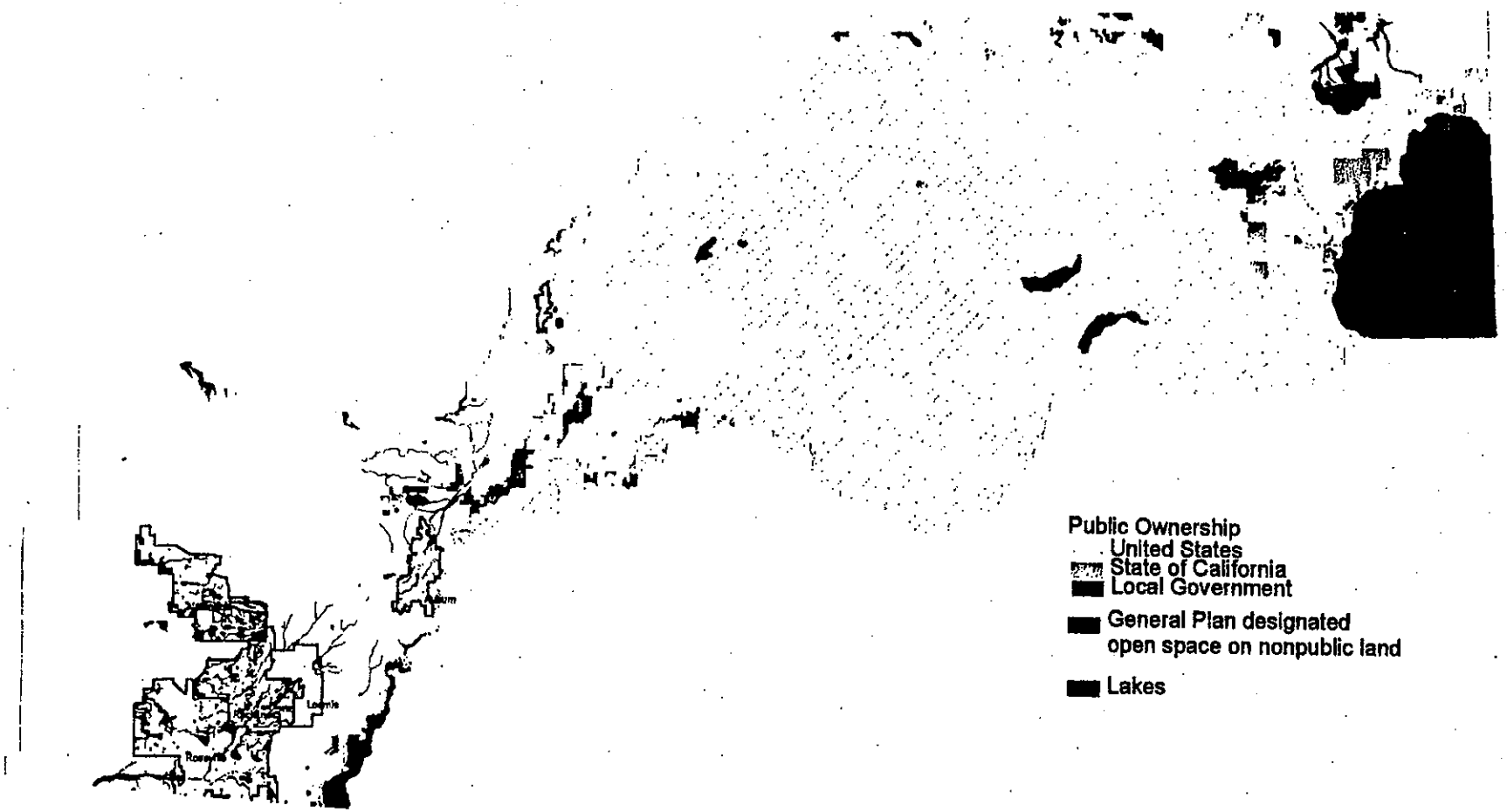


Map 8
General Plan Designations
in Western Placer



ap 9
General Plan

Source: Land Ownership: Assesor parcel map
Open Space: Placer County and City General Plans
Map: Placer County 4/12/00

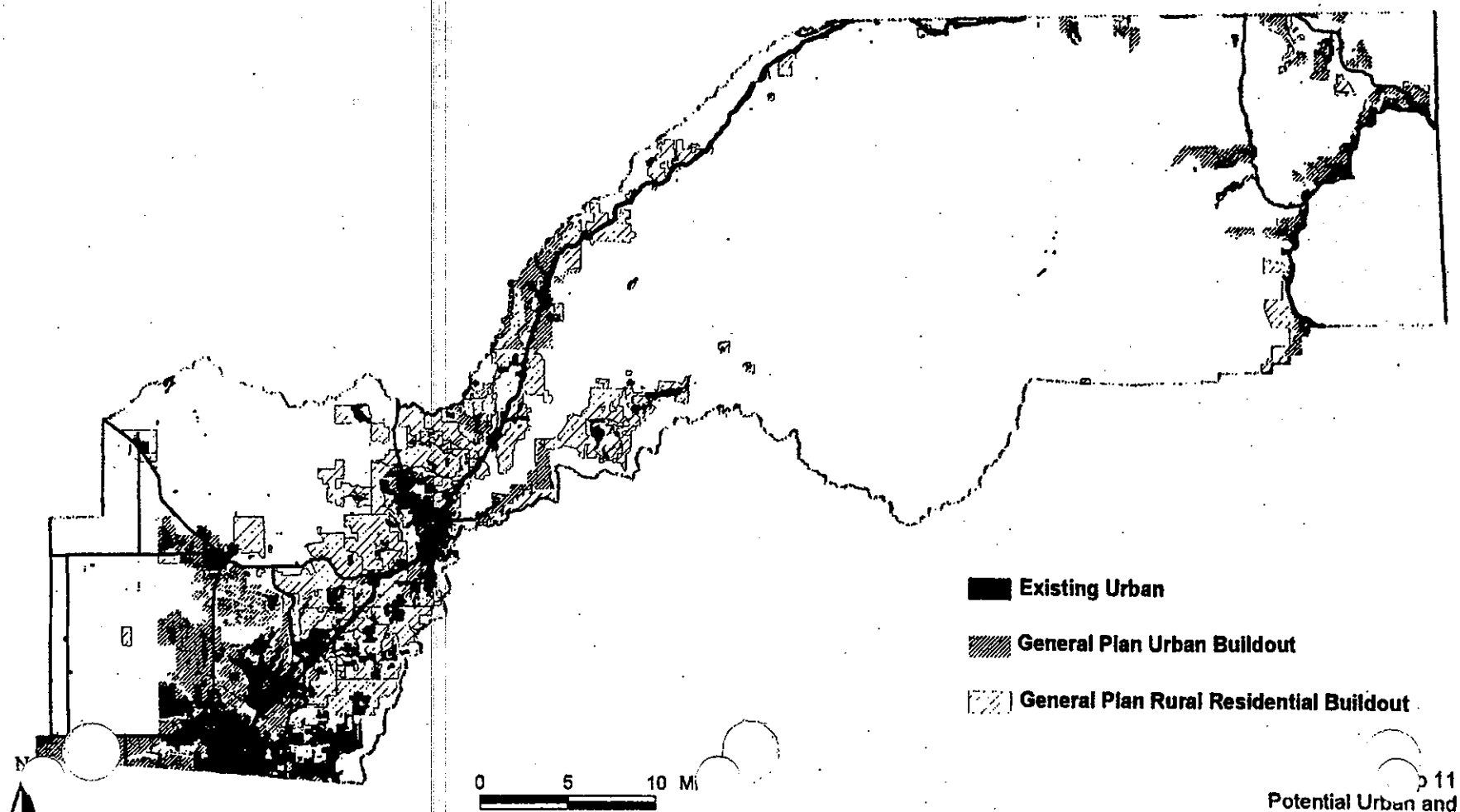


N

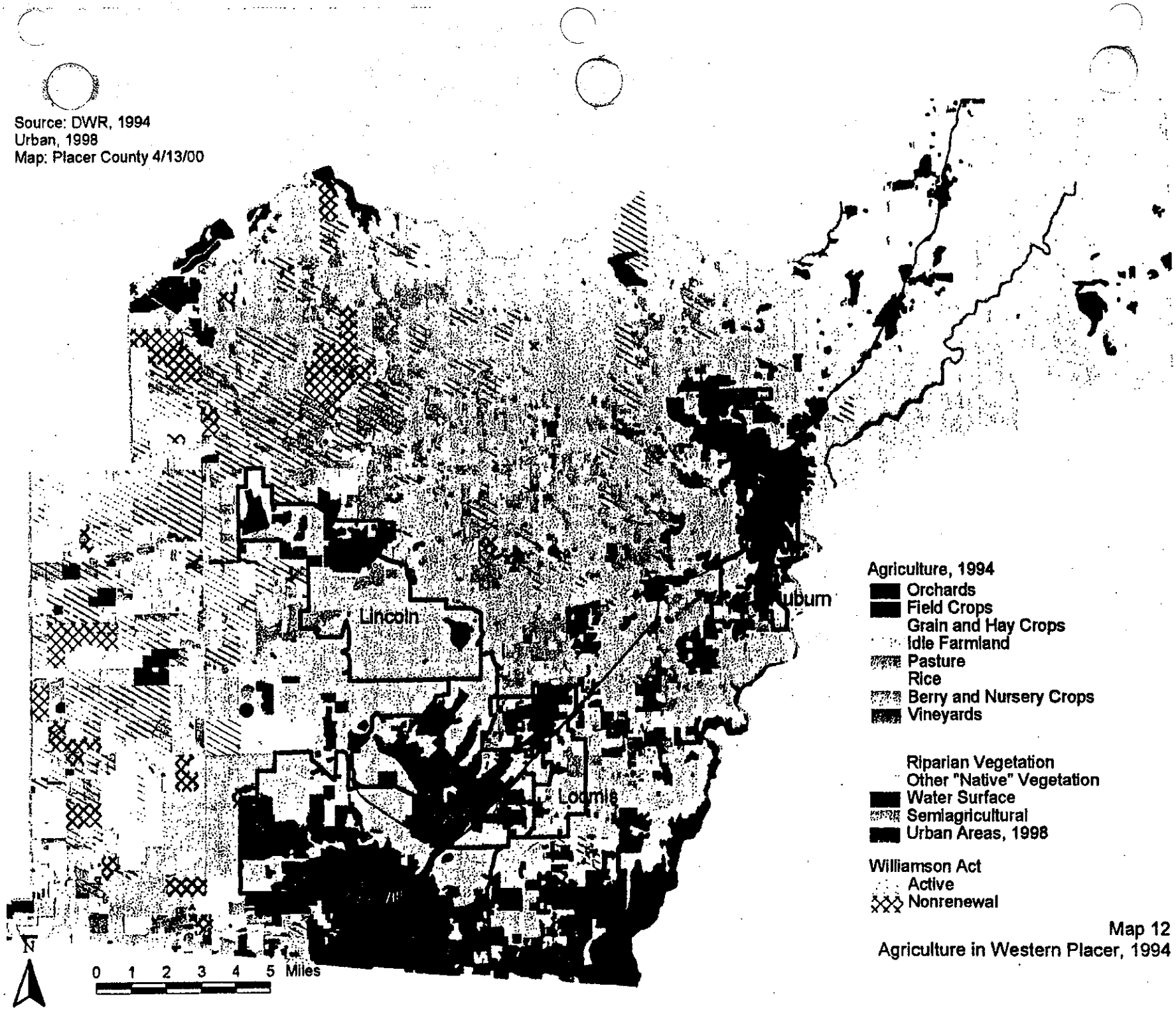
0 5 10 Miles

Map 10
Public Land Ownership and
General Plan Open Space Land Designations

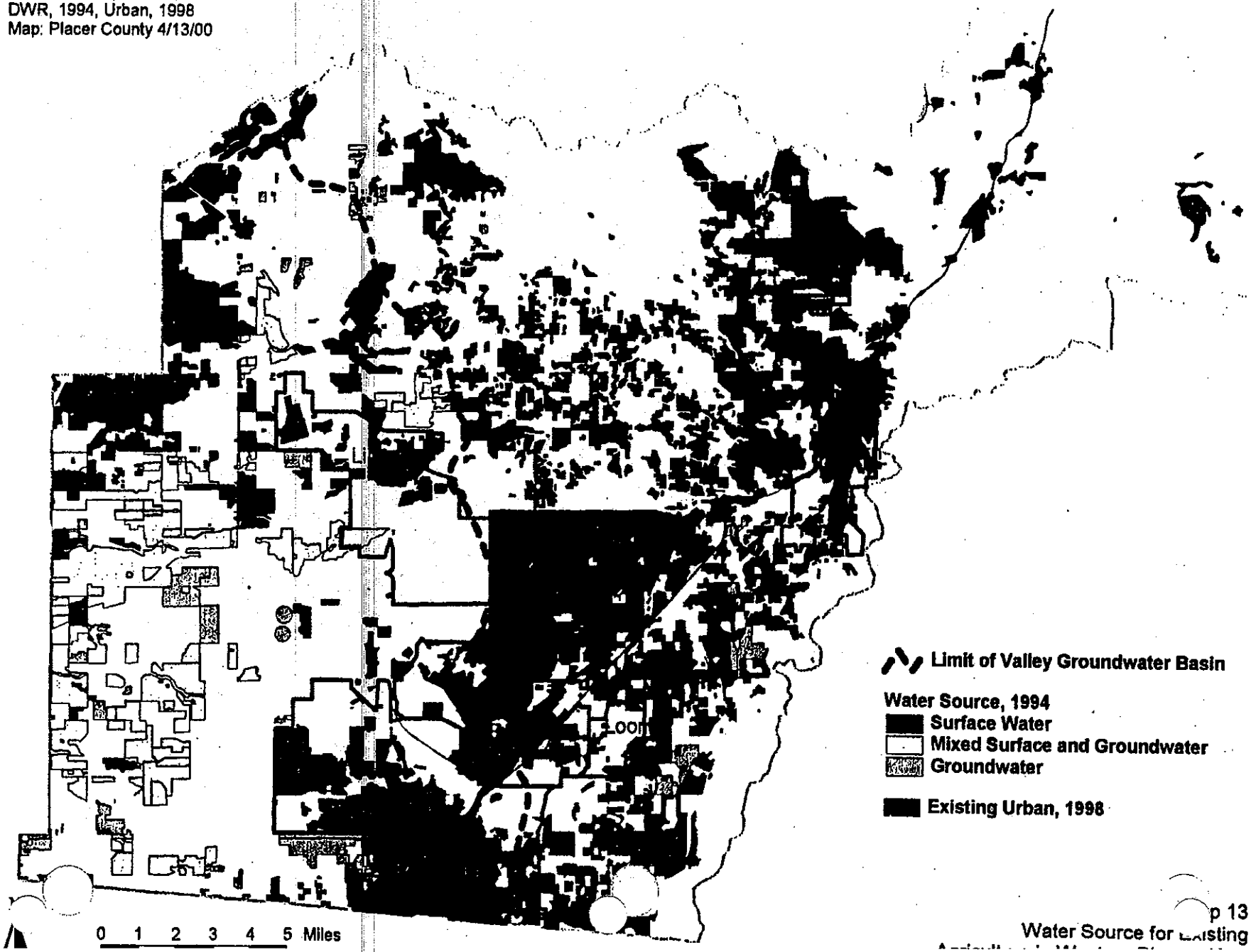
Source: DWR, DOC,
Placer County and City General Plans
Map: Placer County 4/12/00



Potential Urban and

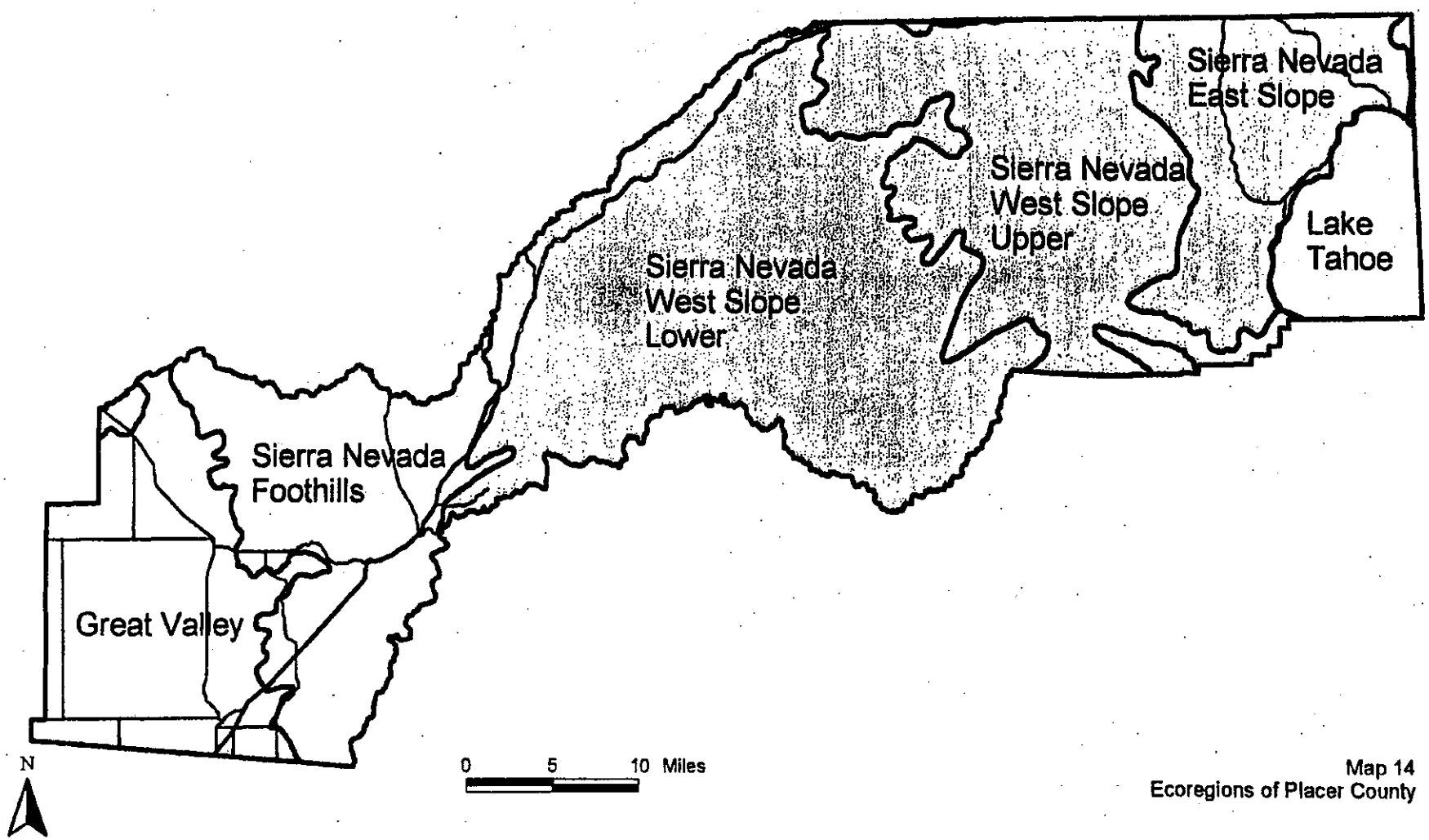


Map 12
Agriculture in Western Placer, 1994



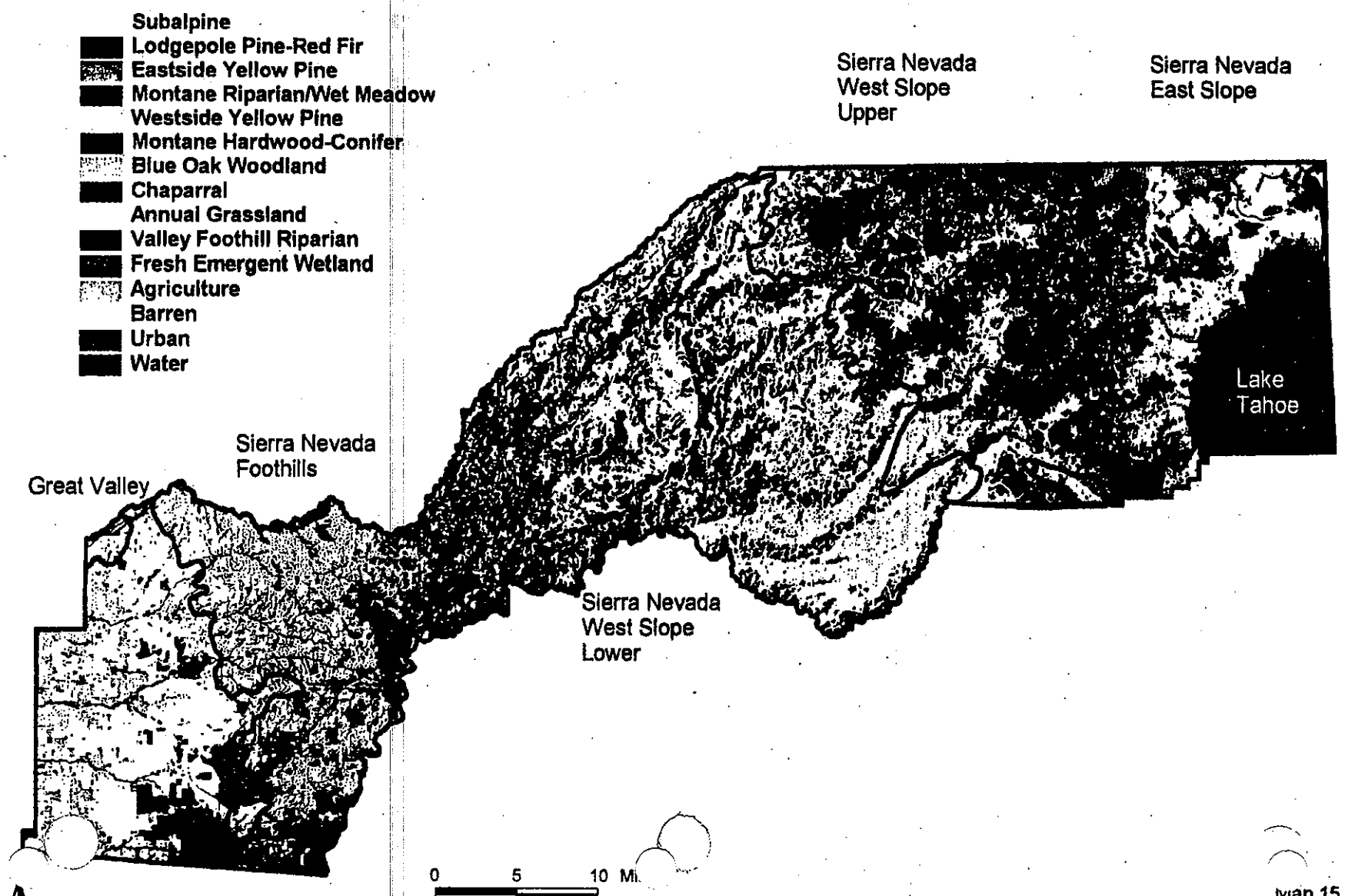
p 13
Water Source for Existing

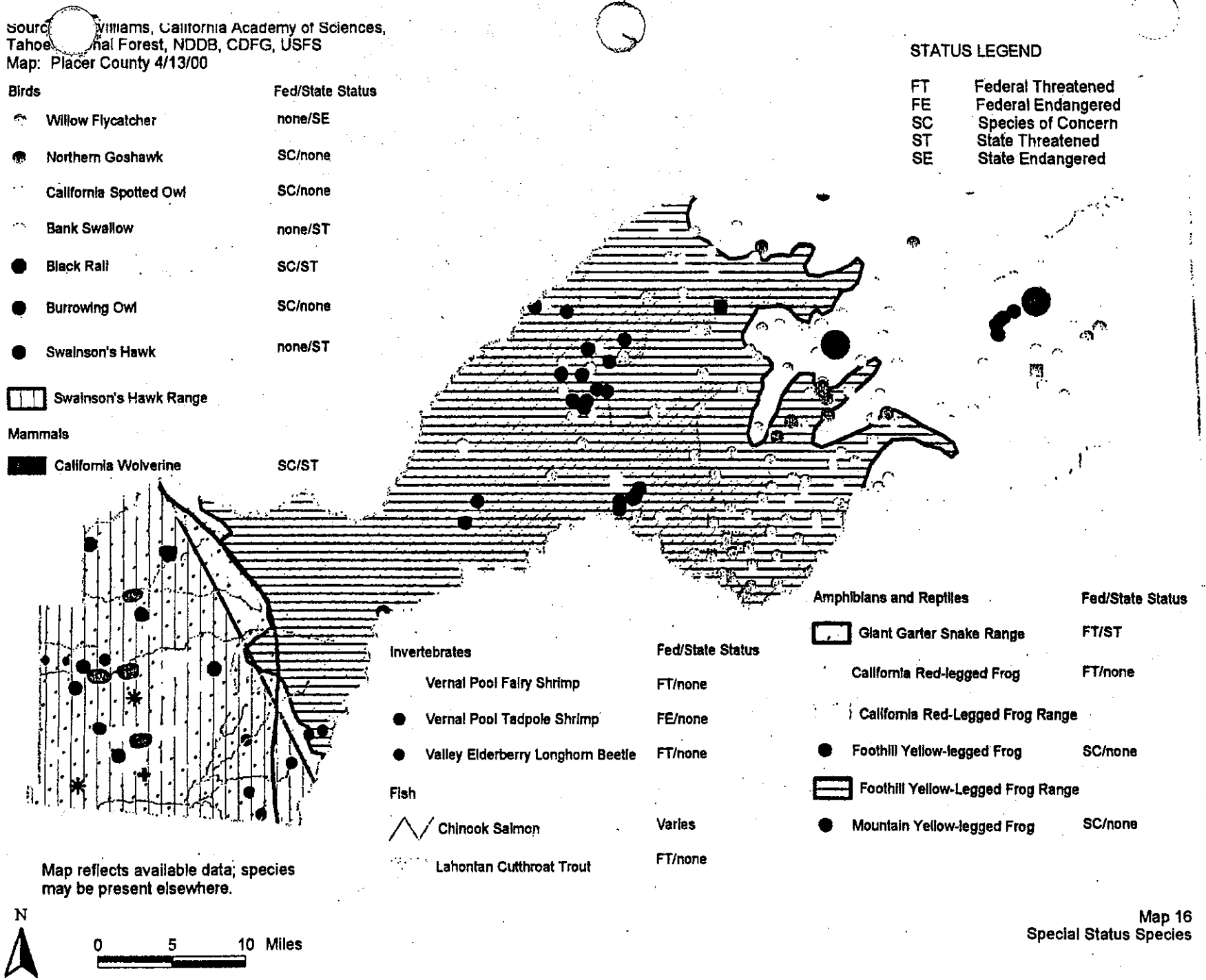
Source: Miles and Goudey
Map: Placer County 4/12/00



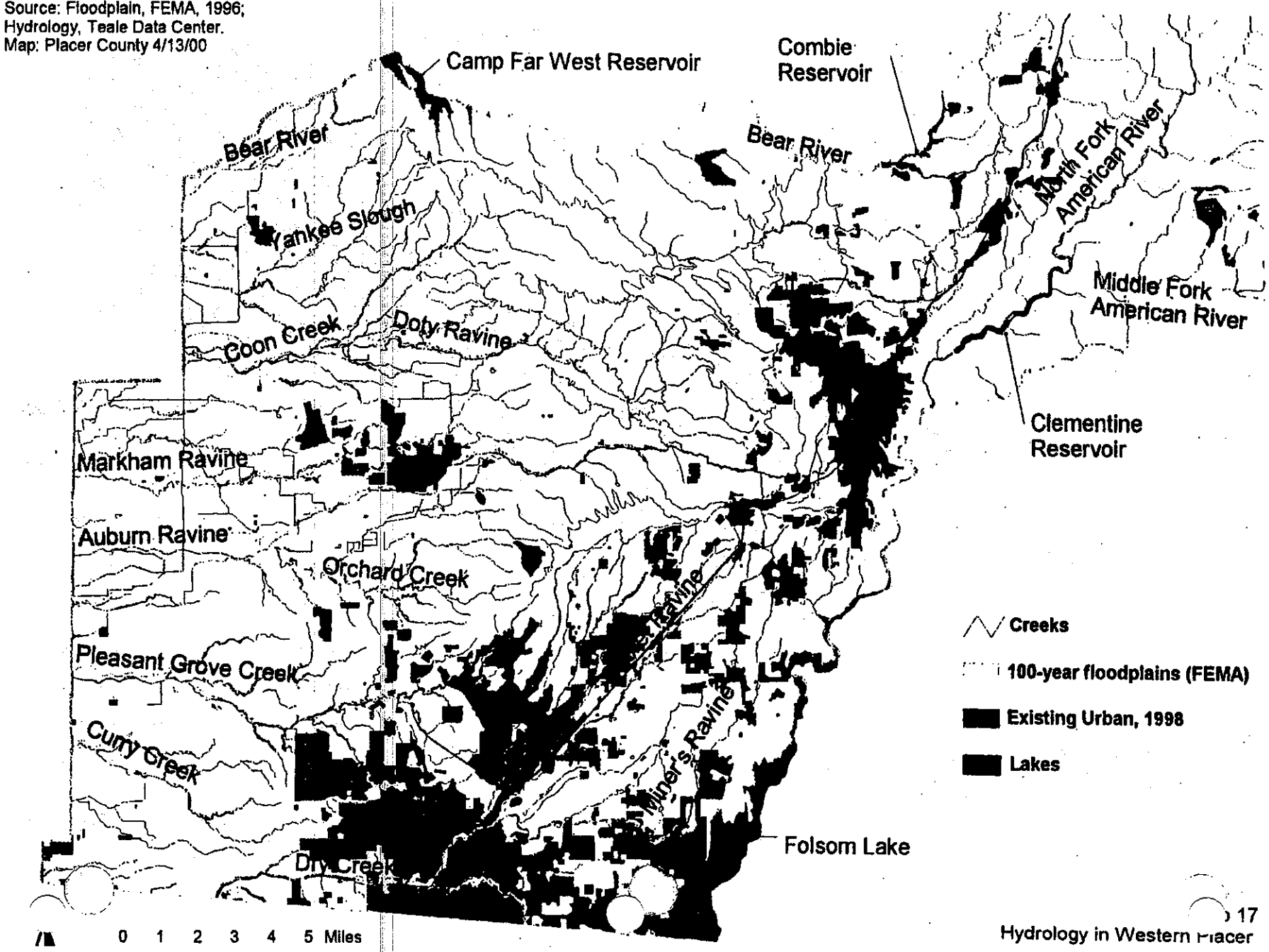
Map 14
Ecoregions of Placer County

Source: CDF, CDFG, USFS
Map: Placer County 4/12/00

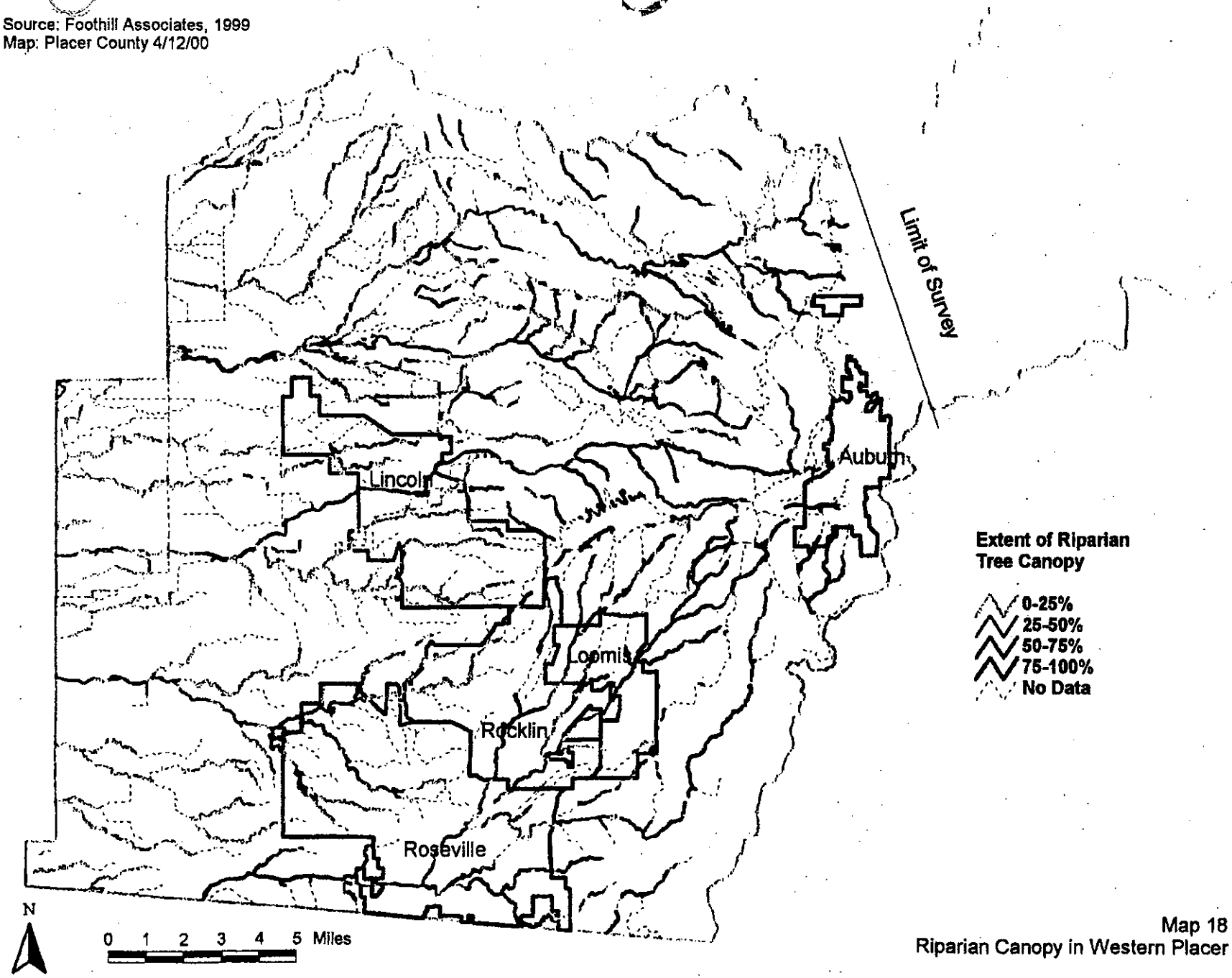




Map 16
Special Status Species

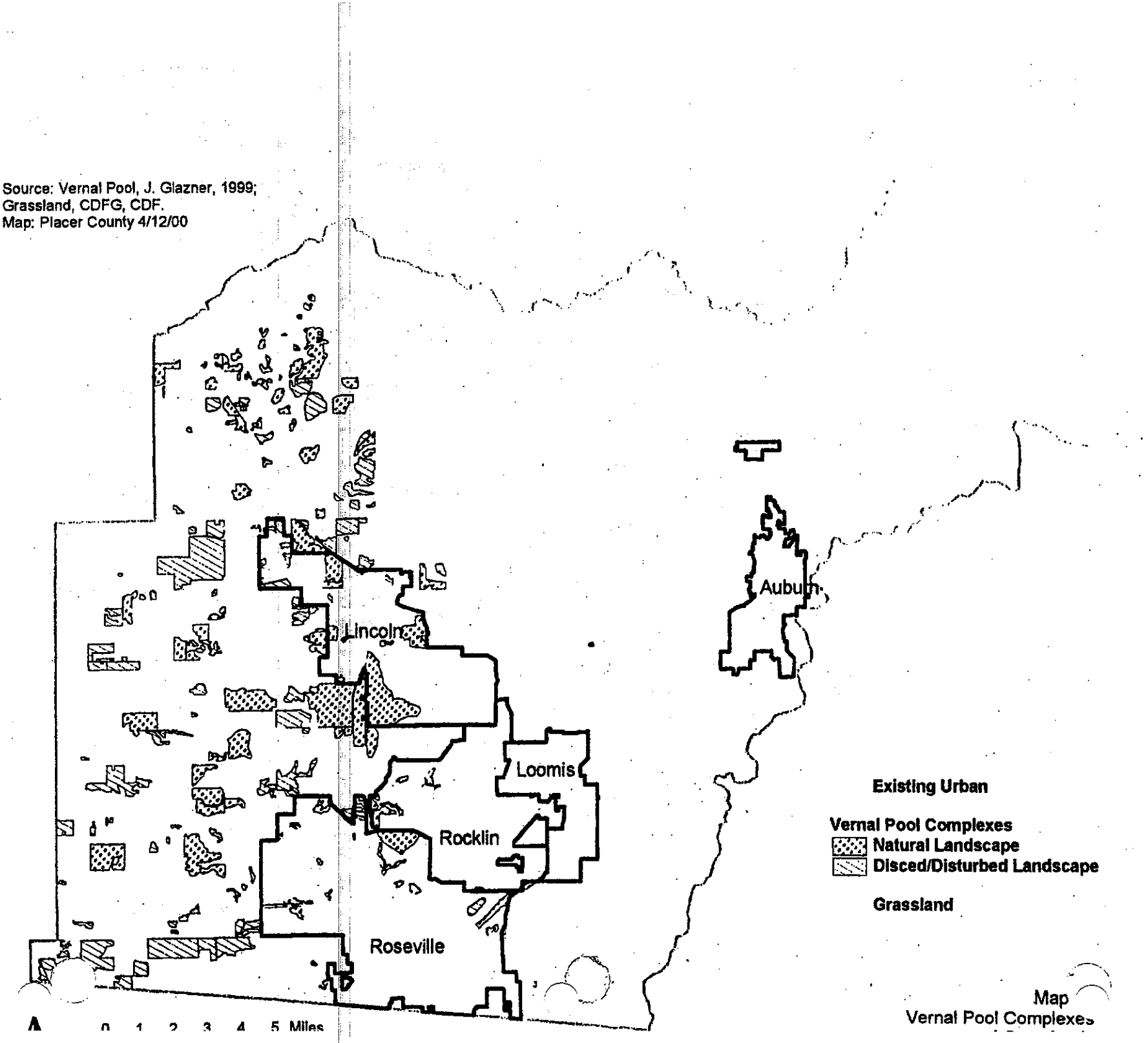

Source: Floodplain, FEMA, 1996;
Hydrology, Teale Data Center.
Map: Placer County 4/13/00
Camp Far West Reservoir
Combie Reservoir
Bear River
Bear River
North Fork American River
Middle Fork American River
Yankee Slough
Coon Creek
Doty Ravine
Clementine Reservoir
Markham Ravine
Auburn Ravine
Orchard Creek
Pleasant Grove Creek
Curry Creek
Miner's Ravine
Folsom Lake
Dry Creek
Creeks
100-year floodplains (FEMA)
Existing Urban, 1998
Lakes
0 1 2 3 4 5 Miles

Source: Foothill Associates, 1999
Map: Placer County 4/12/00

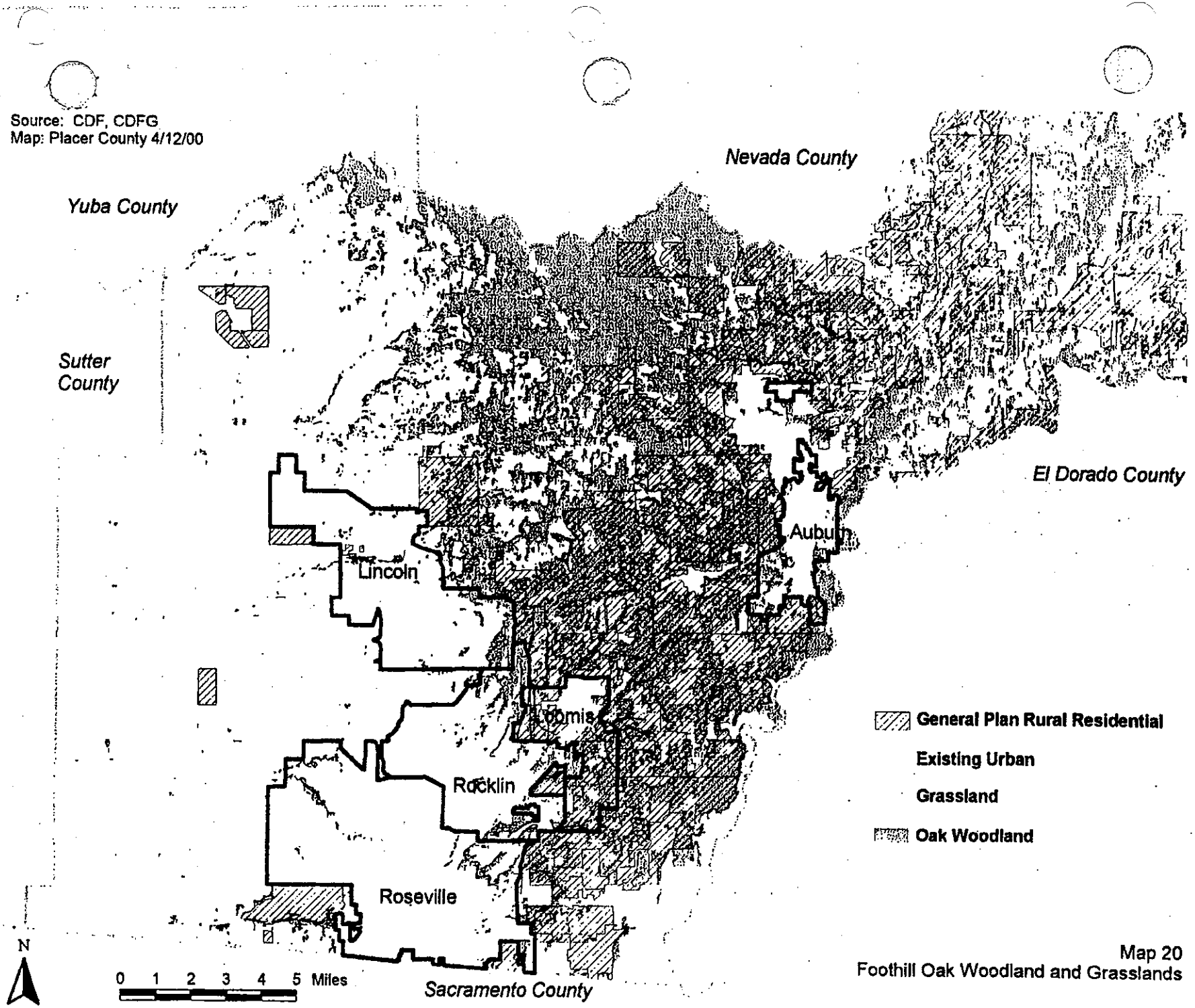


Map 18
Riparian Canopy in Western Placer

Source: Vernal Pool, J. Glazner, 1999;
Grassland, CDFG, CDF.
Map: Placer County 4/12/00

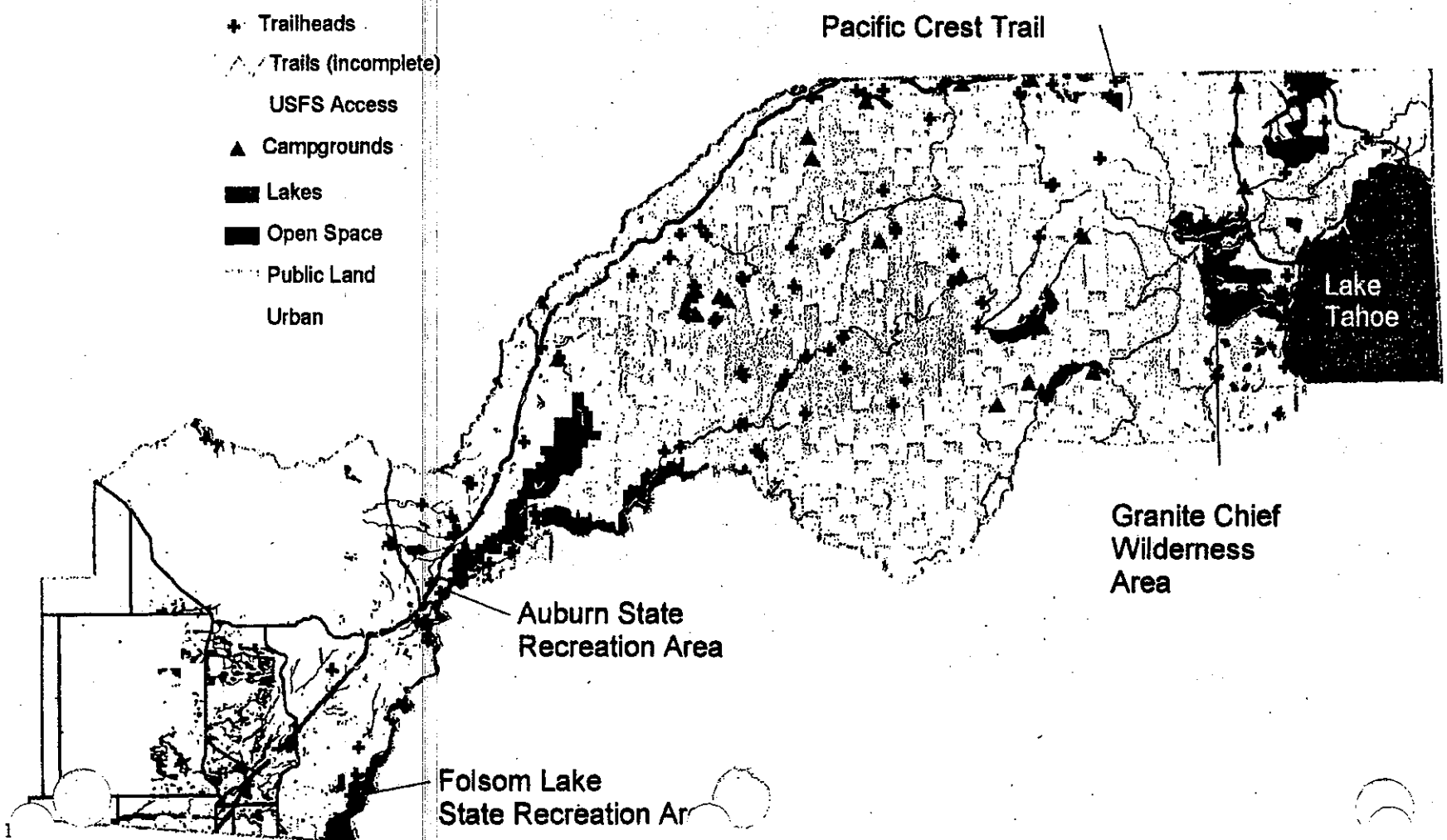


Map
Vernal Pool Complexes



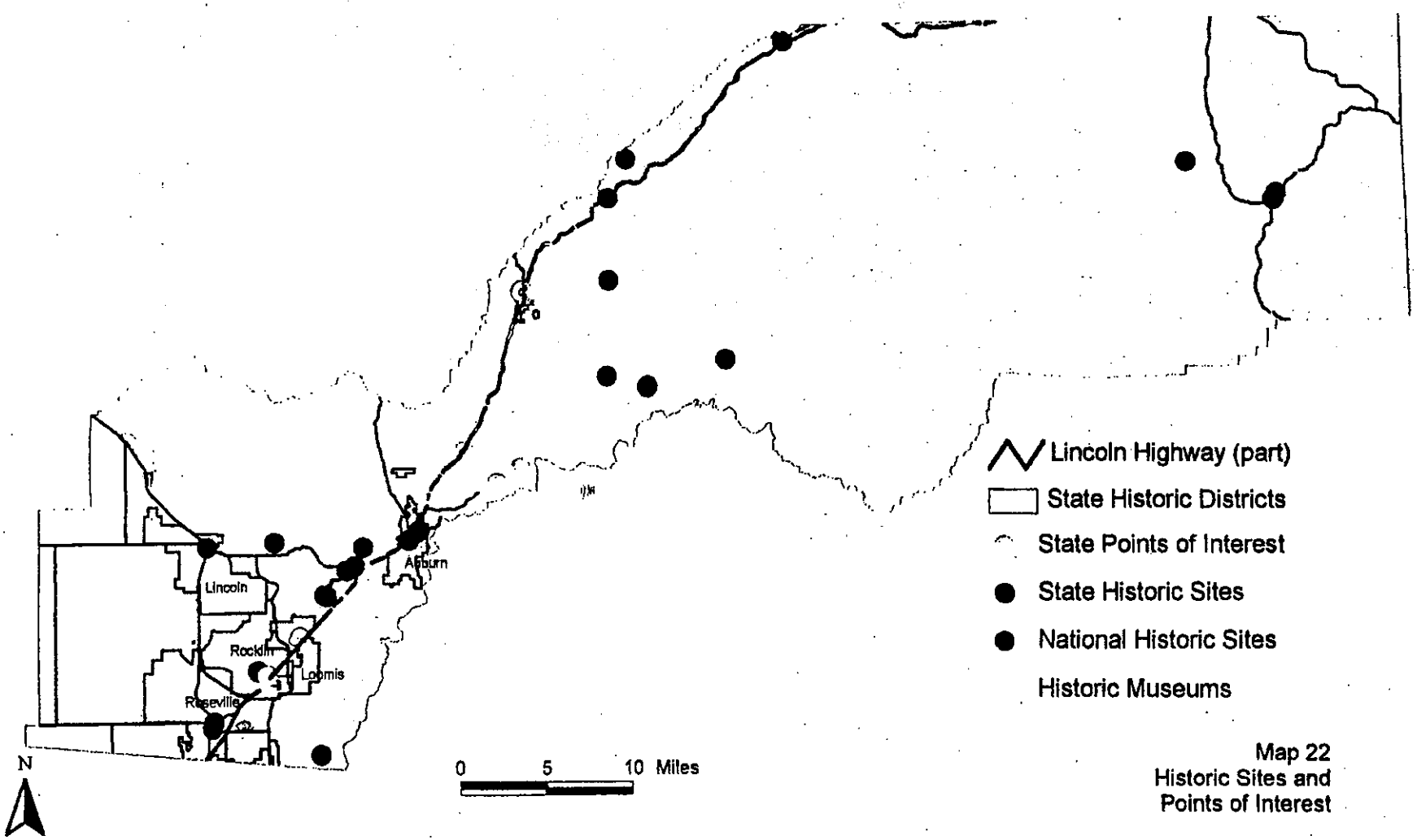
Map 20
Foothill Oak Woodland and Grasslands

Source: Trails, Tahoe National Forest, USFS;
Trailheads, Tahoe National Forest;
Public Land: Assessors Parcel Map;
Open Space: Placer County and City General Plans
Map: Placer County 4/13/00



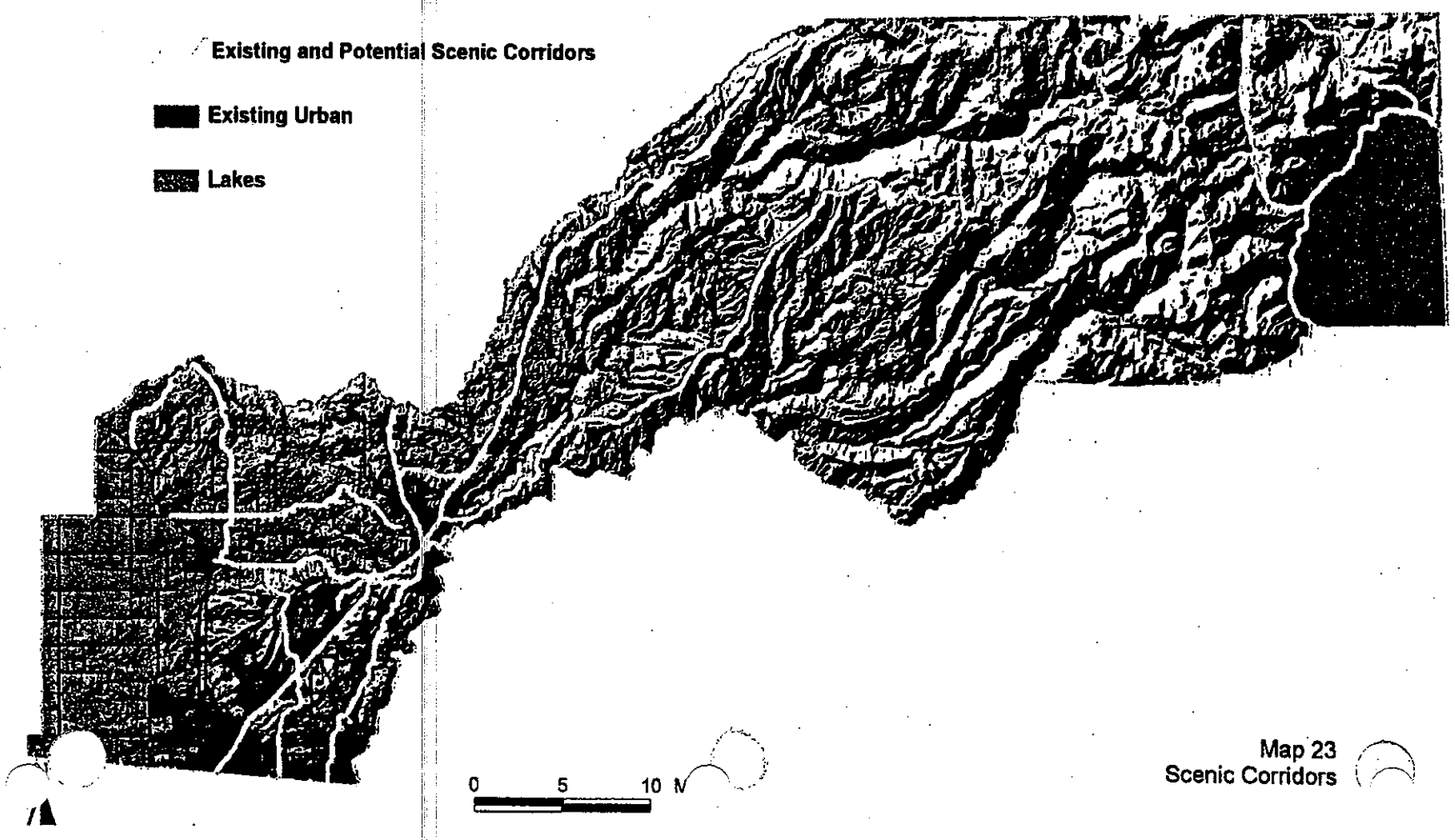
Map 21

Map: Placer County 4/13/00



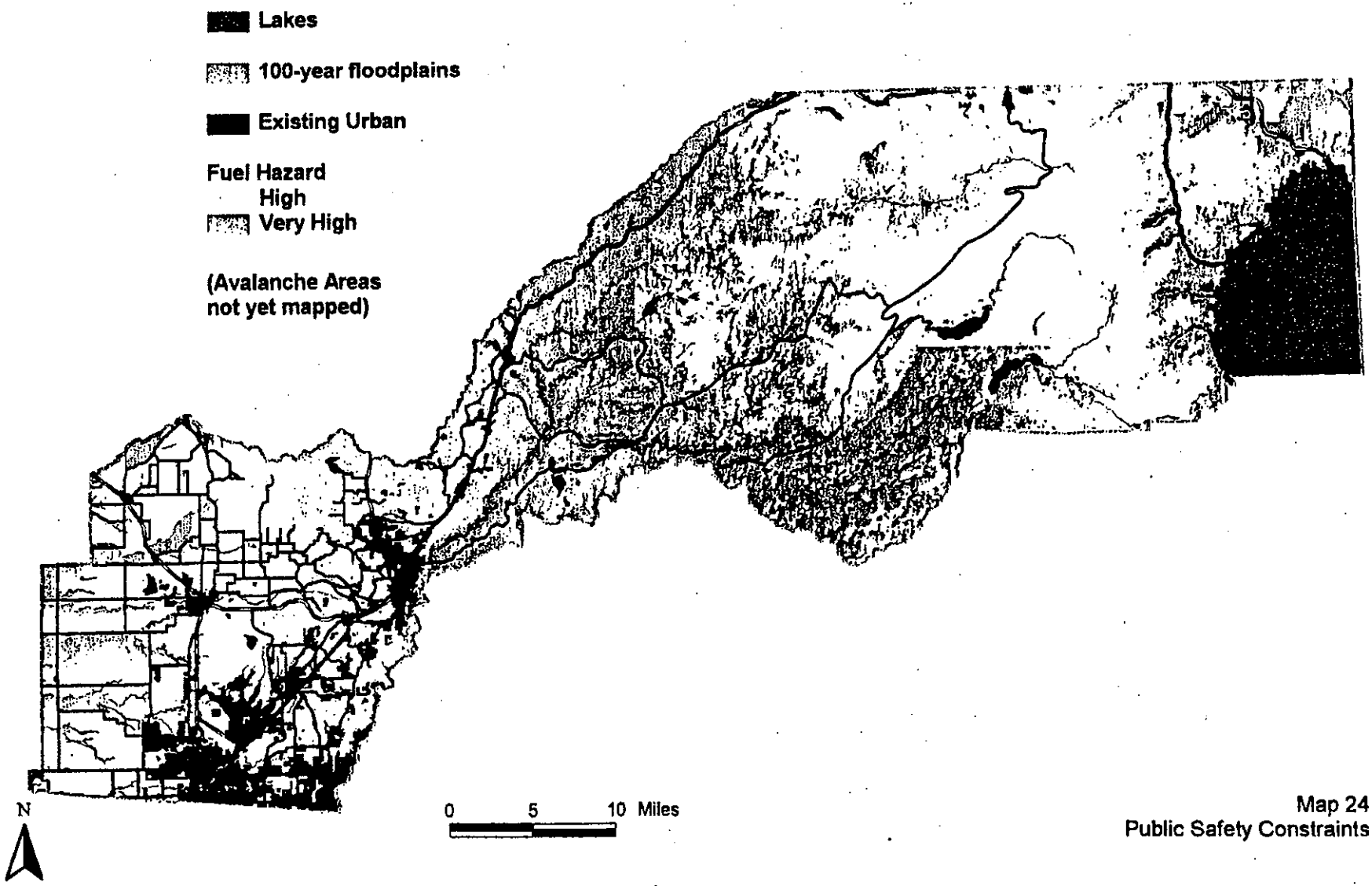
Map 22
Historic Sites and
Points of Interest

Source: Placer County Planning Department
Map: Placer County 4/13/00



Map 23
Scenic Corridors

Source: [illegible] Hazard, CDF;
Floodplain, FEMA, 1996.
Map: Placer County 4/13/00



Map 24
Public Safety Constraints

ACKNOWLEDGEMENTS

Board of Supervisors
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