JAN 23 2001

MP-3817
ADM-13.00

Mr. Glen J. Newman
State of California - The Resource Agency
Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Subject: Modification 001 to Cooperative Agreement 00FC200019, for Fire Protection Services for Auburn Dam and Reservoir Area

Dear Mr. Newman:

Enclosed for your files is a fully executed copy of the subject modification. This modification provides funding for Fire Protection Services for Auburn Dam for Federal fiscal year 2001 from October 1, 2000 through September 30, 2001. This modification is unilateral and thus, does not require the signature of the State of California, in accordance with paragraph C.2 "modifications" of the agreement.

If further information is needed, please contact Debra Keith, telephone (916) 978-5135 (TDD 978-5608).

Sincerely,

(Sgd) Dion T. Steele

Dion T. Steele
Grants and Cooperative
Agreements Officer

Enclosure

bc: Acting Director, Management Services, Attention: D-7734
(w/orig encl)
CCAO-Folsom - Mr. Robert Schroeder CCAO-418
MP-3817, (w/orig encl)
MP-450, Chuck Johnson
MP-3200 (w/encl)

WBR:DKeith:dak:12/07/00:(916) 978-5135
coop\0019\xeqtdmod.uni

7-2278 (7/92)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MODIFICATION OF ASSISTANCE AGREEMENT

1. MODIFICATION NUMBER	2. EFFECTIVE DATE	3. REQUISITION NUMBER
001	10/01/00	01240000009

4. ISSUED BY — CODE MP-3817

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way, W-1540
Sacramento CA 95825-1898

5. RECIPIENT NAME AND ADDRESS

State of California - The Resources Agency
Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460
Tax Identification Number 68-0306069

6. ACCOUNTING AND APPROPRIATION DATA

A10-0859-8008-001-91-0-0-2430300-411C

8. COOPERATIVE AGREEMENT (X) GRANT ( )

NO. 00FC200019
DATED 02/22/00

7. FUNDING INFO.

	Recipient	BOR
This obligation	-0-	$221,992.00
Previous obligation	-0-	$225,876.00
Total obligation	-0-	$447,868.00

9. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

This is a unilateral action pursuant to General Provision C.2. titled "Modifications"

It modifies the above numbered assistance agreement as set forth in block 8.

10. DESCRIPTION OF MODIFICATION:

a. Fire Protection Services for Auburn Dam and Reservoir Area.

b. PURPOSE: The purpose of this modification is to provide funding for Federal fiscal year 2001 from October 1, 2000 through September 30, 2001.

(Block 10 continued on Page 2)

Except as provided herein, all terms and conditions of the document referenced in block 8, as heretofore changed, remain unchanged and in full force and effect.

11. Acceptance of this modification in accordance with the terms and conditions contained herein is hereby made on behalf of	12. Acceptance of this Modification in accordance with the terms and conditions contained herein is hereby made on behalf of the Untied States of America, Bureau of Reclamation
NAME OF RECIPIENT	
BY	BY Dion T. Steele 1.23.01
SIGNATURE DATE	SIGNATURE DATE
	Dion T. Steele
TYPED NAME	TYPED NAME
	Grants and Cooperative Agreements Officer
TITLE	TITLE
	(916) 978-5142
TELEPHONE NO.	TELEPHONE NO.

Attach additional signatures

DESCRIPTION OF MODIFICATION (Block 10 continued):

c. DESCRIPTION:

1. The Statement of Work attached to this modification continuously extends the term of this Agreement through September 30, 2001.

2. The following is a summary of the funding periods of the agreement, and the amounts of funding (either estimated or actually incurred) for those periods:

Period #	Dates Covered	Estimated/Actual Costs	
1.	October 1, 1999 through September 30,2000	$ 225,876	(Actual)
2.	October 1, 2000 through September 30,2001	$ 221,992	(est.)
3.	October 1, 2001 through September 30,2002	$ 254,896	(est.)
4.	October 1, 2002 through September 30,2003	$ 272,738	(est.)
5.	October 1, 2003 through September 30,2004	$ 291,830	(est.)
	TOTAL ESTIMATED AMOUNT	$1,273,332	(est.)

3. The following is a summary of the funding that has been obligated for this agreement:

Period #	Accounting and Appropriation Data	Amount
1.	A10-0859-8008-001-91-0-0-2430300-411C (Provided in the Basic Agreement)	$ 225,876
2.	A10-0859-8008-001-91-0-0-2430300-411C (Provided in Modification 001)	221,992
	TOTAL OBLIGATED AMOUNT	$ 447,868

(C) DATE OF INCURRENCE OF COSTS - RECLAMATION (MAR 1993)

The Recipient shall be entitled to reimbursement of costs incurred in an amount not to exceed $73,998.00 on or after October 1, 2000 for the period October 1, 2000 through January 31, 2001, which if incurred after this agreement had been entered into, would have been reimbursable under the provisions of the agreement

d. ADJUSTMENT OF AGREEMENT AMOUNT: As a result of this modification the total estimated amount of the agreement is hereby decreased by $16,228.00 from $1,273,332.00 to $1,267,332.00.

e. NOTICE OF CHANGE IN FUNDS OBLIGATED: As a result of this modification the total amount of funding obligated for this agreement is hereby increased by $221,992.00 from $225,876.00 to $447,868.00.

f. ADJUSTMENT IN AGREEMENT TIME: There is no change to the period of performance as a result of this modification, it remains October 1, 1999 through December 31, 2004.

Statement of Work
Fire Protection Services
for
Auburn Dam and Reservoir Area
October 1, 2000 through September 30, 2001
00-FC-20-0019

1. Provide to Reclamation the following two types of fire protection service on Reclamation-owned 26,104 acres within that portion of the "take line" area outlined on the attached Exhibit "A" titled "Auburn Dam and Reservoir Area", and by this reference made a part of the agreement hereof.

a. "Supplemental" fire protection services consisting of the additional fire prevention activities required by the increased fire risk resulting from the construction activities associated with the Auburn Dam construction project. (All on a cost reimbursement basis, and only when construction resumes after Congress re-authorizes Auburn Dam and Reservoir.)

b. "Basic" fire protection services. (All on a flat rate cost per acre basis.)

2. "Supplemental" fire protection services to be provided by the recipient:

a. Continue to maintain and equip a full-time, onsite, effective fire protection force.

b. The recipient is responsible to purchase and maintain all equipment and vehicles under this agreement. However, during the term of this agreement, the recipient may, at its discretion, decline to repair any of the said vehicles or equipment items damaged by fire, accident, or any other cause (except negligence of a recipient employee or agent) if said damage exceeds fifty percent (50%) of the current market value of said vehicles or equipment before it was damaged. In this event, said un-repaired vehicles or equipment (in "as is" condition) will be delivered to Reclamation with notice to the Reclamation Grants and Cooperative Agreements Officer (GCAO). The (GCAO) will then:

c. Arrange for the provision of adequate substitute transportation and/or equipment to the recipient during the remaining period of the agreement.

d. Delete the surveyed items from the list, and add the replacement items.

3 Take suitable measures to recover from third parties any amounts to which the recipient is entitled as a result of the damage to the vehicles or equipment; and, after first deducting all expense which the recipient may have incurred in connection with said recovery, the recipient will then promptly pay the remaining balance of all such received amounts to Reclamation.

4. Transfer title and deliver to Reclamation all of the vehicles and equipment purchased under this agreement if applicable.

5. Maintain books, documents, papers, and records (hereinafter referred to as "records") in such detail as will enable a qualified person to readily determine all costs which are reimbursable under this agreement; and preserve such records during the three years following final payment. To the extent practical, such records shall include, but not be limited to, all applicable employee attendance records, payrolls, copies of subcontracts, purchase orders, invoices from, and payments to, any subcontractors and suppliers.

a. This agreement shall permit the Reclamation Grants and Cooperative Agreements Officer and/or the U.S. Comptroller General, or their authorized representative to examine and audit said records during the life of this agreement and during the three years following the final payment hereunder. And, IAW 43 CFR 12.82(e)(2), Expiration of right of access, the rights of access in this section must not be limited to the required retention period but shall last as long as the records are retained.

b. The recipient agrees to adjust any project invoices or vouchers, whether interim or final, as well as payments theretofore made, if such adjustment is indicated by any such audit.

c. The recipient shall include in each nonfixed price project subcontract a provision permitting the Reclamation Grants and Cooperative Agreements Officer and/or the U.S. Comptroller General, or their authorized representative to examine and audit said records during the life of the subcontract and during the three years following the final payment hereunder. And, IAW 43 CFR 12.82(e)(2), Expiration of right of access, the rights of access in this section must not be limited to the required retention period but shall last as long as the records are retained.

6. "Basic" Fire Protection Services to be provided by the recipient:

a. Plan, staff, organize, train, assign, direct, supervise, and maintain fire protection personnel and equipment as such places, and in such numbers, as it considers necessary to provide the

aforementioned Reclamation lands with "basic" fire protection services of at least the same quality and to the same extent that it provides to all other lands within its own area of direct protection in California. Such services will have the following objectives:

(1) Preventing fires to the greatest degree consistent with the forces available, and

(a) plan and construct fire roads, trails and breaks, and maintain same,

(b) reduce fire fuel by crushing thick vegetation and prepare areas for prescribed burns. Coordinate the prescribed burns so they also benefit the wildlife habitat,

(2) patrol area for potential fire locations and public use.

(3) Detecting and suppressing all unwanted fires that might occur within the Auburn Dam and Reservoir Area.

SCHEDULE: **The fire prevention responsibility is a year-round function follows generally as:**

October - December: Plan for the new trails, roads, vegetation crushing, and prescribed burns. Order materials needed; prepare California Environmental Qualification Act (CEQA) reports, and request state and local permits. Seed areas burned.

January - March: Construct new roads and trails as necessary, according to annual plans and maintain other fire breaks. Crush acres of vegetation and prepare for burning. Conduct prescribed burns.

April - June: Finish the fire breaks. Prepare and repair equipment needed for fire suppression.

July - September: Patrol area for potential fires and public use. Participate in fire suppression. Assist in monitoring for illegal activities.

MP-3817
ADM-13.00

FEB 22 2000

Mr. Glen J. Newman
State of California - The Resources Agency
Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Subject: Cooperative Agreement 00FC200019 - Fire Protection Services for Auburn Dam and Reservoir Area

Dear Mr. Newman:

Enclosed is a fully executed copy of the subject Agreement (Enclosure 1).

The Grants and Cooperative Agreements Officer's Representative (GCAOR) for this Grant is **Mr. Robert Schroeder. Mr. Schroeder can be reached at (916) 989-7274.** A copy of the memorandum delineating the GCAOR's authorities and limitations is also enclosed (Enclosure 2). Please retain a copy for your records.

Please acknowledge receipt of the GCAOR appointment by signing and returning it to the above address, **Attention: MP-3817.** Should you have any questions, please contact **Debra Keith at (916) 978-5135 or TDD (916) 978-5608.**

Sincerely,

(Sgd) Dion T. Steele

Dion T. Steele
Grants and Cooperative
Agreements Officer

Enclosures (2)

bc: D-7734 (orig contract)
MP-3200 (copy of contract)
CCAO-Folsom - Mr. Robert Schroeder CCAO-418
MP-3817, (w/orig encl)
MP-450, Chuck Johnson
WBR:DKeith:dak:02/18/00:(916) 978-5135
(MP820H\Agreemen\XEQTCOOP.LTR)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION ASSISTANCE AGREEMENT

CDF #7CA99664

1. AGREEMENT NO.	2. TYPE OF AGREEMENT	3. REQUISITION NUMBER
00FC200019	[ ] GRANT [XX] COOPERATIVE AGREEMENT	00240000001

4. ISSUED BY CODE MP-3817

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way, Room E-1815
Sacramento California 95825-1898

5. RECIPIENT

State of California - The Resources Agency
Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460
Tax Identification Number 68-0306069

6. NAME, ADDRESS, AND PHONE NO. OF ASSISTANCE REPRESENTATIVE

Mr. Robert Schroeder
U.S. Bureau of Reclamation
Mid-Pacific Region
Central California Area Office
7794 Folsom Dam Road
Folsom, California 95630-1799

7. NAME, ADDRESS, AND PHONE NO. OF RECIPIENT'S PROJECT MANAGER

Mr. Lloyd M. Limprecht
State of California - The Resources Agency
P.O. Box 944246
Sacramento, California 94244-2460
(916) 653-6521

8. PROGRAM STATUTORY AUTHORITY	9. CLASS OF RECIPIENT
Title 16, U.S.C. 594	State Government (00)
10. EFFECTIVE DATE	**11. COMPLETION DATE**
See Block 16	September 30, 2004
12. TOTAL AMOUNT OF AGREEMENT $225,876.00 **AMOUNT OF FUNDS OBLIGATED** $225,876.00	**13. ACCOUNTING AND APPROPRIATION DATA** A10-0859-8008-001-91-0-0-2430300-411c

14. PROJECT TITLE

Fire Protection Services for Auburn Dam and Reservoir Area.

15. Acceptance of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of	16. Acceptance of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of the United States of America, Bureau of Reclamation.
CA Dept. of Forestry and Fire Protection NAME OF RECIPIENT	
BY _____	BY _____ 2/22/00
SIGNATURE DATE	SIGNATURE DATE
Glen J. Newman	Dion T. Steele
TYPED NAME	TYPED NAME
Deputy Director for Fire Protection	Grants and Cooperative Agreements Officer
TITLE	TITLE
(916) 653-9424	(916) 978-5142
TELEPHONE NO.	TELEPHONE NO.

Attach additional signatures

SECTION A. SCHEDULE

A.1. BACKGROUND

The State of California, Department of Forestry (recipient) has provided fire prevention and suppression services at Auburn Dam and Reservoir since 1979, under Cooperative Agreement 0-07-20-X0123, and amendments thereof.

A.2. PURPOSE

The purpose of this Agreement is to provide funding for fire prevention and suppression services.

The Cooperative Agreement is entered into under the authority of Title 16, U.S.C. 594 and the appropriations bill for Fiscal Year 2000, Public Law 106-60.

A.3. OBJECTIVE

The objective of this agreement is for the recipient to perform the following specific services: 1) plan for fire suppression, 2) patrol the designated areas, 3) operate heavy equipment to construct and maintain fire roads, breaks and to reduce fire fuel, and 4) improve wildlife habitat.

A.4. BENEFITS

The benefits to be derived from this agreement is the furtherance of Reclamation's mission to protect these designated lands which are at a remote location. Protection of Government-owned lands serves a public purpose in that the forests are preserved for ecological and recreational benefits.

A.5. RESPONSIBILITIES OF THE PARTIES

Responsibilities of Reclamation:

1. The U.S. Bureau of Reclamation (Reclamation), agrees to provide financial assistance to the State of California, Department of Forestry and Fire Protection, not to exceed $225,876.00 for Federal fiscal year 2000. Reclamation's responsibilities shall include the coordination with the recipient to accomplish the following:

a. Planned fire protection services of timber on Federally-owned lands,

b. Determine areas acceptable for vegetation modification required for lost wildlife habitat mitigation, and,

c. Review of varied reports (i.e., fire and law enforcement activities, etc.) within the Auburn Dam and Reservoir take line.

Responsibilities of the Recipient:

See statement of work

A.6. STATEMENT OF WORK

See attachment 1

SECTION B. SPECIAL PROVISIONS

B.1. PERFORMANCE PERIOD

The performance period of the agreement is from October 1, 1999 through September 30, 2004.

B.2. BUDGET - RECLAMATION (MAR 1993)

The total estimated Reclamation budget for this agreement is $1,283,560.00. Contingent upon availability of funds the estimated budget for the period October 1, 2000 through September 30, 2004 is $1,057,684.00 as follows:

Period	Costs
October 1, 1999, through September 30, 2000	$225,876.00
October 1, 2000, through September 30, 2001	238,220.00*
October 1, 2001, through September 30, 2002	254,896.00*
October 1, 2002, through September 30, 2003	272,738.00*
October 1, 2003, through September 30, 2004	291,830.00*
Total amount of the agreement	$1,283,560.00

B.3. FUNDING

Reclamation shall reimburse the recipient for costs incurred during the effective period of this agreement. Funding modifications will generally authorize funding for a period of one year.

(a) SUMMARY OF FUNDING ESTIMATES. The following is a summary of the funding periods of the agreement, and the amounts of funding (either estimated or costs actually incurred) for those periods:

Period #	Dates Covered	Estimated/Actual Costs
1.	October 1, 1999, through September 30, 2000	$ 225,876.00 Actual
2.	October 1, 2000, through September 30, 2001	$ 238,220.00 (est.)
3.	October 1, 2001, through September 30, 2002	$ 254,896.00 (est.)
4.	October 1, 2002, through September 30, 2003	$ 272,738.00 (est.)
5.	October 1, 2003, through September 30, 2004	$ 291,830.00 (est.)
	TOTAL ESTIMATED AMOUNT	$1,283,560.00 (est.)

It is understood that any estimated amounts are not binding on either party and are for informational purposes only, until such time as a modification is issued to provide funding for that period.

(b) SUMMARY OF FUNDING OBLIGATIONS. The following is a summary of the funding that has been obligated for this agreement:

Period #	Accounting and Appropriation Data	Amount
1.	A10-0859-8008-001-91-0-0-2430300-411C (Provided in Basic Agreement)	$225,876.00
	TOTAL OBLIGATED AMOUNT	$225,876.00

It is expressly understood that the Government has no obligation to provide funds in addition to those reserved in writing. Except as required by other provisions of this Agreement specifically citing and to be an exemption from this clause, Reclamation shall not be obligated to reimburse the Recipient for costs incurred in excess of the estimated cost set forth in the approved annual budget.

B.4. PROPERTY AND EQUIPMENT TO BE FURNISHED BY THE GOVERNMENT

In accordance with OMB Circular A-102, the recipient will use, manage and dispose of equipment acquired by the State under a Cooperative Agreement in accordance with State laws and procedures.

B.5. REPORTING REQUIREMENTS

There are no reporting requirements under this agreement.

B.6. DATE OF INCURRENCE OF COSTS - RECLAMATION (MAR 1993)

The Recipient shall be entitled to reimbursement of costs incurred in an amount not to exceed $75,292.00 on or after October 1, 1999, which if incurred after this agreement had been entered into, would have been reimbursable under the provisions of the agreement.

B.7. INVOICES AND PAYMENT

Payment will be made for all allowable costs incurred under the terms of this agreement. Invoices shall be submitted in duplicate to:

U.S. Bureau of Reclamation
Mid-Pacific Region
Attention: MP-3817 (Debra Keith)
2800 Cottage Way, Room E-1815
Sacramento, California 95825-1898

Invoices shall be in sufficient detail to permit review and analysis of costs. Cost items shall include, but not necessarily be limited to category and hours of labor expended, material and supply costs, travel and per diem, other direct costs and indirect costs. Support documentation may be required at the discretion of the Grants and Cooperative Agreements Officer.

B.8. APPOINTMENT OF GRANTS AND COOPERATIVE AGREEMENTS OFFICER'S REPRESENTATIVE (GCAOR)

The Grants and Cooperative Agreements Officer may appoint a GCAOR to act in his/her behalf. The Recipient will be notified of such appointment, the identity of the GCAOR, and any authorities and/or limitations of the GCAOR. This individual may or may not be the representative named in Block 6 of the Form 7-2277.

SECTION C. GENERAL PROVISIONS

C.1. Regulations and Guidance

The regulations at 43 CFR, Part 12, Subparts A - F are hereby incorporated by reference as though set forth in full text. The following Office of Management and Budget (OMB) Circulars, as applicable, and as implemented by 43 CFR Part 12, are also incorporated by reference and made a part of this agreement. Failure of a recipient to comply with any provision may be the basis for withholding payments for proper charges made by the recipient and for termination of support. Copies of OMB

Circulars are available on the Internet at http://www.whitehouse.gov/OMB/circulars/index.html. The implementation of the circulars at 43 CFR Part 12 is available at http://www.access.gpo.gov/nara/cfr/index.html.

a. **Agreements with colleges and universities shall be in accordance with the following circulars:**

Circular A-21, Revised October 27, 1998, "Cost Principles For Educational Institutions"

Circular A-110, Revised September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations"

Circular A-133, Revised June 24, 1997, "Audits of States, Local Governments, and Non-Profit Organizations"

b. **Agreements with State and local governments shall be in accordance with the provisions of the following circulars:**

Circular A-87, Revised August 29, 1997, "Cost Principles for State and Local Governments"

Circular A-102, Revised August 29, 1997, "Grants and Cooperative Agreements with State and Local Governments" (Grants Management Common Rule, Codification by Department of Interior, 43 CFR 12)

Circular A-133, Revised June 24, 1997, "Audits of States, Local Governments, and Non-Profit Organizations"

c. **Agreements made with nonprofit organizations shall be in accordance with the following circulars and provisions:**

Circular A-110, Revised September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations"

Circular A-122, Revised May 19, 1998, "Cost Principles for Non-Profit Organizations"

Circular A-133, Revised June 24, 1997, "Audits of States, Local Governments, and Non-Profit Organizations"

d. **All agreements with organizations other than those indicated above shall** be in accordance with the basic principles of OMB Circular A-110, and cost principles shall be in accordance with Part 31 of the Federal Acquisition Regulations, Subpart 31.2 entitled, "Contracts with Commercial Organizations" which is available on the Internet at http://www.arnet.gov/far/.

C.2. Modifications

Any changes to this Agreement shall be made by means of a written modification. Changes dealing with administrative matters (such as in paying office, changes of address, etc.) May be made by a unilateral modification. A modification issued solely for funding a Federal Fiscal Year may also be made unilaterally. Any other changes shall be made by a bilateral modification (signed by both parties). No written statement by any other person than the Grants and Cooperative Agreements

Officer, and no oral statement of any person, shall be allowed in any manner or degree to modify or otherwise effect the terms of the Agreement.

C.3. Assurances Incorporated by Reference

The provisions of the Assurances executed by the Recipient in connection with this agreement shall apply with full force and effect to this agreement as if fully set forth in these General Provisions. Such Assurances include, but are not limited to, the promise to comply with all applicable Federal statutes and orders relating to nondiscrimination in employment, assistance, and housing; the Hatch Act; Federal wage and hour laws and regulations and work place safety standards; Federal environmental laws and regulations and the Endangered Species Act; and Federal protection of rivers and waterways and historic and archeological preservation.

C.4. Covenant Against Contingent Fees

The recipient warrants that no person or agency has been employed or retained to solicit or secure this agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide offices established and maintained by the recipient for the purpose of securing agreements or business. For breach or violation of this warranty, the Government shall have the right to annul this agreement without liability or, in its discretion, to deduct from the agreement amount, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

C.5. Contracting with Small and Minority Firms, and Women's Business Enterprises

It is a national policy to award a fair share of contracts to small and minority business firms. The Department of the Interior is strongly committed to the objectives of this policy and encourages all recipients of its grants and cooperative agreements to take affirmative steps to ensure such fairness.

a. The grantee and subgrantee shall take all necessary affirmative steps to assure that minority firms, and women's business enterprises are used when possible.

b. Affirmative steps shall include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(5) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce as appropriate, and

(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in b.(1) through (5) above.

C.6. Notice Regarding Buy American Act

In accordance with Section 602 of the Energy and Water Development Appropriations Act, 2000, Public Law 106-60, please be advised of the following:

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in this Act should be American-made.

C.7. Resolving Disagreements

When entering into a cooperative agreement with a recipient, Reclamation commits itself to working with the recipient in a harmonious manner to achieve the objectives of the project successfully. When disagreements arise between the parties, they must be resolved according to the procedures discussed below:

a. Reclamation shall attempt first to resolve disagreements with the recipient through informal discussion among the Grants or Contract Specialist, the Program Officer, and the recipient's Project Director.

b. If the disagreement cannot be resolved through informal discussion between these parties, the Grants Specialist and the Program Officer shall document the nature of the disagreement and bring it to the attention of the Grants Officer.

c. After reviewing the facts of the disagreement, as presented by the Grants and Program Offices, the Grants Officer will arrange a formal meeting. If agreement still cannot be reached, the parties will collectively decide on any varied approaches which might be used to resolve the disagreement. The parties shall be responsible for their individual expenses related to any approach utilized to resolve the disagreement. If attempts at resolving the disagreement fail, the Chief, Acquisition and Assistance Management Services, or the Regional Director, whichever is applicable, shall make a decision which shall be final and conclusive.

d. Nothing herein shall be construed to delay or limit Reclamation's right to take immediate and appropriate action, as set forth at 43 CFR, Subpart 12.83 or 12.962 as applicable, in the event of material noncompliance by the recipient, and no attempts at informal resolution shall be necessary.

Any post award issue will be open for resolution in accordance with the above procedures, with the exception of disagreements regarding continuation of the agreement (since either party may terminate the agreement with the specified notice), or other matters specifically addressed by the agreement itself.

C.8. Lobbying Restrictions

In accordance with Section 601 of the Energy and Water Development Appropriation Act, 2000, Public Law 106-60, please be advised of the following:

None of the funds appropriated by this Act may be used in any way, directly or indirectly, to influence Congressional action on any legislation or appropriation

matters pending before Congress, other than to communicate to Members of Congress as described in section 1913 of title 18, United States Code.

C.9. Electronic Funds Transfer (EFT)

In accordance with the Debt Collection Improvement Act of 1996, 31 CFR 208, effective January 2, 1999, all Federal payments to recipients must be made by EFT unless a waiver has been granted in accordance with 31 CFR 208.4. Upon award of a financial assistance agreement, Reclamation will provide the recipient with further instructions for implementation of EFT payments or a certification form to request exemption from EFT.

C.10. Increasing Seat Belt Use in the United States

In accordance with Executive Order 13043, recipients of grants/cooperative agreements and/or sub-awards are encouraged to adopt and enforce on-the-job seat belt use policies and programs for their employees when operating company-owned, rented, or personally-owned vehicles. These measures include, but are not limited to, conducting education, awareness, and other appropriate programs for their employees about the importance of wearing seat belts and the consequences of not wearing them.

C.11. Endorsement of Commercial Products and Services

In accordance with 43 CFR 12.2(d), this provision applies to grants and cooperative agreements whose principal purpose is a partnership where the recipient contributes resources to promote agency programs, publicize agency activities, assists in fund-raising, or provides assistance to the agency. If the agreement is awarded to a recipient, other than a State government, a local government, or a federally-recognized Indian tribal government, and the agreement authorizes joint dissemination of information and promotion of activities being supported, the following provision shall be made a term and condition of the award:

Recipient shall not publicize or otherwise circulate, promotional material (such as advertisements, sales brochures, press releases, speeches, still and motion pictures, articles, manuscripts or other publications) which states or implies governmental, Departmental, bureau, or government employee endorsement of a product, service or position which the recipient represents. No release of information relating to this award may state or imply that the Government approves of the recipient's work products, or considers the recipient's work product to be superior to other products or services.
All information submitted for publication or other public releases of information regarding this project shall carry the following disclaimer:

> "The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government."

Recipient must obtain prior Government approval for any public information releases concerning this award which refer to the Department of the Interior or any bureau or employee (by name or title). The specific text, layout photographs, etc. of the proposed release must be submitted with the request for approval.

A recipient further agrees to include this provision in a subaward to any subrecipient, except for a subaward to a State government, a local government, or to a federally-recognized Indian tribal government.

C.12. Certifications

The following certifications are incorporated by reference and made a part of this agreement:

Certifications Regarding Debarment, Suspension, and Other Responsibility Matters, Drug-free Workplace Requirements and Lobbying (DI-2010)

C.13. Termination of the Agreement

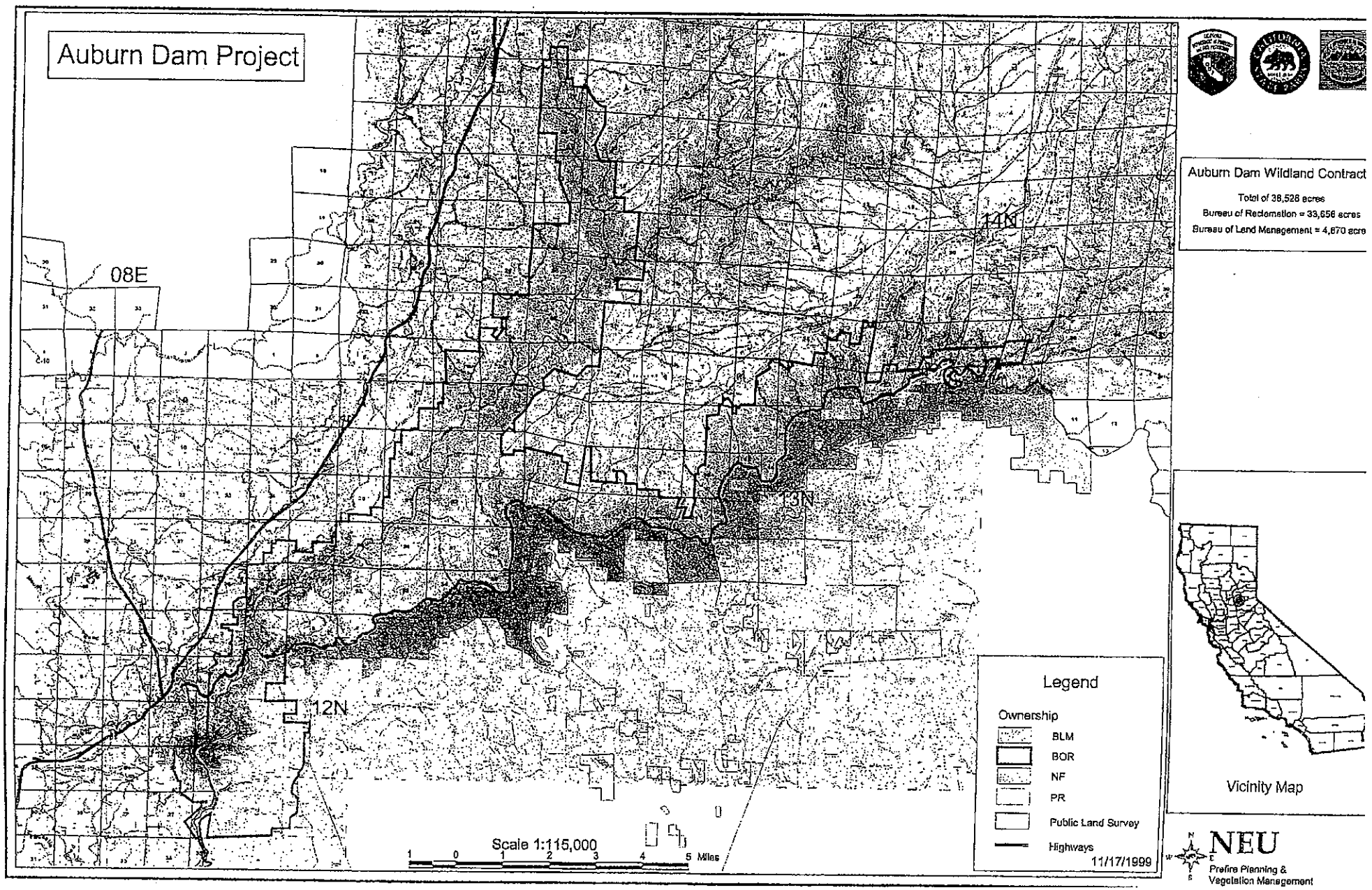
Termination of this agreement, either for cause or convenience, will be in accordance with the termination provisions of the applicable OMB Circular.

C.14. Attachments

The following attachment is incorporated herein and made a part of this agreement:

Attachment 1 - Statement of Work, (3 pages)

Attachment 2 - Area Map


Auburn Dam Project
08E
14N
13N
12N
Auburn Dam Wildland Contract
Total of 38,528 acres
Bureau of Reclamation = 33,656 acres
Bureau of Land Management = 4,670 acre
Legend
Ownership
BLM
BOR
NF
PR
Public Land Survey
Highways
11/17/1999
Scale 1:115,000
1 0 1 2 3 4 5 Miles
Vicinity Map
NEU
Prefire Planning &
Vegetation Management

Statement of Work
Fire Protection Services
for
Auburn Dam and Reservoir Area
October 1, 1999
00-FC-20-0019

1. Provide to Reclamation the following two types of fire protection service on Reclamation-owned 26,104 acres within that portion of the "take line" area outlined on the attached Exhibit "A" titled "Auburn Dam and Reservoir Area", and by this reference made a part of the agreement hereof.

a. "Supplemental" fire protection services consisting of the additional fire prevention activities required by the increased fire risk resulting from the construction activities associated with the Auburn Dam construction project. (All on a cost reimbursement basis, and only when construction resumes after Congress re-authorizes Auburn Dam and Reservoir.)

b. "Basic" fire protection services. (All on a flat rate cost per acre basis.)

2. "Supplemental" fire protection services to be provided by the recipient:

a. Continue to maintain and equip a full-time, onsite, effective fire protection force.

b. The recipient is responsible to purchase and maintain all equipment and vehicles under this agreement. However, during the term of this agreement, the recipient may, at its discretion, decline to repair any of the said vehicles or equipment items damaged by fire, accident, or any other cause (except negligence of a recipient employee or agent) if said damage exceeds fifty percent (50%) of the current market value of said vehicles or equipment before it was damaged. In this event, said un-repaired vehicles or equipment (in "as is" condition) will be delivered to Reclamation with notice to the Reclamation Grants and Cooperative Agreements Officer (GCAO). The (GCAO) will then:

c. Arrange for the provision of adequate substitute transportation and/or equipment to the recipient during the remaining period of the agreement.

d. Delete the surveyed items from the list, and add the replacement items.

3 Take suitable measures to recover from third parties any amounts to which the recipient is entitled as a result of the damage to the vehicles or equipment; and, after first deducting all expense which the recipient may have incurred in connection with said recovery, the recipient will then promptly pay the remaining balance of all such received amounts to Reclamation.

4. Transfer title and deliver to Reclamation all of the vehicles and equipment purchased under this agreement if applicable.

5. Maintain books, documents, papers, and records (hereinafter referred to as "records") in such detail as will enable a qualified person to readily determine all costs which are reimbursable under this agreement; and preserve such records during the three years following final payment. To the extent practical, such records shall include, but not be limited to, all applicable employee attendance records, payrolls, copies of subcontracts, purchase orders, invoices from, and payments to, any subcontractors and suppliers.

a. This agreement shall permit the Reclamation Grants and Cooperative Agreements Officer and/or the U.S. Comptroller General, or their authorized representative to examine and audit said records during the life of this agreement and during the three years following the final payment hereunder. And, IAW 43 CFR 12.82(e)(2), Expiration of right of access, the rights of access in this section must not be limited to the required retention period but shall last as long as the records are retained.

b. The recipient agrees to adjust any project invoices or vouchers, whether interim or final, as well as payments theretofore made, if such adjustment is indicated by any such audit.

c. The recipient shall include in each nonfixed price project subcontract a provision permitting the Reclamation Grants and Cooperative Agreements Officer and/or the U.S. Comptroller General, or their authorized representative to examine and audit said records during the life of the subcontract and during the three years following the final payment hereunder. And, IAW 43 CFR 12.82(e)(2), Expiration of right of access, the rights of access in this section must not be limited to the required retention period but shall last as long as the records are retained.

6. "Basic" Fire Protection Services to be provided by the recipient:

a. Plan, staff, organize, train, assign, direct, supervise, and maintain fire protection personnel and equipment as such places, and in such numbers, as it considers necessary to provide the

aforementioned Reclamation lands with "basic" fire protection services of at least the same quality and to the same extent that it provides to all other lands within its own area of direct protection in California. Such services will have the following objectives:

(1) Preventing fires to the greatest degree consistent with the forces available, and

(a) plan and construct fire roads, trails and breaks, and maintain same,

(b) reduce fire fuel by crushing thick vegetation and prepare areas for prescribed burns. Coordinate the prescribed burns so they also benefit the wildlife habitat,

(2) patrol area for potential fire locations and public use.

(3) Detecting and suppressing all unwanted fires that might occur within the Auburn Dam and Reservoir Area.

SCHEDULE: The fire prevention responsibility is a year-round function follows generally as:

October - December: Plan for the new trails, roads, vegetation crushing, and prescribed burns. Order materials needed; prepare California Environmental Qualification Act (CEQA) reports, and request state and local permits. Seed areas burned.

January - March: Construct new roads and trails as necessary, according to annual plans and maintain other fire breaks. Crush acres of vegetation and prepare for burning. Conduct prescribed burns.

April - June: Finish the fire breaks. Prepare and repair equipment needed for fire suppression.

July - September: Patrol area for potential fires and public use. Participate in fire suppression. Assist in monitoring for illegal activities.

United States Department of the Interior
WATER AND POWER RESOURCES SERVICE
MID-PACIFIC REGIONAL OFFICE
2800 COTTAGE WAY
SACRAMENTO, CALIFORNIA 95825

AUBURN AREA

TO	
	AREA MANAGER
	CHIEF [illegible]
	MAINT. [illegible]
	STENO

RETURN TO:

IN REPLY REFER TO: MP-450
715.

SEP 30 1980

RECEIVED
OCT 0 [illegible]
AUBURN AREA

Mr. Alan P. Thomson
Folsom District Manager
Bureau of Land Management
63 Natoma Street
Folsom, California 95630

Dear Mr. Thomson:

Per your letter of September 22, 1980, enclosed is a fully executed copy of the Memorandum of Understanding (MOU) between our agencies concerning authorization for the California Department of Parks and Recreation to manage certain lands within the Auburn Project.

We feel the implementation of this MOU will be mutually beneficial to all three agencies and we appreciate your efforts and cooperation in this regard.

Sincerely yours,

M. A. Catino

M. A. Catino
Acting Regional Director

Enclosure

Copy to: Mr. Pete Dangermond, Jr., Director
California Department of Parks and Recreation
Post Office Box 2390
Sacramento, California 95811 w/enclosure

Mr. Ronald Hanshew, Area Manager
California Department of Parks and Recreation
Post Office Box 1680
Auburn, California 95603 w/enclosure

Mr. James Ruch, State Director
Bureau of Land Management
2800 Cottage Way
Sacramento, California 95825 w/enclosure

Department of the Interior

Acting

State Director
Bureau of Land Management

Date Sept 4 1980

Department of the Interior

Acting M. A. Catino

Regional Director
Water & Power Resource Service

Date SEP 3 0 1980

Memorandum of Understanding
Between the
Water and Power Resource Service Department of Interior
and the
Bureau of Land Management, Department of the Interior
Concerning

The Management of Certain Uses and Protection of Resources within the Auburn Project Area

WHEREAS, the Water and Power Resource Service, hereinafter called "Water & Power" is responsible for the management of land acquired for the Auburn project and management of certain public land withdrawn in the project area; and

WHEREAS, Water and Power has made application to withdraw additional public land for the Auburn Project, lands which are currently managed under multiple use principles by the Bureau of Land Management, hereinafter referred to as "Bureau"; and

WHEREAS, Water and Power has entered into a contract with California Department of Parks and Recreation to manage water and power controlled lands in the Auburn Project Area. California Department of Parks and Recreation has 5 - 10 rangers patrolling the area on a daily basis providing visitor use services and enforcing state parks code; and

WHEREAS, it has been determined by the Bureau and Water and Power that it will be mutually beneficial to have California Department of Parks and Recreation provide additional on-the-ground management primarily to prevent resource damage from uncontrolled O.R.V. use, prevent theft of wood and vegetation, control and limit camping, and provide fire protection and visitor safety.

NOW, THEREFORE, it is mutually agreed as follows:

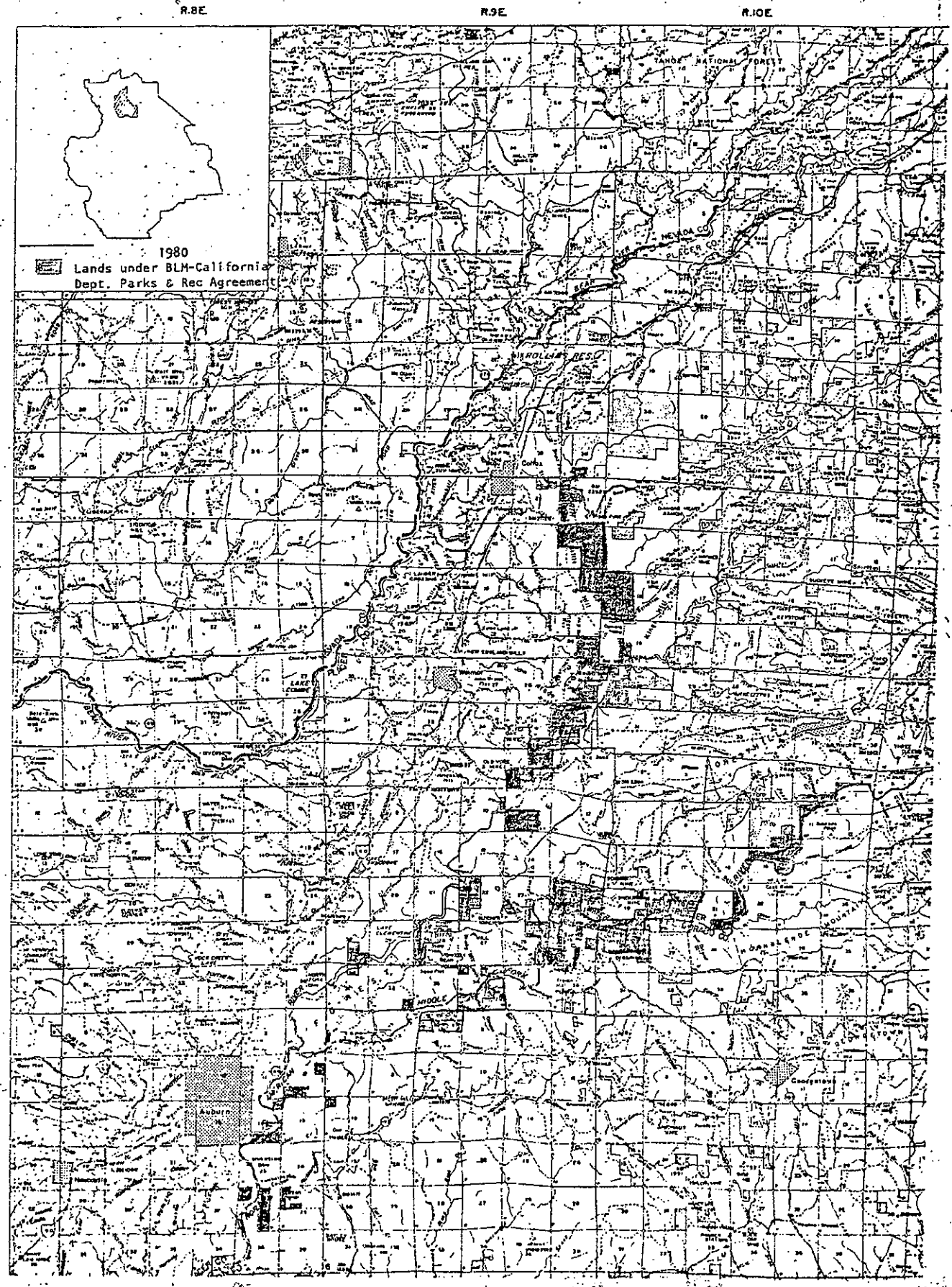
1. This Memorandum of Understanding will be effective upon the date of signing by the California State Director, Bureau of Land Management, and the Regional Director, Water and Power Service.

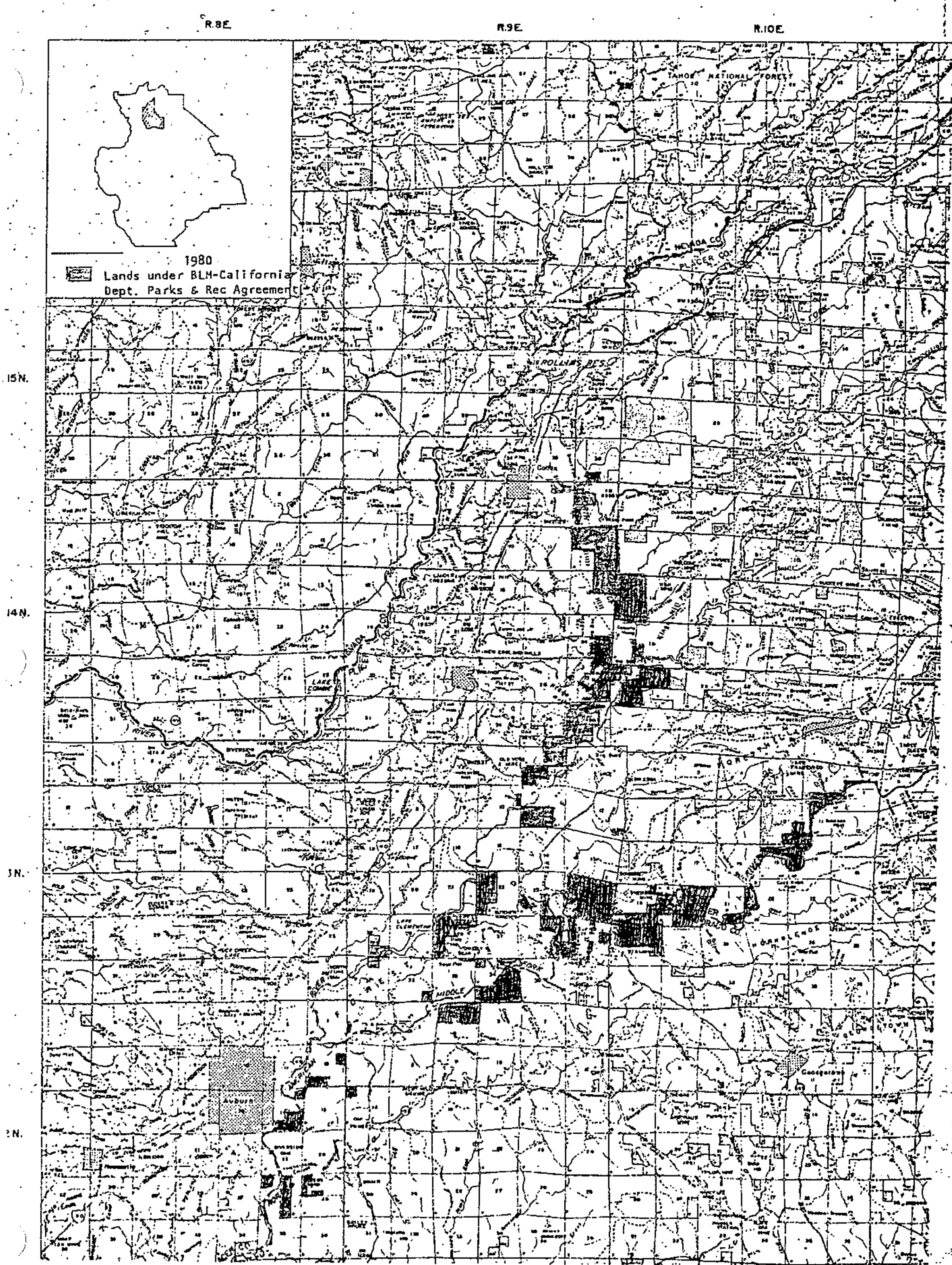
2. Water and Power will, through its contract with California Department of Parks and Recreation provide interim management on Bureau lands shown on the attached map pending final agreement between the Bureau and Water and Power as to which public lands will be included in the Auburn Project.

3. Water and Power will undertake the provisions of this memorandum at no cost to the Bureau.

4. Water and Power will not, nor will it permit its contractors to place any developments on Bureau lands covered by the memorandum without first obtaining approval from the Bureau.

5. This agreement may be cancelled by either party upon giving 30 days notice in writing to the other.


R.8E.
R.9E.
R.10E.
TAHOE NATIONAL FOREST
1980
Lands under BLM-California Dept. Parks & Rec Agreement
15N.
14N.
3N.
2N.
Auburn


R.8E.
R.9E.
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1980
Lands under BLM-California
Dept. Parks & Rec Agreement
TAHOE NATIONAL FOREST
NEVADA CO.
PLACER CO.
ROLLINS RES.
Colfax
LAKE COMBIE
BEAR RIVER
MIDDLE FORK
HORNBLENDE MOUNTAINS
Auburn
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Statewide Trails Program & Planning

California State Parks

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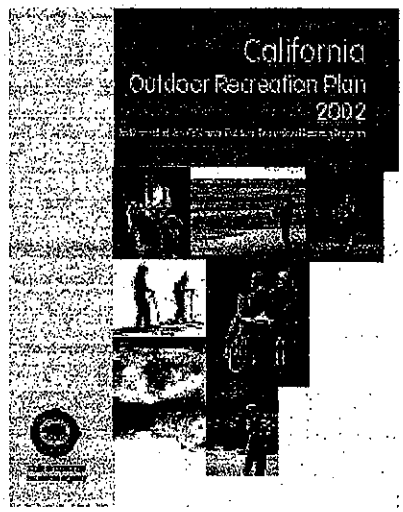
Statewide Planning

Planning Division

The Statewide Planning unit develops plans and conducts research, studies and surveys that look at factors, trends and issues affecting outdoor recreation opportunities in California. One such plan is the California Outdoor Recreation Plan (CORP). It is the statewide master plan for parks, outdoor recreation and open space and includes all recreation providers.



Statewide planning is a recurring process. The Department has released the CORP for 2002. It supercedes the previous CORP of 1993. Documents available (PDF file format):

- **CORP 2002 documents**
  California Outdoor Recreation Plan 2002 (78 pages, 6.57Mb)

  CORP 2002 Appendices (8 pages, 91kb)

  Californians Outdoors, an initial summary of planning process for 2002 CORP (2 pages, 402 kb)
- **Public Opinions and Attitudes on Outdoor Recreation In California**
  2002 (129 pages, 2.14mb) 1997 (114 pages, 893kb) 1992 (106 pages, 2.47Mb)
- **California Outdoor Recreation Plan 1993** (195 pages, 11.7Mb)
- **Other documents**

  Assessment of California's Local Park and Outdoor Recreation Infrastructure 1992 (95 pages, 3.9Mb)

  Local Park and Recreation Agencies in California 1987 (90 pages, 3.61Mb)

CONTACT INF

Statewide Plan
PO Box 94289
Sacramento, C
TEL: 916-653-

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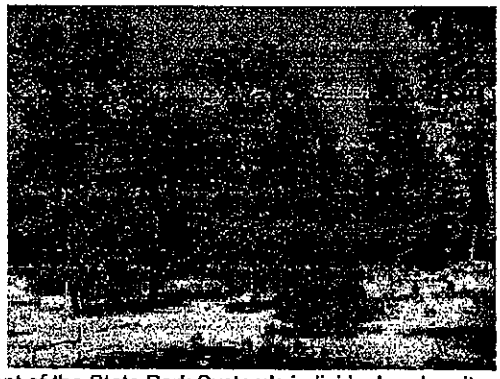

The Department of Parks and Recreation undertakes many kinds and levels of planning analyses for the management and development of public park and recreation lands and facilities. The studies range widely in scope from broad park and recreation issues of statewide significance, to matters involving just the State Park System, down to the level of planning for the protection, development and management of the State Park System's individual park units. In addition, even more specialized planning, research and technical assistance efforts focus on certain specific park and recreation issues and topics.

California Recreation Policy
(Working Draft of April 2005. Subject to approval by the State Park and Recreation Commission.)

STATEWIDE PLANNING --- planning processes, studies and plan documents that encompass the entire state or that address issues of statewide concern

- Outdoor recreation planning --- setting the course for recreation in California (California Outdoor Recreation Plan 2002)
- Statewide trails planning --- determining goals and action guidelines for California's vast network of recreational trails (Statewide Trails Plan)

DEPARTMENTWIDE PLANNING --- planning processes, studies and plan documents concerning the entire state park system and the Department of Parks and Recreation itself

- Central Valley Strategy--- An informational brochure describing a roadmap for the State Park System future roll in the Central valley.
- State park system planning --- anticipating needs and solutions for California's state parks as a unified system for delivery of park and recreation services; Planning Milestones, etc.

PARK UNIT PLANNING (GENERAL PLANS) — planning processes, studies and plan documents for individual state park system units

PARK AND RECREATION TECHNICAL SERVICES (PARTS) --- technical assistance on a wide range of subjects for all park and recreation providers

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Statewide Trails Program & Planning

Planning Division

The Statewide Trails Office provides public information, technical assistance, support for the California Recreational Trails Committee and several trail-related grant programs; and coordinates the California Trails and Greenways Conference.

CALIFORNIA TRAIL DAYS APRIL 23 & 24, 2005
GET INVOLVED! It's fun and rewarding. Trail Days participation is available with many state parks and participating agencies. To register yourself or group, order Trail Days/Earth Day patches, or for more information view the 2005 California Trail Days brochure or call Jeffery Sharp at 916-651-8692.

Other sponsors of Earth Day include California State Parks Foundation.

TRAILS FUNDING SAMPLE PROJECTS
A sampling of State Park's trails projects funded through various grants and bond acts.

CALIFORNIA RECREATIONAL TRAILS PLAN
Phase I of the newly revised California Recreational Trails Plan is now available. A limited number of printed copies are available from the Statewide Trails Office. Contact Doug Wilber at 916-651-6916 or dwilb@parks.ca.gov or Ken McKowen at 916-653-6501 or kmcko@parks.ca.gov.

CALIFORNIA RECREATIONAL TRAILS COMMITTEE < < < GO THERE
The Committee is comprised of seven members, each appointed to a 4-year term by the Governor. Members are active in local, regional and statewide trails programs, generally with personal interests in hiking, biking, or horseback riding. By statute, there are two members from northern, two members from central, and two members from southern California, with the seventh member being selected at-large.

The Statewide Trails Manager serves as Executive Secretary and the Trails Office provides staff support for the members of the Governor's-appointed California Recreational Trails Committee. The Committee is charged in-part with promoting trail use and regional and statewide planning efforts. The Committee meets three to four times each year. GO > > > PUBLIC MEETING SCHEDULE

CONTACT INF

Department of Parks and Rec

Statewide Trail
PO Box 94289
Sacramento, C
94296-0001
TEL: 916-653-9
FAX: 916-653-4

Doug Wilber
Grants Admini
Technical Sup
dwilb@parks.ca
TEL: 916-651-6

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Purpose Statements Collection
State Park System Statistical Report
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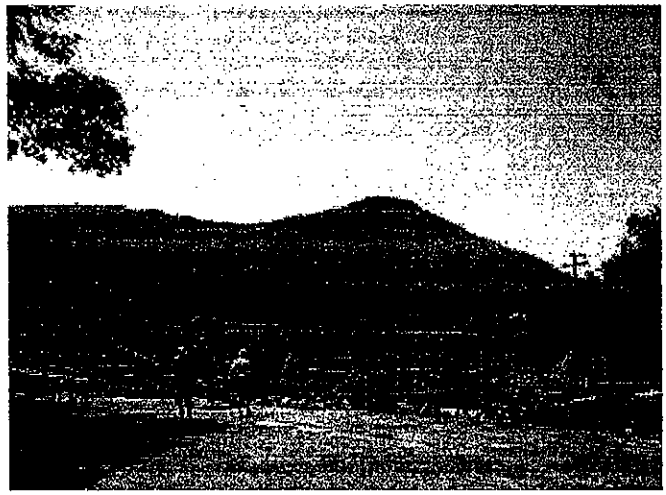
State Park System Planning

Planning Division



State Park System Planning is an activity that concerns the issues, problems and opportunities that collectively encompass all of the large number of State Park System units and treats them as a unified system, as a single entity. State Park System Planning provides a statewide view of a statewide park system which was established to meet statewide objectives.

This broad type of planning may be contrasted to the more focused and detailed planning that results in the General Plans which are prepared for the system's individual park units. The Unit General Plans deal with the protection, development and management of the individual park about which the plan is written.

The process of State Park System Planning is a continuous one and results in a number of plans, studies, reports and information collections.

State Park System Plan

This fundamental document contains goals, policies, objectives, and proposals for new programs and inititives needed to guide the State Park System.

▸ Although the Plan is not yet available in electronic format. There are hard

CONTACT :
Questions abou
page material a
State Park Syst
may be address

Department of
Parks and Recr
State Park Sys
Office
Planning Divisic
(916) 653-9901

copies of parts 1 & 2 available, please contact the Planning Divison at (916) 653-9901 or at atill@parks.ca.gov to request copies.

Department of Parks and Recreation Acquisition Program
The program guides the acquisition of state park system properties, with attention to 8 program themes.
▸ More...

Bear Facts Newsletter
Issued 3 times a year, the newsletter offers useful and thought-provoking information for anyone interested in California's parks, recreation and open space
▸ More...

Planning Milestones
The annual Planning Milestones doucuments contain "of record" information on the total number and specific identity of those classified units and major unclassified properties that constitute the State Park System.
▸ More...

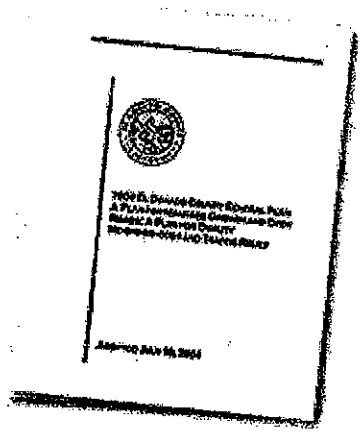
Purpose Statement Collection
This document identifies the values, features and management objectives of each classified unit or major unclassified property of the State Park System Plan.
▸More...

State Park System Statistical Report
The annual State Park System Statistical report provides snapshots of the system's scope and scale.
▸More...

General Plan Consistency Checklist - Single Family Residential Projects and Accessory Structures [.pdf]

Questions and Answers concerning Measure B

In June 2004, members of a local group calling themselves the Anti-Gridlock Committee, filed a Notice of Intention to Circulate Petition to gather signatures for an initiative to amend the county charter. On July 9, 2004, they submitted their petition and on July 26, 2004, it was certified by the Registrar of Voters. On August 17, 2004 the certification was presented to the Board of Supervisors who then requested County Counsel create a report on the effects and impacts of the Measure C initiative. County Counsel's Report, September 13, 2004.



On July 19, 2004, the El Dorado County Board of Supervisors adopted a new General Plan for the County.

State planning law requires every County to adopt and maintain a "blueprint" for development throughout the county: a General Plan. This General Plan is the County's basic planning document and is the vehicle through which a County addresses, balances, and fits together the competing interests and needs of its residents.

On January 23, 1996, El Dorado County adopted a comprehensive General Plan. On February 5, 1999, the Superior Court, County of Sacramento, in the matter of El Dorado County Taxpayers for Quality Growth, et al. v. El Dorado County Board of Supervisors and El Dorado County, ruled that, in certain respects, the County failed to comply with the California Environmental Quality Act (CEQA) in the adoption of its 1996 General Plan. Consequently, certification of the General Plan CEQA Environmental Impact Report (EIR) and adoption of the General Plan were set aside and the County was directed to temporarily restrict new development pursuant to a writ of mandate [.pdf]. To address the Court's findings, the County prepared a new General Plan, which was adopted on July 19, 2004.

The County cannot implement a new General Plan until the Superior Court lifts the Writ of Mandate. Staff anticipated that process to be complete by the end of 2004. However, subsequent to plan adoption, a referendum measure that would also affect implementation of the plan was filed with the County. That referendum, which will appear the March 8, 2005, ballot, will ask county voters to either uphold or reject the Board's adoption of the new plan. Please see our Frequently Asked Questions page for more information.

Any questions about the General Plan process can be

Would you like to receive e-mail news regarding the General Plan? Sign-up for the mailing list

El Dorado County Planning Department

The following is what the Board of Supervisors adopted as the new General Plan for the County on July 19, 2004. This plan cannot be implemented until the Superior Court lifts the Writ of Mandate, which currently limits the County's ability to approve discretionary projects. Please see Frequently Asked Questions for more information.

General Plan information is available for purchase.

2004 El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief

All of the documents are provided in Adobe Acrobat .pdf format (portable document file). **Adobe Reader 6.0 is included.** Get Acrobat Reader free!

- 60 ldn/CNEL Traffic Noise Contours at 2025 (2 of 4)
- 60 ldn/CNEL Traffic Noise Contours at 2025 (3 of 4)
- 60 ldn/CNEL Traffic Noise Contours at 2025 (4 of 4)

(29)

CDF Fire Prevention Report of 2003
For the Auburn State Recreation Area

January 10, 2004

By
Fred Lopez
Fire Captain

California Department of Forestry and Fire Protection
Nevada-Yuba-Placer Unit

SUMMARY

FIRE PREVENTION ACTIVITY REPORTS

Law Enforcement
Patrol, Arrests, Citations, Inspections

Engineering / Planning
Fuel Breaks, Industrial Operations, New Policies, Campgrounds, Fire Roads, Prescribed Fire, Foresthill Bridge

Information / Education
Signs

FIRES BY CAUSE

FIRE SUPPRESSION COSTS

MAPS

Fire Locations

Fire History/Size

Fuel Break Progress

PHOTOS

SUMMARY

The year 2003 marked marks the second year of this fire plan's implementation. Prefire management continues to be focused around campgrounds, the Foresthill Bridge, Auburn Fuel Break and Auburn Lake Trails Fuel Break. Nine fires occurred on the Bureau of Reclamation Project Lands (ASRA), in 2003, most of which, continue to be located around the Foreshill Bidge area. In 2003, Arson was the leading cause of fires The largest fire this year amounted to approximately 45 acres in an area where the most recent large fires have occurred. Overall, fires were kept to a small size with little or no resource damage.

This document compares what has been accomplished during the calendar year 2003, to the objectives established in January of 2003.

FIRE PREVENTION ACTIVITY REPORTS

Law Enforcement

Patrol

In 2003, I was unable to patrol the ASRA to the extant I would have liked to. Time spent patrolling was similar to that in 2002, which was minimal. The time I was able to spend in the ASRA, was spent in the Upper Lake Clementine area, the Ruck-a-Chucky area, the Iowa Hill Campground, and the Confluence area. While patrolling these areas, I encountered unattended campfires; charcoal barbeques being used over dry vegetation and people smoking.

Illegal campsites are a common problem and the patrolling is warranted along the rivers. However, I was unable to raft down the rivers this past year.

There were VIP and CDF personnel patrols of the Forest Hill Bridge and Confluence during the 4th of July weekend and date. This was successful and will continue to occur.

Arrests and Citations

There were two arrests and one complaint filed through the Placer Co D.A.'s office this year for negligently caused vegetation fires and one arson.

Inspections

All of the structures within unincorporated areas and along the ASRA from South of Auburn City to Colfax received LE-38 inspections in 2003.

I was unable to meet with PG&E to inspect all of the power lines in the ASRA, however, I was assured by PG&E that all of the lines within the ASRA had met compliance.

Equipment used for the American River restoration and pump installation had been required to meet standards identified in the Industrial, Commercial and Recreational Guide provided to the contractor. After one of the tractors burned at the dam site, equipment was inspected and recommendations were made for further prevention of fires.

Engineering / Planning

Fuel Breaks

The Auburn Fuel Break is at the end of its second year of implementation. The fuel break is on schedule and is approximately 75% complete. The fuel break began at the southern tip of the City of Auburn and has stretched to Hwy 49 along the city boundary. The fuel break is 300' wide and has received approximately 80% success with private landowner participation. This fuel break is truly one of a kind and is providing a high rate of return for the investment. Getting crews to conduct the work is difficult, particulalarly with Washington Ridge Camp and the management of the camp. However, the result productivity reduction is minimal.

In 2002 a shaded fuel break has been established around the State Park Headquarters to a distance of approximately 100'. This was successful in bringing the facility into compliance with PRC 4291 and making the facility fire safe. In 2003 nothing was done to maintain the work, however, in 2004 there will need to be maintenance.

In 2002, a shaded fuel break has been an established around the BOR building at 471 Maidu Road. This vegetation treatment has brought the Bureau building into compliance with PRC 4291 and has made the building more fire safe. Nothing was done in 2003, however, work will need to be maintained in 2004.

In January 2003, the Auburn Lake Trails Fuel Break commenced. The Amador-El Dorado Unit is taking the lead on the project after I / NEU initiated the effort. AEU continued the project and has gained grants and commitments from Growlersberg Camp to conduct the work. The work that is occurring on BOR lands is in compliance with the prescription developed by the agencies.

Approximately 15 state locks have been added to gates along the City of Auburn on BOR lands and throughout the ASRA. This will expedite fire resource access.

Industrial Operations

Manning Construction has been awarded the contract to restore the original course of the American River at the Auburn Dam site. They have been required to maintain vegetative removal along the roadsides leading to the worksite and establish road shoulder ignition reduction measures by removing vegetation and establishing barriers. See Industrial Guide. Additionally, the contractor must have all vehicles with fire suppression devices in addition to water tenders, pumps and hoses at he construction site. One inspection of

the equipment was conducted, which resulted in compliant and noncompliant equipment. Fire safety is not a priority with this company, and education is required regularly.

During operations one of the backhoes ignited and burned the engine compartment, which is as large as a vehicle. The fire was extinguished prior to extension into the wildland and partial savings of the backhoe occurred as the fire suppression water, which was required to be on site, resulting from the CDF Industrial Guide.

New Policies

2003 was the first year of campfire restrictions within the campgrounds during peak fire hazard days. Implementation went smoothly for the first year, which experienced campfire shut down twice during the year.

In 2003, new restrictions were established for the ASRA resulting in order to better prevent ignition management. BBQ restrictions have been developed for the ASRA. Discussions between State Parks Staff and myself have resulted in the following policy: BBQs containing charcoal briquettes will not be allowed in the ASRA, outside of designated campgrounds. Gas fired BBQs will still be allowed, however. 2004 will be the first year if the BBQ enforcement.

Campgrounds

All of the campgrounds within the ASRA received fire prevention measures in 2003, with the exception of Cherokee Bar campground. Fire breaks and fuels reduction within the campgrounds was successful and will be an annual event.

See New Policies

Fire Roads

The only fire road treated this year involved the Stage Coach and Robie Point.

Forest Hill Bridge

Hand line was constructed around the Forest Hill Bridge. This line construction contained numerous vegetation fires within its boundaries. Incendiary devices and a welding operation were the causes of fires.

Prescribed Fire

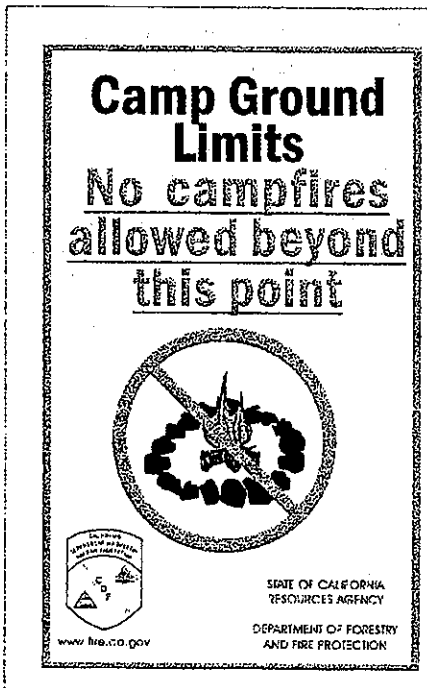
No prescribed fire was conducted in the ASRA in 2003.

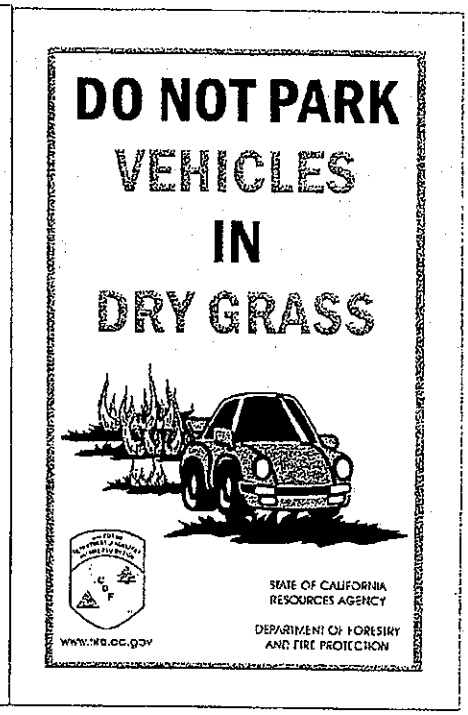
Information / Education

Signs

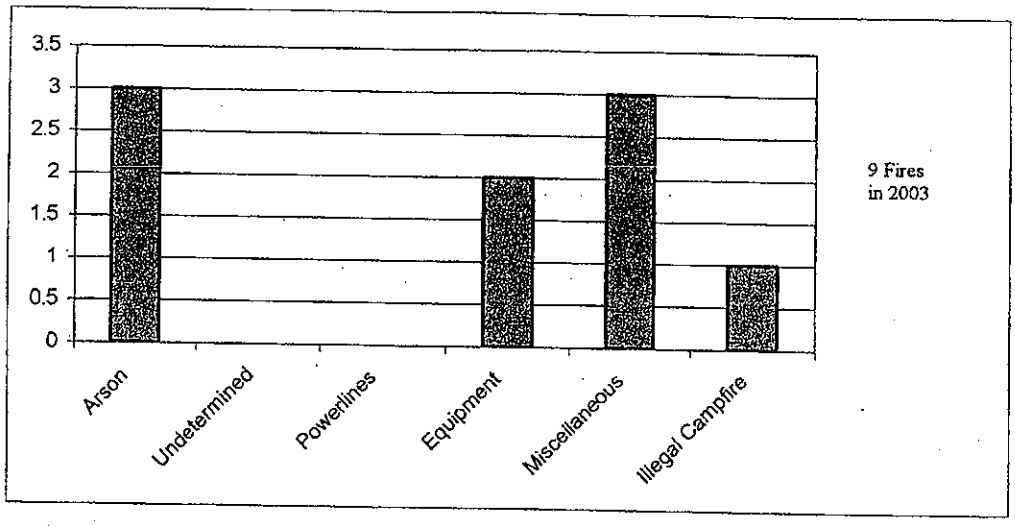
The development of new fire prevention related signs, designed for the ASRA and other areas, were obtained in the Fall of 2003. The signs will be placed in service around many of the campgrounds throughout the ASRA in 2004.

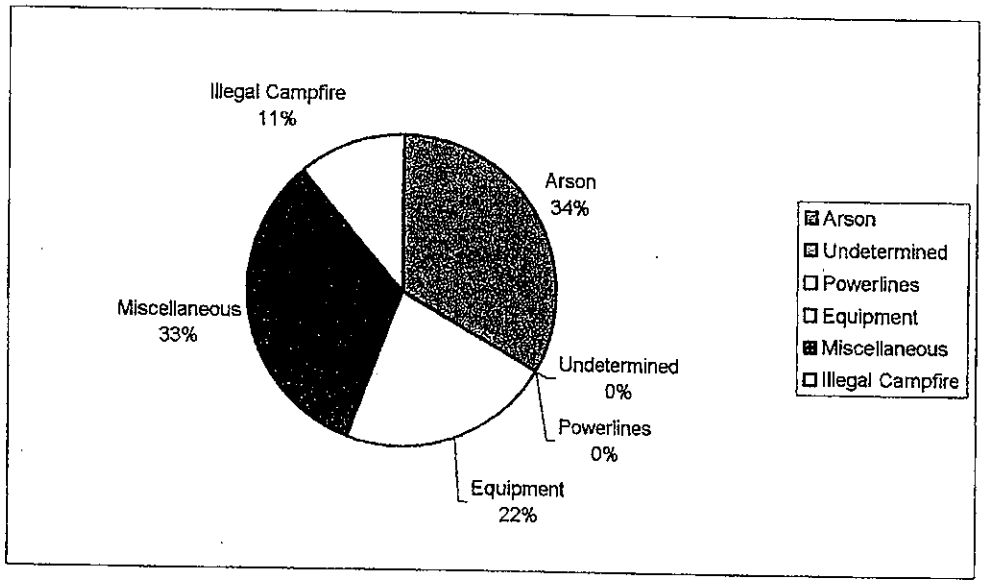
The following signs were developed for use in the Auburn State Recreation Area:





FIRES BY CAUSE 2003





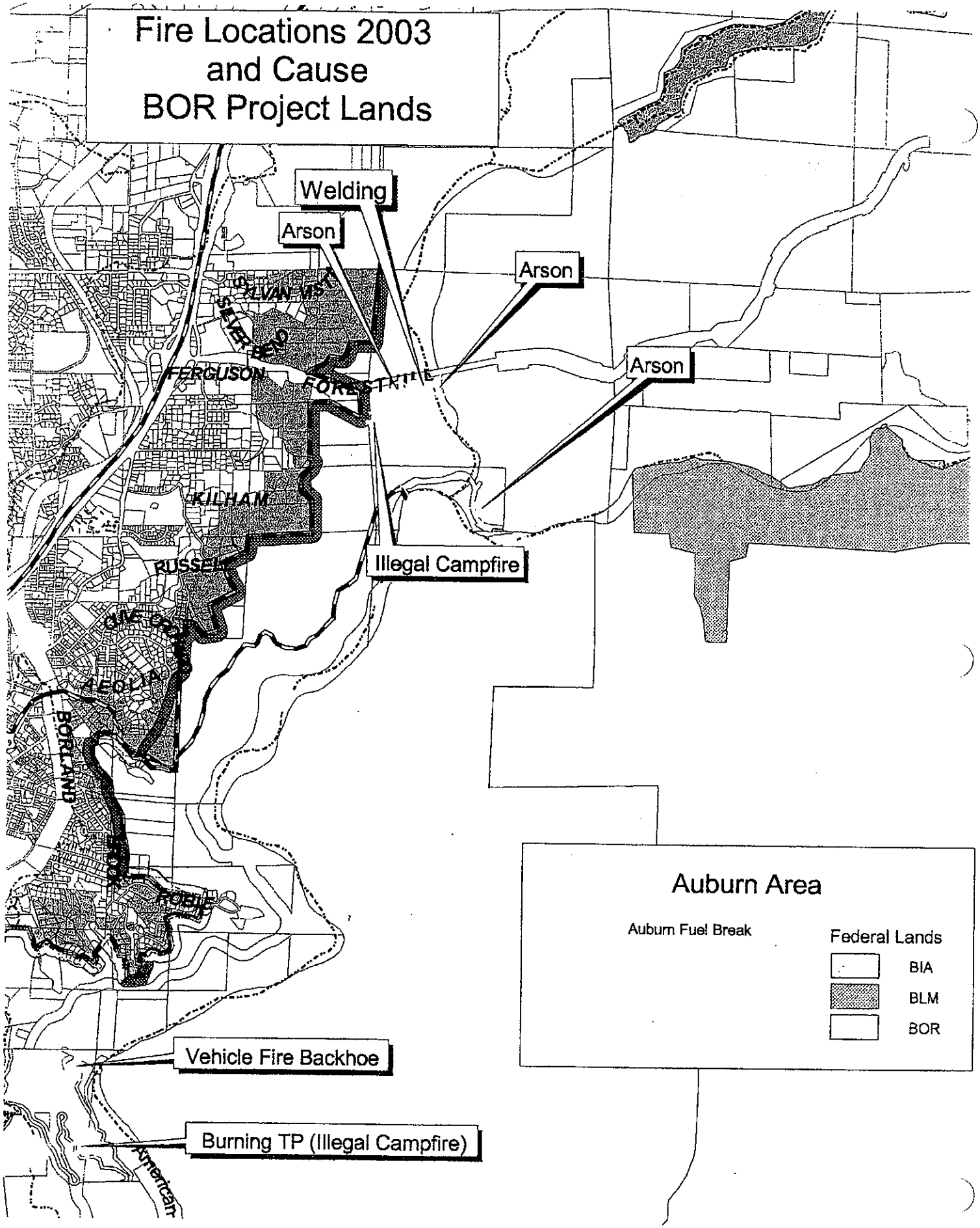
There were nine fires within the Auburn State Recreation Area this year. The majority of fires occurred around the Forest Hill Bridge area, which is a common occurrence and continues to be an area of frequent ignitions. Human caused fires due to recreational visitation is the primary source of ignitions. The arson activity was present from ASRA visitors, who tend to be those visitors who commonly neglect recreation areas in general. The recreation aspect is what drew them there primarily. Two fires occurred relating to industrial activity, which will be a primary concern in 2004.

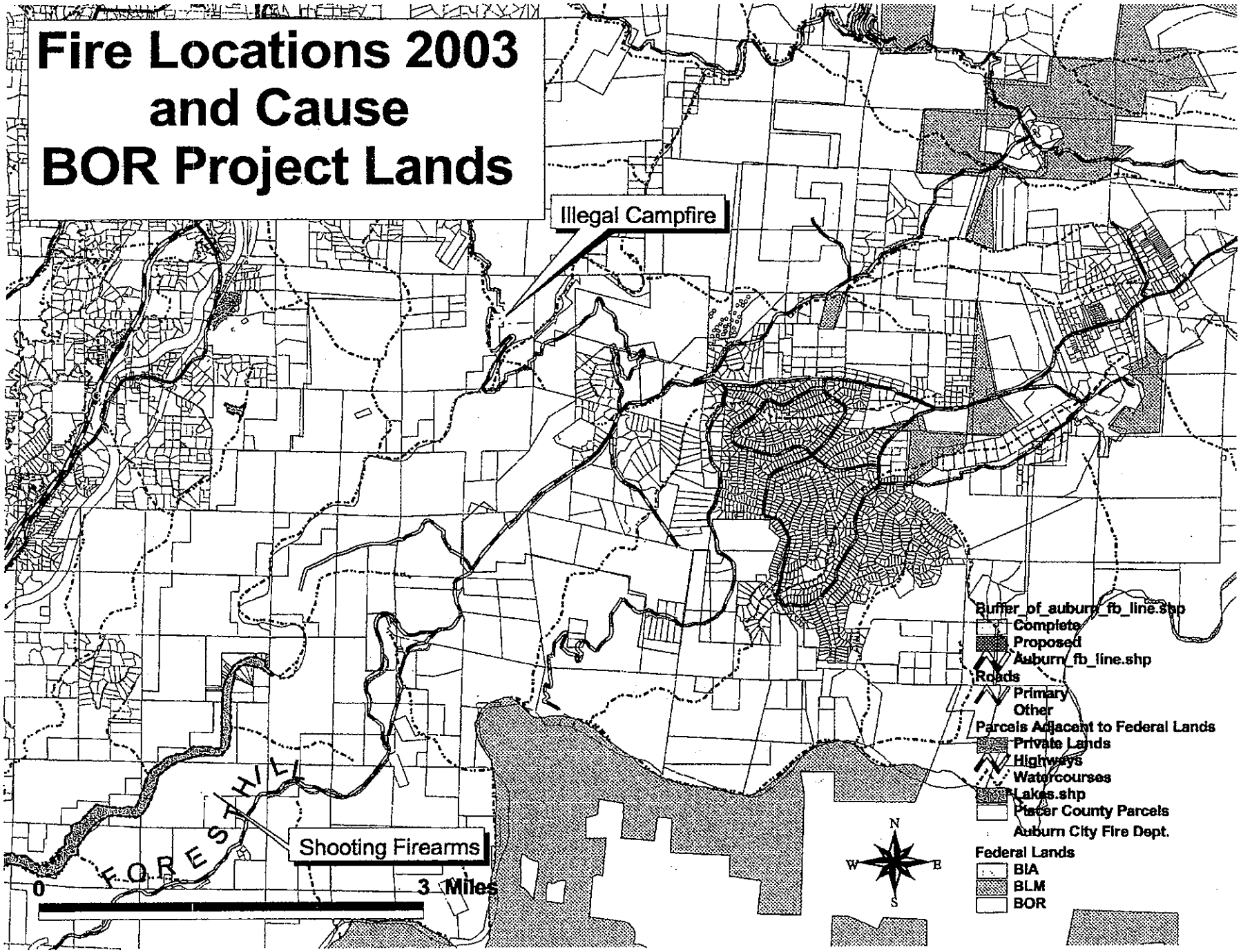
FIRE SUPPRESSION COSTS

r	Fire Name	Date	Inc #	Acres	Legal Description	Cost	Cause	Acres BOR	Acres CDF
03	Manning	10/28/2003	16456	0		$0.00	Vehicle		
03	Canyon	7/4/2003	9614	10	NW 1/4, Sec1, Twn12 N, R8E	$11,483.00	Arson		10
03	Bridge	9/16/2003	14047	1/2 ac	N/E 1/4 Sec 2, Twn 12 N, R8E	$5,236.00	Welding, Accidental	1/2 ac	
03	Clementine	6/21/2003	8692	1	SE 1/4,S28, Twn 15N, R7E	$3,005.00	Shooting		1
03	American	6/24/2003	8861	6	SE 1/4,S1, Twn 12N, R8E	$4,116.00	Arson		6
03	Maidu	9/7/2003	13591	1/4 ac	NE 1/4, S22,Twn 12 N, R8E	$820.00	Toilet Paper Burning	1/4 ac	
03	Canyon	7/23/2003	10816	1	SE 1/4, S2 Twn 12 N, R8E	$13,980.00	Smoking		1
03	Pine	9/24/2003	14448	50		$160,073.00	Illegal Campfire		45

MAPS

Fire Locations
Fire History / Size
Fuel Break Progress


Fire Locations 2003
and Cause
BOR Project Lands
Welding
Arson
Arson
Arson
Illegal Campfire
Vehicle Fire Backhoe
Burning TP (Illegal Campfire)
SILVER BEND
FERGUSON
FORESTHILL
KILHAM
RUSSELL
AEOLIA
BOWLAND
ROBIE
American
Auburn Area
Auburn Fuel Break
Federal Lands
BIA
BLM
BOR


Fire Locations 2003
and Cause
BOR Project Lands
Illegal Campfire
Shooting Firearms
FORESTHILL
0
3 Miles
Buffer_of_auburn_fb_line.shp
Complete
Proposed
Auburn_fb_line.shp
Roads
Primary
Other
Parcels Adjacent to Federal Lands
Private Lands
Highways
Watercourses
Lakes.shp
Placer County Parcels
Auburn City Fire Dept.
Federal Lands
BIA
BLM
BOR
N
W
E
S

Auburn State Recreation Area
Prefire Management Plan

(1-29-02)

AUBURN DAM AND STATE RECREATION AREA
FIRE MANAGEMENT PLAN

Introduction

This paper introduces the purpose and the need for a Comprehensive Fire Management plan for The Auburn Dam and Reservoir Project lands. It also discusses a Fire Management Planning Strategy that has been developed by representatives of the California Departments of Forestry and Fire Protection (CDF), California Department of Parks and Recreation (DPR), and The United States, Bureau of Reclamation (Reclamation). The development of certain elements of the fire planning strategy have been closely coordinated with the City of Auburn Fire Department and with a representative of The United States, Bureau of Land Management (BLM).

Background

Reclamation is responsible for the management of The Auburn Dam and Reservoir Project lands, a project originally authorized by Congress in 1965. The total acreage within the project boundary is 42,000 acres. Of this, Reclamation has ownership for approximately 26,000 acres. The remaining acreage is owned by BLM, the United States Forest Service, and private parties. DPR and CDF have management authority over all Project lands through cooperative agreements with Reclamation. The total lands are known as the Auburn State Recreation Area and are operated by the State of California as a state recreation area.

Project lands within the American River watershed are largely comprised of two large river drainages, the North and Middle Forks of the American River that have carved over fifty miles of canyons within both Placer and El Dorado counties. Much of this area runs adjacent to the communities of Auburn and Foresthill, along with other residential developments. The oak-chaparral environment within this area can be highly combustible under certain dry conditions and the risk of wildland fires is a major concern as residential and visitor use activity continues to increase.

Because of these concerns, Reclamation is working with CDF and DPR to develop a Comprehensive Fire Management Plan for the Project Area. The development of this plan and its implementation is being greatly enhanced through appropriate coordination with local counties, communities, fire safe councils and other interest groups and jurisdictions. It may be appropriate to include both BLM and USFS lands within the Comprehensive Fire Plan. Funding mechanisms for the development of the Comprehensive Fire Management Plan have been identified as critical and needs further investigation.

The managing partners initiated the fire planning process for the ASRA lands in the summer of 2000. However, with the advent of a dry year in 2001, and the resulting high fire danger, concerns of local community leadership have reached high levels. In response, the managing partners are moving quickly to identify and implement appropriate actions. These actions are focusing on Reclamation Lands that interface with private property where certain priority conditions may exist.

A priority condition of great concern for the managing partners is residential density associated with these interface lands, such as the canyon rim adjoining the City of Auburn. It has been in response to this concern that the managing partners have focused on the Fuels Management Element of the Comprehensive Fire Plan for those interface lands.

A Fuels Management Action Plan has been developed, to not only be responsive to fire management concerns of the local interface areas, but also to be consistent with the broader goals and objectives of a comprehensive fire management plan for the ASRA. This plan will work to preserve and restore the natural resources and protect the cultural resources of the area. It is the intent of this strategy to implement the Fuels Management Action Plan for the priority interface lands, as soon as possible, consistent with the broader goals and objectives of the Comprehensive Plan. A major component for implementation is the selection of appropriate Demonstration projects to help ensure the viability of any fuels management activities.

It is vital to identify appropriate goals and objectives as a first step in the development of a comprehensive fire plan. The following is the product of much discussion, as the agencies integrated the needs for both fire protection and resource management.

FIRE PLAN
GOALS AND OBJECTIVES

Goal:

To protect human life and both public and private resources by reducing the risk and hazard of wildland fire within the American River Canyon by practicing management strategies that promote the preservation and restoration of natural resources and protection of cultural resources.

Objective:

Mitigate fire danger in order to:

- Enhance public safety
- Protect natural and cultural resources
- Provide for recreational opportunities
- Conduct cost effective maintenance of features and facilities

PLAN IMPLEMENTATION STRATEGIES FOR RECLAMATION LANDS

To insure the effectiveness of this fire management program, a planning strategy has been developed that compliments and augments fire planning and management activities of local communities, jurisdictions and Fire Safe Councils.

I. **Fire Prevention:** Almost all fires that start on the Reclamation lands in the American River Canyon are directly caused by human activity. As public use and other activities increase on Reclamation lands, the probability of fire ignitions also increases. Fire prevention activities on Reclamation lands include:

   A. Education.

   B. Public information.

   C. Visitor and Resource Management actions:

      1. Placement of structures and facilities.

      2. Area closures to vehicle and/or visitor access.

      3. Other uses as appropriate.

   D. Area patrols and other law enforcement activities.

II. **Fire Safe Practices for Urban/Wildland Interface Lands:** The single most effective practice to reduce the spread of wildland fire and help prevent damage to structures is to create areas of reduced and/or modified fuels. This strategy includes practices utilized by local communities and landowners adjacent to Reclamation land using the following components:

   A. Defensible Space: The area extending from a structure out to between 30 and 100 feet creating an area where fuels that allow fire to spread from the wildland to a structure or a structure to the wildland to be more easily controlled.

   B. Education: Through local fire departments, local Fire Safe Councils, and other activities.

   C. Inspections: Coordinate with State and local government to encourage defensible space regulations, and appropriate regulations for new construction.

   D. Assistance Programs: Help to identify and support fuel modification activities that encourage and assist landowners in the creation and maintenance of defensible space, (i.e. Chipper Program, mulching, composting).

III. **Fuel Management:** Reduction of wildland fuels in strategic locations will enhance fire suppression activities and provide increased firefighter safety. Fuels management activities will occur on (1) Reclamation lands adjacent to other properties that enhance defensible space activities, (2) on Reclamation lands adjacent to public access roads and trails, and (3) on Reclamation core lands to increase wildlife habitat benefits and increase water values.

* Fuel reduction techniques include: hand tools and mechanical equipment, prescribed burns, biological controls and chemical application will be available for use to reduce or modify fuels as appropriate.

FUELS MANAGEMENT PRESCRIPTIONS FOR INTERFACE LANDS

Fuel modification within interface lands is critical for reducing the potential for a costly and damaging fire. The following prescriptions can be utilized for fuel management in three distinct geographic areas, or zones, within the interface.

The three zones are as follows:

1. Defensible Space: This is the area closest to structures and is defined as being within 30 to 100 feet of existing buildings or improvements. To be Fire Safe, this area should be considered to be the leanest in terms of flammable vegetation. In addition to the Shaded Fuel Break prescription treatments described below, all annual grasses are to be maintained to below 4 inches in height. Branches overhanging structures are to be removed along with any portion of vegetation within 10 feet of the outlet of any chimney or stovepipe. Dead wood and branches within the zone and leaves and needles on roofs are also to be removed.

2. Defensible Landscape: This is the area outside the Defensible Space zone (>30 to 100 feet from structures) where the land manager has decided to implement fuel management. This will increase the effectiveness of fuel management activities implemented within the Defensible Space Zone. The Shaded Fuel Break prescription treatments described below can be used as the guideline for fuel management within this zone.

3. Shaded Fuel Break: This is a strategic location along a ridge, access road, or other location where fuels have been modified. The width of the shaded fuel break is usually 100 to 300 feet depending on the site. This is a carefully planned thinning of dense vegetation, so fire does not easily move from the ground into the overhead tree canopy. A shaded fuel break is not the removal of all vegetation in a given area. Fire suppression ground and air resources can utilize this location to suppress wildland fires. Any fuel break by itself will not stop a wildland fire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack. Air resources may use the location for fire retardant drops. The Shaded Fuel Break prescription treatments described in this document is the guideline for fuel management within this zone.

FUELS MANAGEMENT ACTION PLAN
Greater Auburn Interface Area

This action plan lays out a process for implementing fire management strategies for Reclamation lands that interface with the Greater Auburn Area. The urban/wild land interface area identified as a priority starts at or about Shirland Tract, running east along the north canyon rim of the American River along Reclamation property lines up stream to approximately the Foresthill Bridge within Placer County.

This interface area will be divided into manageable sections based generally on geographical and location characteristics. Project Priority Selection Criteria will then be applied to these sections and a priority list will be developed. Each section will then be evaluated and a Fuel Break Prescription will be tailored to meet specific resource and fire management needs for the selected section. Appropriate National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documentation will be completed prior to fuels management. Implementation will be accomplished through coordination and in partnership with local entities.

On-going or long-term maintenance of these project sites is a significant issue that needs to be addressed as part of this fire management strategy. Local partnerships will need to play an important roll in this regard.

As an initial step, a demonstration project or projects will be planned to demonstrate the effectiveness of these implementation strategies and the Priority Selection Criteria. The selection of demonstration projects will be done in close coordination and partnership with local entities. A similar process as to the one mentioned above will be used to evaluate and select appropriate fuel management program for any demonstration sites on Reclamation lands before project implementation will occur.

Project Selection Criteria

- **Residential density**: Higher numbers of people living within the interface project area receive a high priority. Density of existing private property development is a high priority.

- **Defensible Space Activities:** An action or commitment by private property owners to reduce or modify the type or amount of vegetative fuel that will help prevent fire to move from a structure to the wildland, or the wildland to a structure.

- **Project Costs and Funding:** Project costs should include labor and equipment, management and administration for the planning, implementation, and on-going maintenance and oversight of a proposed project. Funding of a proposed project must cover the cost of the whole project and must be identified prior to initiating

the planning phase of the project. Project funding may come from grants, in-kind labor, matching funds, etc. A project will not be pursued until funding sources have been identified.

- **Local Partnerships:** Partnerships with local communities, counties and other local organizations are extremely important to the success of fuels management activities. Partnerships can be in the form of cost sharing or in-kind services and other local support. Partnerships will receive a higher priority.

- **Topography:** Topography has a direct relationship to the speed of wildland fire spread. The steeper the slope the faster the fire spread and the higher the priority. The ideal location to create a fuel break is at the break-over point from the canyon wall to the ridge top.

- **Fuel Characteristics:** Wildland fuel density and arrangement has a particular effect on the spread of wildland fire. By the removal of light flashy fuels, thick dead and/or live fuels, and ladder fuels from the landscape reduces the risk of catastrophic fire. High fuel density areas will receive a high priority.

- **Strategic Location and Accessibility:** Modifying fuel density from areas next to access roads and structures allow firefighting personnel to gain access and to more safely and efficiently control the advance of a wildland fire. Project areas that provide for strategic locations and accessibility will receive a higher priority.

- **Complexity of Environmental Review:** Generally, the environmental review and compliance process should be without unresolved conflicts or highly controversial environmental effects. Project actions not having adverse effects on unique or sensitive geographical, cultural or biological resources such as wetlands, historical features or endangered species, etc., will have a higher priority.

- **Project Maintenance and Administration:** To ensure the success of a project, an on-going maintenance program for the project site must be identified. Maintenance of a project site includes regular monitoring, and sustaining the integrity of the site through use of various vegetation management techniques. Administration of project maintenance includes coordinating and implementing the defined maintenance program, distribution of the funds to support the program, and monitoring on-going defensible space activity. Projects with an identified maintenance and administrative component will receive a higher priority.

- Other factors may be considered for project site selection as they are identified.

The decision-making processes will be accomplished by the representatives of the managing partners, (the Technical Team). Members of the Technical Team are responsible for coordinating with appropriate agency personnel, as needed, in order to ensure representation of their agency's position given a particular issue. Project decisions will be made by a consensus of the Technical Team. Should a Technical

Team member have a dissenting opinion for any action, no further project action will be taken until the issue can be resolved. Decisions may be elevated if appropriate.

Project Administration will continue as it currently exists. The CDF remains responsible for fire prevention and suppression activities on Reclamation lands as stated in the Cooperative Agreement. The California State Parks and Recreation maintains responsibilities for recreation and resource management on Reclamation lands as identified in its cooperative agreement. Funding and appropriate staff time to coordinate and administer this action plan should be made available from existing resources under these cooperative agreements.

Desired Project Benefits

Fuel break land treatments in wildland / urban interface areas include many benefits, some of which, tend to be intangible in nature. The true test of success resulting from fuel breaks on interface lands occurs after a wildfire has occurred. What life, property and natural resources were saved? What tactical advantage did firefighting resources encounter during the extinguishing of the fire? These questions are futuristic and may only be projected prior to wildfire.

The subsequent results are desired during and after interface fire protection projects are completed.

A. Public Safety:

Reduced fuel loading on fuel break lands produces a less intense fire behavior which allows firefighting crews to make a stand, either offensively or defensively, on fuel break lands. The result is a more effective effort to protect the lives of citizens living in the fire's path along with residential and commercial structures. The fuel loading on fuel break lands will change from fuel models of 4 and 6, which have approximately 13 tons per acre and 6 tons per acre respectively, to fuel models of 1,2, and 3, which have approximately .74 tons/ac, 4 tons/ac and 3 tons/ac. On an "average day" in the summer, the flame lengths from fuel model 4 on the fuel break lands, as they are now (without treatment), would support flame lengths of approximately 26 feet and a fireline intensity of 6784 Btu/ft/s. On fuel break lands without treatment the current fuel model 6 flame lengths would be approximately 8 feet with a fireline intensity of 415 Btu/ft/s. The resulting fuel models of 1,2 and 3 after treatment will support flame lengths of 6, 9 and 15 feet with fireline intensities of 327 Btu/ft/s, 797 Btu/ft/s and 2278 Btu/ft/s.

B. Education:

Fire protection projects, such as fuel breaks, most often involves the need to create the fuel break on private lands which, creates a situation where communities become directly involved with public agency sponsored projects. During the cooperative process between agency and community an education process occurs. There

becomes an awareness of the need for private landowners to participate in wildfire protection projects. Landowners are in direct contact with agency representatives who explain first hand, the why and how projects, such as fire defense projects are implemented. Landowners will become informed regarding wildfire behavior, land use planning concerns, and environmental protection issues. The education will occur resulting from public presentations and participation solicitation. Brochures, interpretive demonstration sites, newsletters and other activities will be a part of the education process which, will result in a better understanding of fuel break projects.

C. Protection of Natural Resources:

Fuel break lands create habitat edge effects which, benefit species that rely on edge and open canopy habitats. The fuel break will allow firefighting resources to quickly extinguish fires spreading from structural improvements to the wildlands, thus protecting the balance of ASRA lands from devastating fire. When fire does burn fuel break areas, the fuels consumed involve ground fuels such as grass, low lying brush and duff. In turn, the tree species remain with a very low mortality. Without fuels reduction, all of the vegetation on site becomes available to burn, in short, all vegetation on site is destroyed. With the resulting fuel load reduction, water yields on fuel break lands will increase by 35% assuming an average annual rainfall of 35" (USFS, Faust 1979). Plant species diversity and recruitment of new growth will be promoted by fuel break development.

D. Protection of Cultural Resources:

During fuel break establishment, cultural resources will be identified and recorded. On fuel break lands cultural resources can be protected as a result of less severe fire intensity. Fuel break lands encounter lower burn duration, resulting in cultural resources encountering less fire. Additionally, if circumstances permit, cultural resources can be protected by retaining vegetation as barriers.

E. Conduct Cost Effective Maintenance of Features and Facilities:

Once fuel loads are reduced on fuel break lands, the maintenance of those lands becomes less costly than the initial establishment. Costs may average $400.00 per acre to treat whereas costs may involve approximately $200.00 per acre to maintain (Handcrew estimates). Additionally, the improvements within the area will be protected thus resulting in maintenance costs rather that replacement costs in event of wildfire impingement. Existing parking areas, roads, canals, trails and other such features will be incorporated into the fuel break planning process in order to reduce costs and be more efficient.

SHADED FUEL BREAK PRESCRIPTION FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

This is a defensible location to be used by fire suppression resources to reduce the hazard of wildland fires. Any fuel break by itself will **NOT** stop a wildland fire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack. Air resources may use the location for fire retardant drops.

Prescription

The intent of the fuel break is to create a fuel model or vegetative arrangement where wildfire reduces intensity as it burns into the fuel break. A ground fire, burning grass and leaf duff is the desired fire behavior. An arrangement which, provides the desired fire behavior effects, involves an area where ladder fuels are removed and tree or brush canopies will not sustain fire, and where the contiguous fuels arrangement is interrupted.

This general arrangement allows fire and resource managers to retain a species diversity of individual younger, middle aged and older plants, which allows the opportunity for an uneven aged vegetative type, without compromising the project objectives. For example, young saplings of individual oaks or conifers may be retained, although, they may be under the desired diameter, they may not contribute to undesired fire behavior effects. Additionally, it may be necessary to cull a few trees in a thick stand of conifers over the desired diameter in order to improve forest health. It is important to remember that this prescription is a guide, not an absolute. Site specific prescriptions may be developed later for individual projects which, all will be in accordance with the project objectives.

Implementation consists of removing or pruning trees, shrubs, brush, and other vegetative growth on the project area as prescribed. All work will be accomplished by use of hand crews, biological treatment or mechanical equipment; supported by chippers and/or burning as determined appropriate on a case-by-case basis. The preferred width of a shaded fuel break along a ridge top or adjacent to one is approximately 300 feet

Trees up to the 6-inch diameter at breast height (dbh) class are eligible for removal under this prescription. However, larger hazardous snags may be removed. Due to operational needs, it may be necessary to remove an occasional tree with a dbh larger than 6 inches based on forest health and project objectives. Individual trees under 6-inch bdh may be retained for diversity and if they do not disrupt project objectives. This will only be done on a case-by-case basis after proper review by all agencies.

Threatened and endangered plant and animal species, such as elderberry and other sensitive species, shall not be removed or treated, or otherwise adversely affected, within any shaded fuel break.

Cultural resources are a major resource and will be protected.

1. Understory fuels:

Understory fuels over 1 foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

2. Mid-story fuels:

Trees up to the 6-inch dbh may be removed. Exception to this size limit shall be trees that have significant defect and/or which do not have a minimum of a 16-foot saw log or trees, such as saplings, that do not present an undesirable effect. Live but defective trees larger than the 6-inch dbh providing cavities for obvious wildlife use will be retained.

Trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines. Larger overstory trees (> 6-inches dbh) do count as residual trees and, in order to reduce ladder fuels, shall have vegetation within their drip lines removed. *Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.*

Criteria for residual trees (up to < 6-inch dbh):

Conifers: Leave trees that have single leaders and thrifty crowns with at least 1/3 live crown ratio.

Conifer leave tree species in descending order:

Sugar pine
Ponderosa pine
Douglas fir
Knob-cone Pine
Gray Pine
White fir
Incense cedar

Intolerant to shade species have a higher preference as leave trees because their seed will be less likely to germinate in the understory.

3. Snags:

Snags are a conduit for fire during a wildland fire. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

18-inch diameter class or larger and not more than 30 feet in height which are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

Hardwood trees: Leave trees that have vertical leaders and thrifty crowns with at least 1/3 live crown ratio.

Hardwood leave tree species in descending order:

Valley Oak
Big Leaf Maple
Blue Oak
Black Oak
Madrone
Live Oaks

Brush: It is desirable to remove as much brush as possible within the shaded fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more that 5 feet wide.

From a fuels management perspective the following are brush leave species in descending order:

Category 1
Dogwood
Redbud

Category 2
Toyon
Buckeye
Coffeeberry
Lemmon Ceanothus
Buck brush (Wedge leaf ceanothus)

Category 3
Whitethorn
Deer brush
Manzanita
Chamise
Yerba Santa
Poison Oak
Scrub Oak

Non-native species (such as olive, fig, etc.) will be considered on a case- by- case basis.

4. Wetlands:

Wetlands and riparian areas will not be adversely affected for treatment and ground operations.

5. Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

WLPZ widths and operational limitations shall be in conformance and consistent with Title 14, California Code of Regulations, 936.5, Procedures for Determining Watercourse and Lake Protection zone Widths, as approved by the California Board of Forestry.

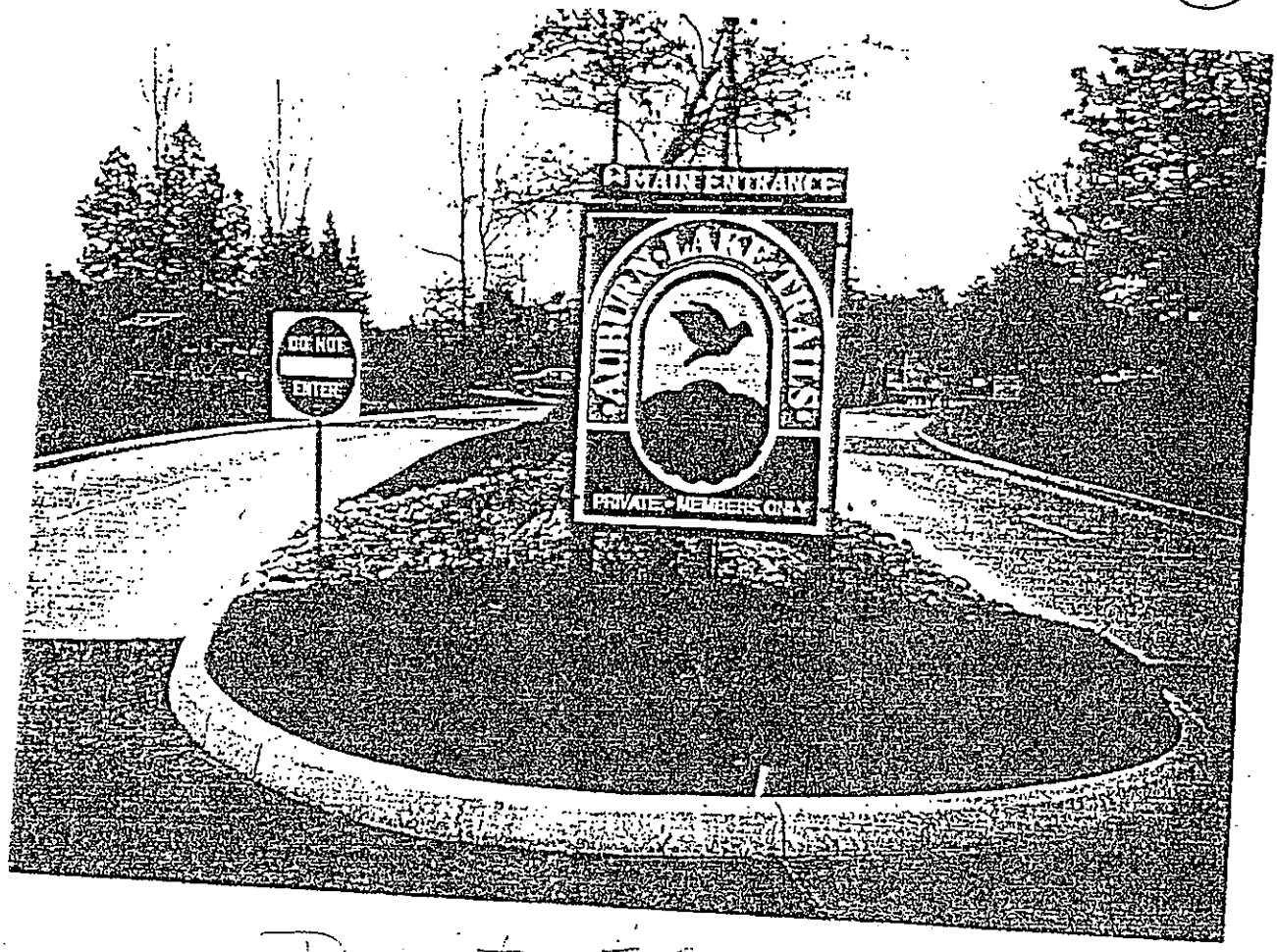
916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

TABLE I

Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures[1]								
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite includes habitat to sustain fish migration and spawning.		1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.		No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.		Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.	
Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
>50	150[2]	ADG	100[3]	BEI	See CFH		See CFI	

1 – See Section 916.5(e) for letter designations application to this table.
2 – Subtract 50 feet width for cable yarding operations.
3 – Subtract 25 feet width for cable yarding operations.

(24)



Draft 2 4-3-03

AUBURN LAKE TRAILS

FIRE SAFE & FUELS

REDUCTION PLAN

June, 2003

AUBURN LAKE TRAILS

FIRE SAFE AND FUELS REDUCTION PLAN

PLAN PREPARED FOR
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
AMADOR-ELDORADO UNIT
CAMINO, CALIFORNIA
AND
THE RESIDENTS OF AUBURN LAKE TRAILS

Prepared
by
Registered Professional Foresters
Eugene E. Murphy
Douglas R. Leisz

Approval Signatures

Signature Date
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Registered Professional Forester #1164
Cameron Park, California

Signature Date
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Registered Professional Forester # 249
Placerville, California

Plan Approved

by

California Department of Forestry and Fire Protection
Amador-El Dorado Unit

Chris Waters Date
Vegetation Management Coordinator
California Department of Forestry and Fire Protection

Resolution
of the
Board of Directors
of the
Auburn Lake Trails
Property Owners Association

RESOLVED,

The Board of Directors of the Auburn Lake Trails Property Owners Association has reviewed and hereby adopts this Fire Safe and Fuels Reduction Plan for the benefit of the community of Auburn Lake Trails for the purpose of increasing fire safety for our residents, while reducing the risk of loss of life and property.

SO RESOLVED.

Executed this xx day of xxxxxx, 2003 at Auburn Lake Trails.

John Plymer, President

Bob Diekon, Vice President

Dave Magie, Treasurer

Jack Frost, Secretary

Debee West, Member at Large

Contents

I. Executive Summary

Auburn lake Trails (ALT) is a community of 4000 acres, 1004 lots with 950 home, 3000 residents and assessed valuation of over $200,000,000.00. ALT is situated on the rim of the Middle Fork of the American River in El Dorado County. The steep topography in the canyon, heavy fuel loading combined with extensive day use activities, in the State Recreation Area, has many of the elements for a wildfire of catastrophic portions to threaten ALT.

Severe fire seasons in the western United States in the last 2 years has led to the availability of National Forest Fire Plan funds for communities at risk for fire planning and fuel treatment. The California Department of Forestry and Fire Protection (CDF) applied for and received Wildland Urban Interface (WUI) funds for ALT Fire Safe and Fuels Reduction Plan, Evacuation Plan and Biomass Utilization Paper. Environmental Documents were prepared and dollars allocated for the Plan and the Perimeter Shaded Fuel Break (PSFB). Work began, by the CDF, on the Fuel Break in February and the Plan in March, 2003 by Registered Professional Foresters..

The ALT Fire Safe and Fuel Reduction Plan addressed all the hazards and risks within and adjacent the community. The greatest threat outside the community would be a fast moving wildfire in the river canyon. Within the community there are areas where homes are intermixed with dense vegetation. Other areas of concern were identified as the Cascade Creek Campground, Recycle Area and the south facing slopes with flashy fuels between Highway 193 and ALT.

Fuel reduction was categorized into 7 Elements: Fuel Breaks, Common Areas, Inholdings, Lots, Roadsides, Trails and Other Use Areas. The vegetation (fuels) were classified into 6 fuel types and Fuel Reduction Guidelines developed for each type that can be applied to the Fuel Reduction Elements. The Plan also addressed maintenance, new home fire safe features, training exercises, prescribed fire, and periodic reviews.

A Evacuation and General Preparedness Plan was prepared in collaboration with ALT Security Department. A Biomass Utilization Paper displays alternatives for the utilization of woody material generated from fuel reduction work.

Other high priority action items were identified for future consideration; Wildfire Ignition Prevention Plan, Trail Fuel Treatment Plan and formation of ALT Fire Safe Council.

Two "Town Hall" meetings were held with the Property Owners Association (POA) and residents seeking their input. The Plans were also reviewed with CDF, El Dorado County Fire Protection District, Bureau of Reclamation, and Auburn State Recreation Area.

Much work to make ALT a Fire Safe Community has been accomplished by the POA and many home owners have completed Defensible Space around their homes.

II. Acknowledgments

This Plan was prepared under a Grant from the United States Forest Service, State and Private Forestry National Fire Plan funds and local matching funds from the California Department of Forestry and Fire Protection, (CDF) Amador-El Dorado Ranger Unit.

Gene Murphy and Doug Leisz commend the CDF and Chris Waters for having the foresight in ranking Auburn Lake Trails (ALT) as a community at high risk and seeking Grant funds for the preparation of a Fire Safe Plan for the community. The consultants also thank the Auburn Lake Trails Property Owners Association (POA) General Manager Fred Dean-Turner, Barry Heidl Chief of Security, Rich Sam Mequil, Head of Maintenance; and Dale Lake who gave the consultants their time and cooperation. Also, Rob Schnoeder of the Bureau of Reclamation, Jil Dampier of the Auburn State Recreation Area, Fred Lopez, Fire Captain, CDF, Jody Gossner, Battalion Chief CDF and Jeff Tolson of the El Dorado County Fire Protection District for their expertise and cooperation.

The consultants appreciate the excellent cooperation of residents in providing input and assistance. Also the community is congratulated on the extensive fuel treatment already accomplished by many homeowners

Excellent fuel reduction by lot owner on Lovers Leap Road
Ground fuel removed, trees pruned, fuel ladder removed.

III. Fire Safe Plan Limitations

The planners make no guarantee, warranty, expressed or implied and assumes no liability that the Fire Safe and Fuels Reduction Plan for ALT will prevent wildfire from threatening or destroying natural resources or existing or future homes or endangering residences. However, full implementation of the Plan measures and periodic maintenance will greatly reduce the exposure of homes from potential loss from wildfire and provide defensible space for firefighters and residents.

IV. Purpose and Scope

Western Sierra Nevada communities are increasingly concerned about wildfire safety. Drought years coupled with dense flammable vegetation and annual periods of severe fire weather insure the potential for periodic wildfires. ALT is best described by Foresters as being in the I Zone (Intermix, Interface or Intermingle) a zone between two incompatible fuels where a fire moves from the wildland environment, consuming vegetation for fuel, to an environment where structures are located.

The scope of the Plan recognizes the extraordinary natural features of the area and designs wildfire safety measures which are meant to compliment and become part of the community.

The purpose of this Plan is to assess the wildfire hazards and risks of the community and to identify measure to reduce these hazards. The Plan contains standards for reducing fuel loading along roads, in Common Areas, in Inholdings, and adjacent homes. Fuelbreaks and fuel reduction areas are identified and ranked in priority for implementation. In addition, the Plan addresses evacuation, disaster preparedness and opportunities for utilization of biomass.
Homeowners who live in and adjacent to the wildfire environment must take primary responsibility along with the fire services for ensuring their homes have sufficient low ignitability and surrounding fuel reduction treatment. The fire services should become a community partner providing homeowners with technical assistance as well as fire response. For this to succeed it must be shared and implemented equally by homeowners and the fire services.

V. Wildfire Background for El Dorado County

Wildfires respond to their environment of climate, topography, and fuel (the wildland vegetation and structures.) Wildfire behavior is subject to complex variables that are not fully understood. The management and control of wildfire is not an exact science, and more is being discovered about the behavior of wildland fires and their management. Under extreme burning conditions, a wildfire can be so powerful and unpredictable that fire protection agencies can only wait until fire conditions moderate before suppression can be successful. The implementation of this Plan cannot prevent wildfires from occurring nor can it eliminate damages from wildfires to values at risk within the

community or adjacent to it. Full implementation of the Plan, over time, will reduce the threat, size and intensity of wildfires and damages therefrom.

The Wildfire Situation for the Western Slopes of El Dorado County

Climate

The western slopes of El Dorado County have a Mediterranean - type climate that features hot, dry summers and cool moist winters. Precipitation comes generally from storms from the Pacific Ocean that usually begin in October and end in May. The hot, dry summers produce ideal conditions for wildfires. Annual plants die and dry while perennial plants lose much of their moisture content and become highly flammable. Fires burning under these conditions threaten lives, property, and natural resources, especially toward the end of the dry season. Two additional climatic conditions aggravate this already serious wildfire problem. Periodically, every year, the Pacific high-pressure system moves eastward over California and brings very hot; dry weather with low humidity as warm air aloft subsides and dries the vegetation even more. This condition is known as a "heat wave" and can occur at any time during the late Spring, Summer and Fall. During this condition wildfires start easily and are difficult to extinguish. The other extreme wildfire conditions usually occur in the late summer or fall when north winds blow down the Sacramento valley or east winds subside from the Great Basin. Under these conditions a wildfire can quickly escape control and create great damage before the wind stops blowing. It is this latter climatic condition which made the 1991 Oakland Hills fire so difficult to control and produced an explosive rate of fire spread, a "firestorm".

Fire History From The Gold Rush Until 1950

For half a century after the Gold Rush, settlers, miners, stockmen, loggers, and other users of California's wildlands burned California foothill lands indiscriminately. These wildfires caused considerable damage to the forests and rangelands as well as contributing to flooding in the valleys. Until the early 1900's the prevailing attitude toward wildfires in most of the state was to protect life and property and let the wildlands take care of themselves. Thus, wildfires probably continued to occur in El Dorado County on a regular basis for many years. After 1905, with the creation of the United States Forest Service and the California Division of Forestry (early 1920's) indiscriminate burning was gradually reduced and controlled.

Fire History Since 1950

As population increased in California, the threat to structures from wildfires has sharply increased. A catastrophic loss of homes due to wildfires occurred in Berkeley in 1923 when a strong north wind carried fire from Wildcat Canyon, across the Berkeley Hills and into the city, destroying 584 structures. Since then, disastrous losses of structures to wildfires have occurred with increasing frequency throughout much of California, sometimes in unlikely and unexpected locations. In the same general location of the 1923 Berkeley Fire, the disastrous 1991 Oakland Hills fire burned more than 3000 structures. A partial list of some destructive wildfires in recent years is shown below.

These fires destroyed almost 7,000 homes. Hundreds more were lost in many other wildfires. In recent years, homes were lost where few thought there was danger from wildfire. One of the best examples of this situation was the Morse Fire that destroyed 31 homes in May 1987 in Pebble Beach; an area shrouded in fog much of the year. The problems are similar to those experienced in El Dorado County today: flashy fuels (vegetation), rugged topography intermixed with homes with wood roofs. In all wildfires with heavy loss of structures, the main culprits were wind, wood roofs, and flammable vegetation too close to homes.

Major Destructive Wildfires in California Since 1950

Year	Name of Fire	County of Origin	Homes Destroyed
1956	Newton	Los Angeles	50
1961	Harlow	Mariposa	106
1961	Bel Air	Los Angeles	484
1964	Hanley	Napa	101
1964	Coyote	Santa Barbara	94
1967	Paseo Grande	Riverside	61
1970	Laguna	San Diego	382
1970	Wright	Los Angeles	103
1977	Sycamore	Santa Barbara	256
1978	Creighton	Sonoma	64
1978	Kannan	Los Angeles	224
1980	Panorama	San Bernardino	325
1981	Atlas Peak	Napa	69
1987	Morse	Monterey	31
1988	Forty-Niner	Nevada	148
1991	Paint	Santa Barbara	599
1991	Oakland, Berkeley	Alameda	3810
	Major destructive wildfires in El Dorado County		
1985	Eight Mile	El Dorado	14
1992	Cleveland	El Dorado	26

VI. Fire Safe and Fuels Reduction Plan

A. Community Description

ALT is an unincorporated community of 4000 acres with 1104 privately owned lots with 950 homes and approximately 3000 people with an assessed valuation of over $200,000,000. It is primarily situated along the Georgetown Divide immediately above the Middle Fork of the American River. The river receives a significant amount of recreation use from rafting, fishing, hiking, horseback riding, swimming and picnicking. State Highway 193 parallels portions of the community on the southern area and American Canyon, a major side drainage of the river, forms the eastern boundary.

The topography along the "Divide", where the majority of the homes are located, is relatively gently as are the south facing slopes above Highway 193. However,

the north facing slopes of the river canyon, below the "Divide' are steep (45%) and dissected by four major drainage's: Browns Bar, Wildcat, Buckeye and Maine Bar Canyons that flow to the northwest.
The community is gated with a golf course, parks, lakes and ponds, 11 Common Areas (191 acres) and 235 acres comprised of 165 lots that can not be developed due to poor percolation for septic systems. The Common Areas and POA undeveloped lots are owned by the POA. The community has numerous large lots where horses are stabled. It is estimated there are over 300 horses within the community. There are 4 parcels with a total of 52 acres of other ownership within the exterior community boundaries. Structural fire protection is provided by the El Dorado County Fire Protection District and wildfire protection by the CDF. The nearest fire Station is Station 72 in Cool. A fire hydrant system serves the community.
Currently (February 2003) there is a 300 foot wide shaded fuel break that parallels the perimeter of the community that is under construction.

B. Vegetation (Fuels) and Fire Behavior

The vegetation (fuels) within and adjacent ALT is a mosaic of fuel types. With the exception of the heavy fuels adjacent to the Middle Fork of the American River and American Canyon the fuels in the residential areas are broken up by grassy areas, horse pastures, a golf course, lakes and roads.
In ALT the broad classification of fuels falls into three general groups in the Fire Behavior Predication System (FBPS) they are: Grass and Grass-dominated, Chaparral and shrub fields, and Timber litter. BEHAVE, a fire behavior computer system, was used for estimating fire behavior. Using the Fuel Models and BEHAVE, the consultants made various "Runs" in the fuel types on a variety of slopes and wind conditions to determine flame lengths and rate of spread. From their wildfire experience and data from the "Runs" the consultants developed fuel reduction specifications for a variety of sub group fuel types to be applied to fuel breaks, Common Areas, Inholdings, roadside zones, and lots.
The CDF Hazard Severity Zoning system has three levels of severity; Very High High and Moderate. ALT and vicinity is classified by CDF as Moderate. However, an extensive area immediately adjoining ALT to the north is Very High Severity rating from the consultants classification. See Appendix E for BEHAVE computer outputs. Appendix A has pictures of the sub group fuel types, within the community, with Fuel Reduction Guidelines.

C. Problem Statements

1. **The steep terrain, composition, density, structure and heavy fuel loading of the vegetation adjacent the community in the Middle Fork of the American River includes all the elements for a catastrophic wildfire to threaten ALT under severe burning conditions.**

   In recent years three wildfires burned with in 2 miles of ALT they are:

a. American Fire – 1998, xxx acres
b. Sliger Mine Fire – 1999, xxx acres
c. Drivers Fire – 2000, xxx acres

2. **The light fuels along Highway 193, within and adjacent to the subdivision will ignite easily and have a rapid rate of spread.**

Fire history has demonstrated that grass and other light fuels are a threat to other vegetation as well as people. There is a strong tendency for the public and even some firefighters to discount the serious nature of wildfire in the grasslands of California. For instance, a grass stand of 1 ton per acre has approximately 8000 BTU's per acre. A study conducted on 100 fires where 31 fire fighters lost their lives revealed many of these burned in light fuels such as grass. Fire in the open grass and under oak stands is a serious wildfire situation in ALT.

3. **Wildland fire incidence will increase as interface populations and uses grow.**

4. **Home owners often do not recognize adequate wildfire mitigation measures.**

A review of many wildfires has conclusively shown that the most home losses occur when: (1) there is inadequate clearing of flammable vegetation around the house; (2) roofs are not fire resistant; (3) homes are sited in hazardous locations; (4) firebrand ignition points and heat traps are not adequately protected and (5) there is lack of water for suppression; (6) access roads are unsafe for fire suppression forces due to roadside excess fuels.

5. **Provisions must be made to maintain all fuel treatments.**

The wildfire protection values of fuel modification are rapidly lost if not maintained.

6. **Portions of the subdivision are fractured by drainage's, saddles and ridges and steep side slopes which can cause erratic fire behavior.**

For example, Browns Bar Canyon splits into two side drainage's, just east of Double 'O" Court, creating a constricted canyon which can cause erratic fire behavior.

7. **Evacuation and Preparedness Plans are essential to safely evacuate residents and animals in a wildfire emergency.**

ALT has an existing Evacuation Plan that is being updated.

D. Goals

1. Ensure ALT is a Fire Safe Community.
2. Modify the existing high hazard fuels on vacant lots, along roads in Common Areas and other current use areas.
3. Ensure Defensible Space is provided around structures.
4. Reduce the number, size and intensity of wildfires
5. Ensure fuel treatment measures are maintained.
6. Ensure residents can evacuate safely if wildfire threatens homes.
7. Establish a neighborhood "Fire Watch" structure.
8. Explore alternatives for use of biomass for energy production, mulch etc.
9. Promote land management practices that will maintain a healthy stand of native vegetation, consider wildlife habitat, and protect the soil, water and visual resources.

E. Fuel Reduction Measures

For planning purposes, fuel treatment areas for ALT are subdivided into the following categories and sub categories:

1. Fuel Breaks
2. Fuel Reduction Areas
    - (a) Common Areas
    - (b) Land Inholdings
    - (c) Subdivision Lots
        - (1) Developed
        - (2) Vacant Developable
        - (3) POA not developable
3. Prescribed Fire
4. Roadside
5. Trails
6. Other

Fuel types in ALT have been classified by the consultants into 5 sub group fuel types (Annual Grasses with Scattered Trees & Brush, Brush, Transition Fuels, Oak with Conifer Overstory, Mixed Conifer & Oak with Brush Understory). In Appendix A, the fuel types are pictured with guidelines for treatment. It is important to understand that the actual on the ground fuels will vary from the pictures due to variable vegetation mosaics. As a general rule of thumb the goal is to: remove ladder fuels, reduce the volume of fuels on the ground, and aerial fuels both vertically and horizontally, separate tree crowns with a end result that looks "park like".

1. Fuel Breaks

A fuel break is defined as a generally wide (60-1000 feet) strips of land on which native vegetation has been permanently modified so that fires burning into them can be more readily controlled.
Features common to all fuel breaks:

- Contain fire lines (e.g. roads, trails, hand lines) which can be quickly widened and used as a line for burning out.
- Must be "staffed" with suppression resources in advance of an approaching fire.
- Must have "anchor points" to prevent fires from making an "end run" around the fuel break.
- Contain Helispots.
- Must be maintained to standards.
- Outer edges of a fuel break not be a straight lines but undulating to reduce the visual impact and provide more "edging" for wildlife.

On Bureau of Reclamation lands and adjacent private lands the following fuel treatment prescription is prescribed. See Shaded Fuel Break Prescription For Bureau of Reclamation Lands of the Auburn State Recreation Area, Draft 6 dated 6/05/01, in Appendix C, for more detail.

- The width is approximately 300 feet.
- Only trees up to 6 inch dbh are eligible for removal. Trees with significant defect and/or do not have a minimum of a 16 foot sawlog may be removed.
- Trees are to be removed to create a horizontal distance between trees from 20 feet up to 8 to 15 feet between crown drip lines.
- Larger overstory trees, over 6"dbh, shall have vegetation within drip line removed.
- Prune branches off all residual trees from 8 to 10 feet above the ground but not less than ½ of the crown.
- Understory fuels over 1 foot in height are removed. Plants may be retained if there is a horizontal separation of 3 to 5 times the height of the residual plant, and are not within the drip line of overstory trees.
- Retain snags over 18 inches in diameter and are not more than 30 feet in height. Remove snags that are capable of falling and reaching a road or structure and are not separated by 100 feet.
- Remove as much brush as possible. However, individual plants may be left if less than 5 feet tall and 5 feet wide.

On private lands use the Fuel Reduction Guidelines, by fuel type, as displayed in Appendix A

a. The Perimeter Shaded Fuel Break (PSFB)

This fuel break is under construction along the perimeter of the subdivision that borders on the southern rim of the Middle Fork of the American River and on

the western rim of American Canyon. The CDF, with permission of lot owners, will modify the fuels on lots that border on the fuel break. This work will be from the home, outward, to the lot rear property line. On the contiguous Bureau of Reclamation lands the fuels will be treated an additional 300 feet, plus or minus depending on topography, outward from the lot rear property line. The purpose of the PS FB is to provide defensible space for firefighters to protect the homes.

The consultants offer the following comments on this fuel break in progress:

1. Due to the steep topography, heavy fuel loading in the river canyon and the Federal 6 inch dbh limits on tree removal the consultants determined that the fuel break will not stop a fast moving crown fire but will provide some important Defensible Space protection for homes in the ALT development.
   The PSFB must: effectively modify fire behavior, be strategically placed, be cost effective and be maintained. The Bureau of Reclamation prescription which limits tree removal to less than 6 inches diameter, severely restricts adjustments to canopy closure and prevents fully effective treatment. It is the consultants professional opinion that much more live fuel must be removed to provide canopy and stem separation if the potential for crown fire is to be fully mitigated on this side hill fuel break location. For example, some trees in the 6" to 30" diameter must be removed if tree canopy separation is to be obtained. The consultants also recommend adjustments and expansion of the PSFB to include treatment on 2 key ridges described below (1b. & 1c.) and adjustment in Browns Canyon.

2. The headwaters of Browns Bar Canyon, just north of Deer Ravine Road, becomes quite narrow then opens up into two side drainage's. This land form configuration can produce a Venturi wind effect and this combined with the heavy fuels could cause erratic fire behavior between the drainage's. It is recommended constructing the PSFB directly across the drainage from Windy Mill Road westerly to Lovers Leap Road for the purpose of preventing a wildfire from entering the headwaters of the drainage. The land between the drainages is Common Area and should receive high priority for treatment.

3. It is recommended expanding the width of the fuel break in the grass flat north of Big Chief Road, on Federal lands, for use of a Staging Area for suppression resources.

4. Incorporate the old road, dozer trail and hiking trail within the fuel break along the north and west boundaries of the community near Shirt Tail Road.

5. The consultants recommend expanding the fuel treatment in the following "flat areas" to be used as "anchor point" for fire line construction during suppression activities:
    1. The ridge top flat area off Windy Mill Road
    2. The ridge top just north of the curve in Grouse Ridge Road.
    3. The grassy flat area north of Big Chief Road.

6. The planned PSFB west of Yankee Jim CT be relocated on the ridge line that ties into Highway 49 in lieu of its proposed side slope location.

b. Stoney Bar Fuel Break

It is recommended that the PSFB be expanded to include the north/south ridge between Wildcat Canyon and Buckeye Canyon on Bureau of Reclamation lands. The purpose of this fuel break is to help prevent a fire from burning up canyon and threatening ALT. See map in Appendix for location.

1. This fuel break extension should be anchored into the Perimeter Fuel Break at Stoney Bar Road and the Middle Fork of the American River.

2. The width of the fuel break should be 300 to 500 feet depending on the topography, (wider in the saddles and flats, narrower where the ridge top is narrow with step side slopes).

3. Maintain the portions of the existing road that is within the fuel break. Construct a hand line about 3 feet wide, where there is not an existing road or trail, down the center of the fuel break ridge to mineral earth. The purpose of this road and hand line is to provide suppression forces a fire line that can quickly be widen and fired.

4. Construct a Helispot on one of the high points along the ridge.

c. Roses Bar Court Fuel Break

It is recommended that the PSFB be expanded to include the east/west ridge east of Roses Bar Court and be anchored in the American Canyon water course.

1. The width of the fuel break should be 300 to 500 feet.

2. Incorporate existing grassy open space areas and maintain existing trails and/or construct a fire line to be used as a line for firing out.

Recommended priorities for Fuel Break construction are: (1) Completion of PSFB, (2) Stoney Bar Fuel Break and (3) Roses Bar Fuel Break.

2. Fuel Reduction Areas

Fuel Reduction is defined as any manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control (e.g. lopping, pruning, chipping, crushing, piling, burning). Fuel reduction areas designated for treatment in ALT are: Common Areas, Land Inholdings, Lots, Roadside, Trails, and Other areas.

a. Common Areas

There are 9 separate Common Areas, for a total of 191 acres, scattered through the community. They ranging in size from 1/2 acre to 50 acres with a variety of fuel types, and are owned by the POA and are dedicated to permanent open space.

1. Fuel treatment should be by the Fuel Types and Guidelines as displayed in Appendix A.

2. Priority for Common Areas fuel treatment is listed below: (See map in Appendix for locations)

Priority	Common Area
1.	G
2.	J
3.	I
4.	H
5.	K
6.	F
7.	E
8.	D
9.	C
10.	B
11.	A (no treatment, Fire Safe)

b. Land Inholdings

There are 4 parcels (5 to 41 acres) of land within the boundaries of ALT that are of other ownership (see map in Appendix for location). The consultants wrote each landowner requesting permission for the CDF to enter their lands for fuel treatment purposes.

1. Fuel treatment should be by Fuel Types Guidelines displayed in the Appendix A.
2. Priority for Inholding parcels for fuel reduction treatment is as listed

below.

Priority	Inholding
1.	I
2.	II
3.	III
4.	IV

c. Subdivision Lots

For fuel treatment and scheduling purposes ALT subdivision lots are exhibited in three categories; (1) privately owned lots with homes, (2) vacant privately owned lots and (3) non developable lots owned by POA.

(1.) Developed Lots

There are approximately 950 lots with homes of varying size from ¼ to 10 acres. Many have horse pastures and corals which has created Defensiblé Space (DS) for structures. Structures in the grassy fuels are generally Fire Safe. Many lot owners in the heavier fuels have created DS around their homes. There are also occupied lots that are at risk due to lack of fuel treatment. Some have planted exotic plants of high resins content such as Junipers and trees to close to homes and some are sited in hazardous locations. Lots within the PSFB will have their backyard fuels treated by the CDF.

a. All lots with structures must meet the Firescaping Standards displayed in Appendix B.

b. Priority for Lot Firescaping accomplishments, if not already to standard) are:
   (1) Front and side yards of homes within the PSFB
   (2) The second "tier" of lots adjacent the perimeter lots in the PSFB
   (3) Lots on the southern boundaries of ALT
   (4) Lots adjacent the "other private" parcels that are accessed of Highway 193 northwest of Cramer Road
   (5) Those adjacent or near undeveloped lands with dense vegetation.
   (6) Lots in urban setting .
   (7) Lots with light ground cover, improved pasture, and widely spaced plants.

c. It is recommended that the POA establish several Demonstration Lots, in central locations, that will feature DS fuel treatments in a variety of fuel types.

d. It is recommended the POA establish a Demonstration Garden in a Park that will feature fire resistant plants.

e. It is recommended that the POA pursue funding from the private sector that can be used to create DS, for Seniors, who are not financially unable to hire a contractor.

(2.) Vacant Developable Lots

There are approximately 150 vacant lots, that are "buildable" scattered throughout the community. Currently there are approximately 20 homes under construction. Lot owners have the responsibility for fuel reduction on their lots. Fuel treatment be implemented to the standards displayed by Fuel Types Guidelines in Appendix A. Vacant lots within the PSFB will be 100% treated, with permission of lot owner, as the fuel break is constructed. Vacant lots outside the PSFB should be stratified by fuel severity and treated to bring them within acceptable fuel level even before occupied. The priority for treatment of vacant developable lots is:

a. Lots within the PSFB
b. Lots along the southern boundaries of ALT.
c. After additional analyses areas off Shirt Tail, Double O Mine, Deer Ravine, Strap Miner, and Big Nugget roads or courts.

(3.) POA Lots That Are Not Developable

There are approximately 170 lots for a total of 235 acres that are owned by the POA. Homes can not be constructed on these lots due to poor soil percolation for a septic system. The lots vary in size from ¼ acre to 5 acres, and have a variety of fuel types. Fuel reduction treatment should be by Fuel Type Guidelines displayed in Appendix A. The priority for treatment of POA Lots is:

a. Lots within the PSFB
b. Lots off Browns Creek Trail, Browns Bar Ct, Double O Mine Ct, and lots north of Big Nugget Trail
c. Lots with heavy fuels that are adjacent lots with homes.

It is recommended the POA

a. Work with the El Dorado County Fire Safe Council to request their Door Yard Chipper Program be initiated in ALT to encourage and support lot owner fuel treatment work. See Fire Safe Council Chipper Handout in Packet.
b. Distribute El Dorado County Fire Safe Council "Homeowners Watch Outs!" brochure to every lot owner. Copy of handout in Packet.
c. Distribute "Will Your Home Survive" to all employees. Copy in Packet.

d. Roadside

There are xx miles of privately owned roads within the community that are managed by the POA. Some of the cul-de-sac and side roads do not meet current county standards as to width or turn arounds at dead end streets. Segments of some roads have heavy fuel loading within the road prism and lack of vertical clearance. Ignitions do occur along roads. Wildfires adjacent roads will create radiant heat that can close a road to emergency vehicles and residents. The following fuel treatments are recommended along ALT roads:

1. Road shoulder and ditches have all vegetation removed annually.
2. Fuels within the right of way be treated to the standards displayed in the drawings in Appendix A. (Lot owners treat fuels on their lots to the standards prescribed outward to meet the road right of way fuel treatment.)
3. All roads should have 15 feet vertically clearance above the road pavement..
4. Cul-de-sacs without a turn around at its termini should have a "Hammer/head T" constructed.
5. Top three roads for priority treatment are:
   (1.) Shirt Tail
   (2.) Double O Mine
   (3.) Sweetwater from American Trail to Bottle Hill CT
6. All roads with locked gates should be equipped with a Knoks Lock.

e. Trails

There are 32 miles of horse and hiking trails within the boundaries of ALT. There are also xx miles of trail located on Bureau of Reclamation lands in the canyons below the subdivision. Trails within the community are managed by the POA. Trails on the Bureau of Reclamation lands are managed by the Auburn State Recreation Area. A fire at mid slope in the canyon ,adjacent a trail, could be difficult to contain and become a threat to ALT.

It is recommended that a Wildfire Prevention Plan be prepared for the total trail system that address ignition prevention, fuel treatment, prevention signing, closures etc.

f. Other Areas

Located throughout the community are other areas that receive heavy use. They are:

1. Indian Bow Lake

   Reduce grass to a 2 inch stubble by June 1, annually around tennis courts, above parking lot to foot trail and fishing and picnicking areas.

2. Soccer Field – Fire Safe.
3. Cascade Trail Campground

   Close all camping units along loop road, in wildfire season, until camping sites and road are fire proof.
4. BarnLoft and Stable Area – Fire Safe
5. Recycle Area

   Maintain the 100 foot fuel reduction area around drop site. Due to air quality environmental factors from burning, utilization of woody material and wildfire ignition potential, the consultants recommend closing the site and explore the alternatives for disposal of woody material in the Biomass Utilization Paper.

F. Maintenance of Fuel Reduction Treatments

Maintenance of the all fuel treatment areas must be scheduled periodically or the fuel modification values will quickly be lost. Maintenance may be accomplished in the following ways: chemical treatment, prescribed burning, machine mastication, hand work, animals, biomass utilization or a combination of the above. Utilization of biomass is the preferred alternative.

It is recommended that the POA:

1. Seek Fund Sources from CDF and El Dorado County Fire Safe Council (EDCFSC). Appoint resident or employee to represent ALT on EDCFSC.
2. POA form a Fire Safe Council to help lot owners accomplish and maintain their fuel reduction work (See Paper in Packet on "How To" form a Council).
3. Initiate Chipper Program with CDF or EDCFSC (See EDCFSC 'Flyer" in Packet).
4. Pursue use of goats for fuel reduction and maintenance.

   Grazing is a form of biological treatment applicable as a maintenance technique. This option exists where the plants are palatable to livestock. The livestock consume the vegetation thus reducing fuel loading. Goats prefer forbs, and shrubs, but will also eat grass, whereas cattle and horses will primarily eat grass. Steep slopes can be grazed by goats, sheep and horses but cattle prefer not to graze on slopes over 25%. Fencing is a major cost in a live stock operation with cattle and horses. Herding of goats is more economical depending on the market and size of the maintenance operation. It is recommended the POA contact commercial goat owners to explore opportunities to utilize goats for fuel reduction and maintenance. See Packet for information on local goat business that specialize in vegetation control.

G. Other Fire Safe Mitigation Measures

1. New Homes

As new homes are constructed or existing homes maintained, it is recommenced

that the following be required:

a. Class A roofing
b. Enclose decks that are cantilevered out over the natural slope.
c. Box eaves in high hazard areas.
d. Use ignition resistant siding materials high hazard areas such as stucco, Hardy Board etc.
e. Homes on lots over 1 acre maintain a 30 foot setback from all lot lines.
f. Do not site homes in saddles, in a draw or on steep side slopes.
g. Driveways should conform to SRA standards providing a minimum of 10 foot traffic lane and those over 150 feet in length, but less than 800 feet should have a turnout near the midpoint of the driveway.

2. Periodic Reviews

Every five years the fire agencies and the POA review the fuel treatment areas to determine if additional fuel hazard reduction work is necessary.

3. Joint Training Exercises

a. Periodically the fire agencies, law enforcement and POA conduct a simulated Evacuation Exercise.
b. Annually the fire agencies visit the fuel breaks to plan firing scenarios, access, maintenance needs etc.

4. Wildfire Ignition Prevention Plan

Prevention of wildfires is a top priority for ALT. It is highly recommended that a Wildfire Ignition Prevention Plan be prepared for the community and adjacent lands that addresses the following elements:

a. analysis of person caused wildfires for last 10 years
b. signing
c. closures
d. shut downs
e. information and education
f. administration
g. enforcement
h. trails

5. Prescribed Fire

Consider the CDF Vegetation Management Program (VMP) for the use of Prescribed Fire within the communities Common Areas and large POA lots. Also work with the Bureau to initiate a Prescribed Fire program to reduce fuels and widen fuel breaks on Federal lands. (See VMP brochure in Packet).

VII. APPENDIX

APPENDIX A

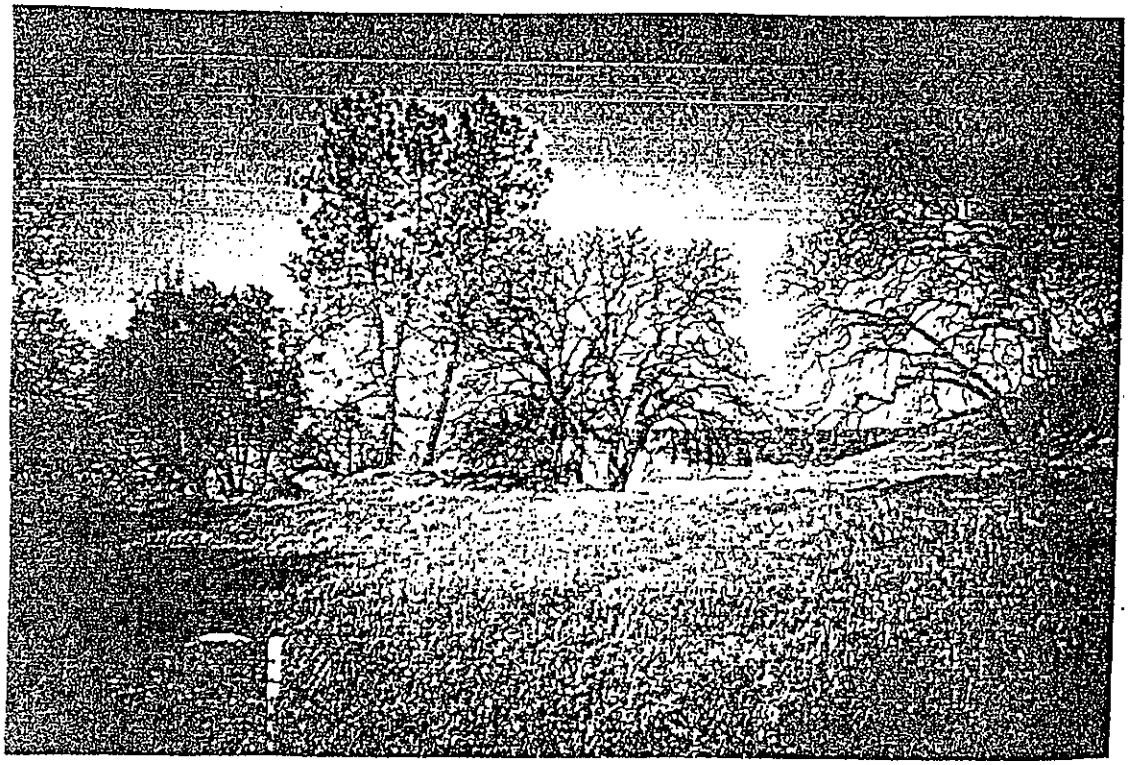
Auburn Lake Trails

Fuel Reduction Guidelines for Vacant Lots, Common Areas, Inholdings and Other Areas

(Refer to Firescaping Standards for Developed Lots & Bureau Prescription for Fuel Breaks)

Annual Grasses with Scattered Trees & Brush

(North of Big Chief Road)



1. Reduce grass to a 2 inch stubble by June 1, annually, in specified areas, i.e. vacant lots, roadside areas etc. Large Common Areas reduce grass on perimeter only.
2. Remove all dead trees.
    a. In open space areas 2 snags per acre may be left for wildlife purposes if not within 100 feet of structure or road.
3. Leave all live trees.
4. Prune all trees of live and dead branches for 8 to 10 feet above ground (ladder fuels) but not more than 1/3 of tree crown.
    a. Multi stem Live Oak trees: remove all dead stems, cut off green stems at 8 to 10 feet above the ground that arch over and are growing downward towards the ground.
5. Remove brush under tree drip lines and "jackpots" of fuel.
6. Every 3 years remove all dead and down tree limbs and logs that are over 1 inch in diameter.
7. Slash created by fuel reduction actions must be disposed of by burning, chipping, hauling off site or a combination of disposal methods.

Appendix A continued
Auburn Lake Trails
Fuel Reduction Guidelines for Vacant Lots, Common Areas, In holdings and Other Areas

(Refer to Firescaping Standards for Developed Lots and Bureau Prescription for Fuel Breaks)

Brush, Mixed Chaparral)
( )

1. Remove most brush. (approximately 2/3).
2. Specimen Plants and small islands of brush may be left for wildlife and the visual resource if there is 25 feet between crowns and diameters of islands do not exceed 15 feet. Do not retain Chamise.
3. Leave all live trees where possible. (There are usually live trees that are suppressed by the brush and may be released with careful removal of the brush plants.
4. Burn remove or masticate in place ground fuels. logs. limbs etc.) larger than 1 inch in diameter
5. Slash created by above fuel reduction must be disposed of by burning. chipping or hauling off site or a combination of disposal methods.

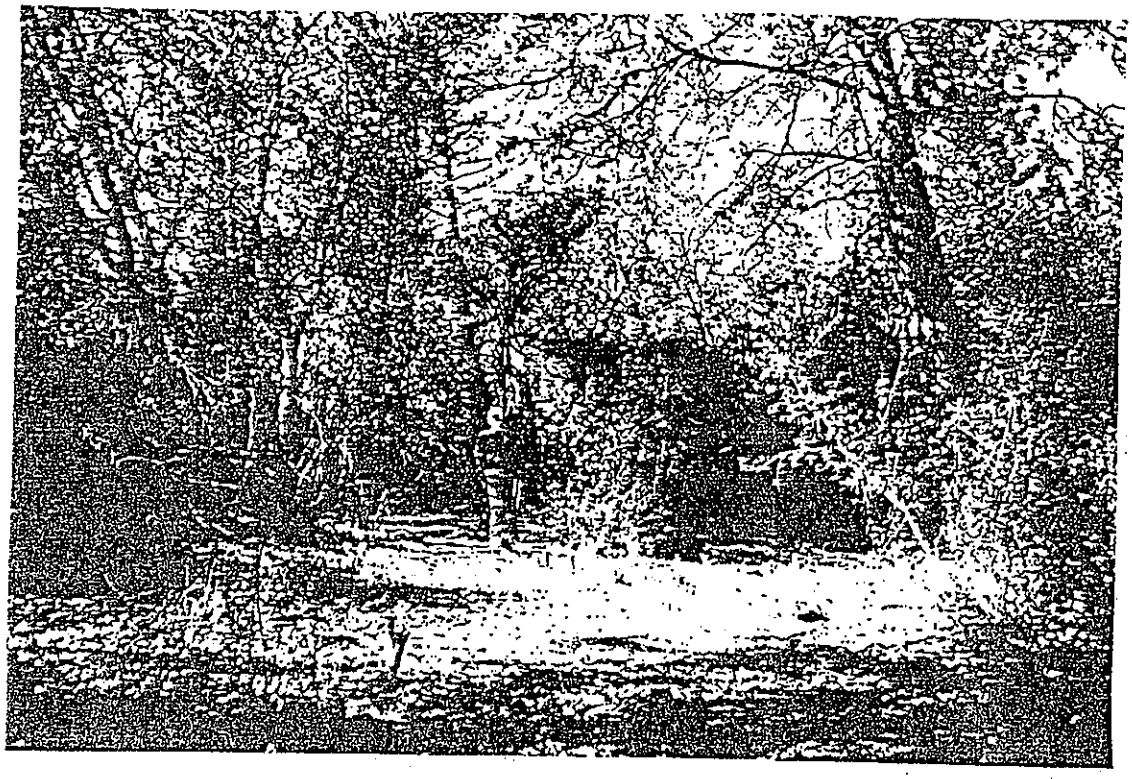
Auburn Lake Trails

Fuel Reduction Guideline for Vacant Lots, Common Areas, Inholdings and Other Areas

(Refer to Firescaping Standards for Developed Lots & Bureau Prescription for Fuel Breaks)

Oak with Scattered Conifer Overstory

(Windy Mill Cul-de-Sac)



1. Leave all Live trees
    a. Scrub oak, Quercus berberidfolia, may be removed if in brush form class.
2. Remove all dead trees
    a. Two snags per acre may be left for wildlife purposes if separated by 100 feet, not over 30 feet tall and not within 50 feet of road or structure.
3. Prune all trees of dead and green branches 10 to 12 feet above the ground but not more than 1/3 of the tree crown.
    a. Multi stem Live Oak trees: remove all dead stems, cut off green stems at 10 feet above the ground that arch over and are growing towards the ground.
4. Remove all brush.
5. Remove all seedlings, saplings to provide a horizontal separation of approximately 20 feet between trees.
6. Remove all down limbs, and logs that are over 1 inch in diameter but less than 6 inches in diameter. Over 6 inches may be left if separated by 10 feet.
7. Reduction of grass to 2 inch stubble optional on Vacant and POA Lots
8. Slash created by above fuel treatments must be disposed of by burning, chipping, hauling off site or combination of disposal methods.

Appendix A continued

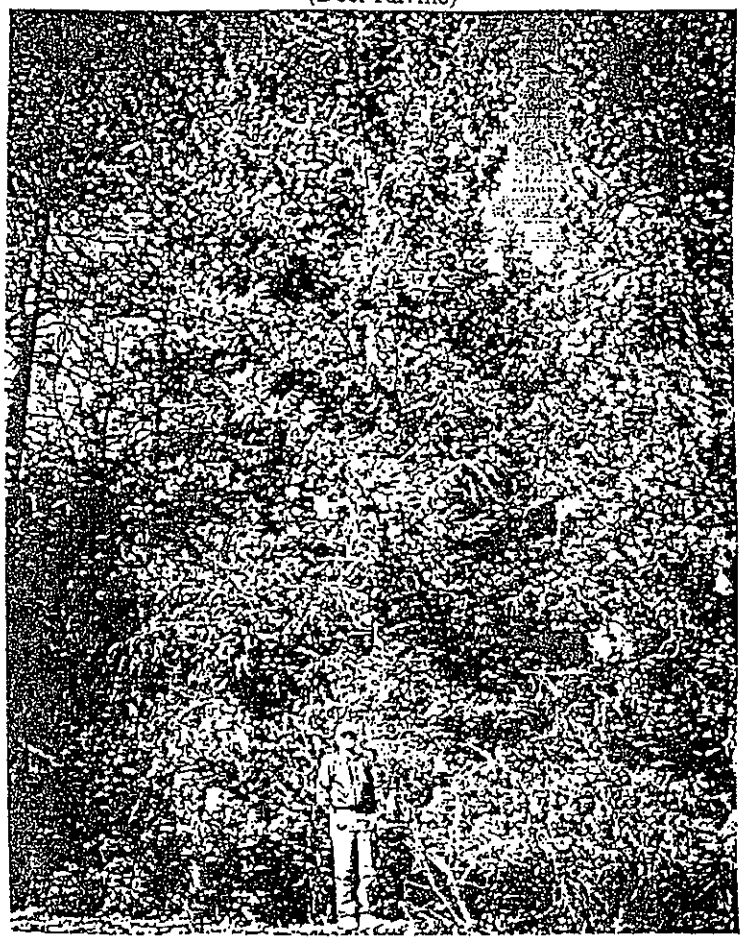
Auburn Lake Trails

Fuel Reduction Guidelines for Vacant Lots, Common Areas, Inholdings and Other Areas

(Refer to Firescaping Standards for Developed lots and Bureau Prescription for Fuel Breaks0

Mixed Conifer & Oak Overstory With Brush Understory

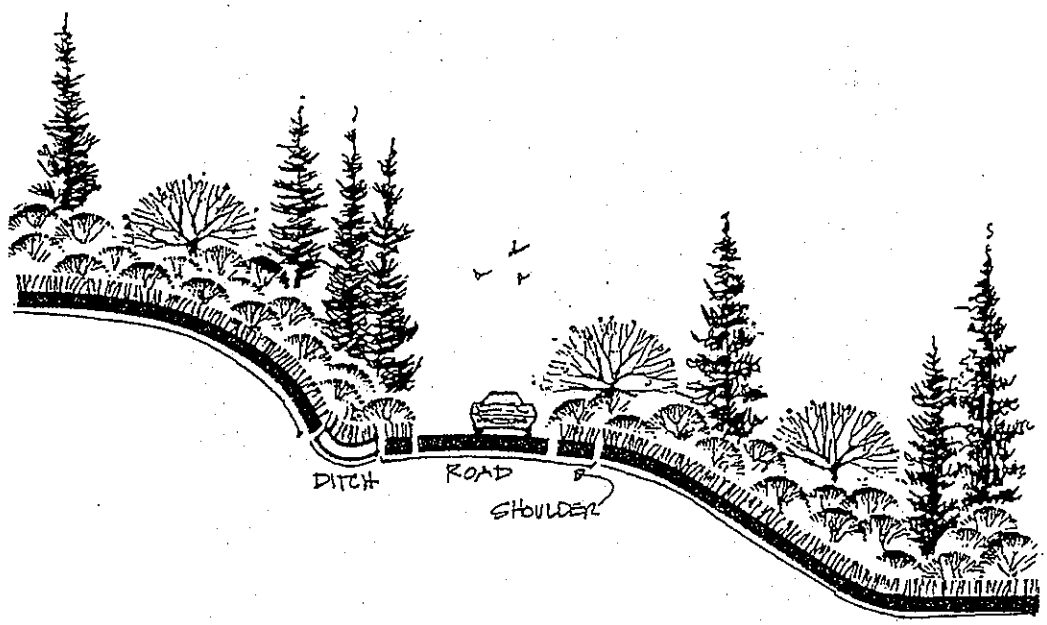
(Deer Ravine)



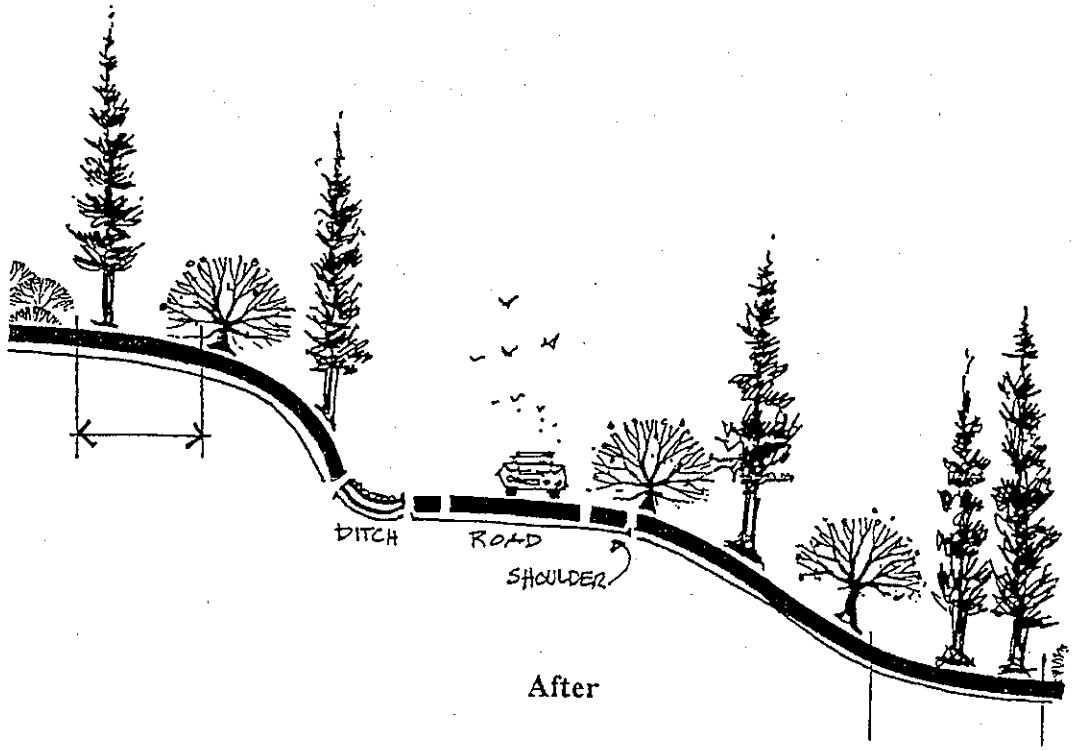
1. Remove all dead trees.
    a. Two snags per acre may be left for wildlife if separated by 100 feet, not over 30 feet tall and not within 50 feet of road or structure.
2. Leave all overstory conifers over 30 inches dbh. Conifers from 6 inch to 30 inch dbh may be removed if crowns are touching to create horizontal separation. **(Removal of trees in these diameter classes will require a Timber Harvest Plan approved by the CDF) unless granted an Exception).**
    a. Prune overstory conifer of all live and dead branches for 20 feet above ground but not more than 1/3 of the tree crown.
3. Leave all thrifty mature oaks.
    a. Prune oaks of all dead and green branches for 10 feet above the ground but not more than 1/3 of the tree crown.
4. Remove all seedlings and saplings up to 6 inches in dbh to provide a horizontal separation of 3 to 5 times the height of the leave trees and are within 10 feet of the drip line of overstory trees.
5. Remove all brush and Scrub Oak.
6. Remove all down limbs and logs that are over 4 inches in diameter but less than 8 inches in diameter. Over 8 inches in diameter may be left if separated by 12 feet.
7. Slash created by above fuel treatments must be disposed of by burning, chipping or hauling off site or a combination of disposal methods.

Appendix A continued
Auburn Lake Trails

Fuel Reduction Guidelines for Roadside Fuels - Within the Road Right of Way
Before and After Drawings



Before



After

Appendix B.

FIRESCAPING STANDARDS
For
Auburn Lake Trails
Developed Lots

Firescaping is an approach to landscaping to help protect homes from wildland fires. The goal is to create a landscape that will slow the advance of a wildfire and create a Defensible Space that provides the key point for fire fighting agencies to defend the home. This approach calls for a system of landscape zones surrounding the home. Each zone may contain a balance of native and exotic plants that are fire and drought resistant, help control erosion, and are visually pleasing.

Zone I

This zone extends to not less than 30 feet from the house in all directions (or to the property line) and has a traditional look of irrigated shrubs, flower gardens, trees and lawns. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc. exceeding 1 inch in diameter) are removed. All trees are pruned up to 8 - 10 feet above the ground, but no more than 1/3 of the crown is removed. The plants in this zone are generally less than 18 inches in height, must be slow to ignite from wind blown sparks and flames. Such plants produce only small amounts of litter and retain high levels of moisture in their foliage year around. Native oaks are permitted inside the Zone, but may not be within 10 feet of the roof or chimney. Grass and other herbaceous growth within this zone must be irrigated or if left to cure must be mowed to a 2 inch stubble, disked, chemically treated or removed. Such treatment must be accomplished by June 1, annually. This zone has built in fire breaks created by driveways, sidewalks etc.

ZONE II (Zones I & II)

This zone adds 50 feet to Zone I and extends to a minimum of 80 feet from the house in all directions (or to the property line). This zone is a wide band of low growing succulents and ground covers designed to reduce the intensity, flame length and rate of spread before a wildfire reaches Zone I. Native trees are preserved but are pruned of dead material up to 8 - 10 feet above the ground but no more than 1/3 of the crown is removed, grasses are mowed, disked or chemically treated, Shrubs are not to exceed 24 inches in height and placed to create a pleasing look yet slow a fires progress. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc.) exceeding 1 inch in diameter are removed. Tree spacing should be maintained to provide 10 foot horizontal space between crowns. Irrigation may be necessary to maintain a quality appearance and to retain the retardant ability of the plants. Treatment of herbaceous vegetation must be completed by June 1, annually.

Appendix B. (continued)

ZONE III (Zones I, II & III)

This Zone adds 50 feet to Zones I and II and extends to a minimum of 130 feet, or to the property line, from the house and is a transition area to the outlying native vegetation. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc.) exceeding 1 inch in diameter are removed. It is characterized by planted deep rooted native vegetation interspersed with fire resistant ground covers such as Dwarf Coyote Brush, Dwarf Rosemary, and low growing manzanita (not to exceed 24 inches in height). Annual grasses are mowed after they have cured by June 1 annually. Native trees are preserved and are pruned of dead limbs up to 8 - 10 feet. Spacing should be maintained to provide 10 foot horizontal space between tree crowns.

ZONE IV

This zone starts at 130 feet from the home and extends to all the property lines. Live trees are retained and pruned up to 8 - 10 feet and dead trees removed. No plants are added. Brush is removed, however specimen bushes and islands of brush may be retained (do not retain chamise, Toyon) if spaced with 25 feet between islands and diameter of islands does not exceed 15 feet. Ground fuels, limbs, logs etc. over 2 inches in diameter are removed. Spacing should be maintained to provide 10 foot horizontal space between tree crowns.

For all Zones with Live Oak

Multi stemmed Live Oaks present a serious fire problem if untreated. Treat the Live Oak as to the following specifications: (a.) remove all dead limbs and stems, (b.) cut off green stems 8 - 10 feet above the ground, that arch over and are growing downwards to the ground.

Regular maintenance is essential in all zones. Litter must be removed, trees pruned and sprouts controlled on a regular basis

Appendix B (continued)

Fire Resistant Plant List

To be developed for ALT

SHADED FUEL BREAK PRESCRIPTION FOR BUREAU OF RECLAMATION LANDS OF THE AUBURN STATE RECREATION AREA

DRAFT 6 (9/05/01)

Shaded Fuel Break: A defensible location to be used by fire suppression resources to suppress oncoming wildland fires. Any fuel break by itself will NOT stop a wildland fire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack or firing out. Air resources can use the location for fire retardant drops.

Shaded Fuel Break Widths: The preferred width of a shaded fuel break along a ridge top or adjacent to one is approximately 300 feet.

Defensible Landscape: This prescription may also be considered for use in those areas on lots that will be treated for fire safe clearance.

Defensible Space: This prescription may also be considered for use in those areas on lots that will be treated for fire safe clearance within 30 to 100 feet of existing structures. In addition to the prescribed treatments below, all annual grasses are to be maintained to below 4 inches in height. Branches overhanging structures are to be removed along with any portion of vegetation within 10 feet of the outlet of any chimney or stovepipe. Dead wood and branches within the zone and leaves and needles on roofs are also to be removed.

Prescription

Note: only trees up to the 6 inch diameter at breast height (dbh) diameter class are eligible to be removed under this prescription with the exception of hazardous snags.

Due to operational needs at the time fuel modification for a shaded fuel break occurs it may be necessary to remove an occasional tree with a dbh larger than 6 inches. This will only be done on a case by case basis after proper review by all involved agencies.

Threatened and endangered plant and animal species, such as elderberry and other sensitive species, shall not be removed or treated, or otherwise adversely affected, within any shaded fuel break.

Cultural resources are of a major concern in any area where they may exist. These resources will be protected, wherever they are found.

Implementation consists of removing or pruning trees, shrubs, brush, and other vegetative growth on the project area. All work will be accomplished by use of heavy equipment, masticator and/or hand crews supported by chippers and/or burning.

1. Understory fuels

Understory fuels over 1 foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

2. Mid-story fuels:

Only trees up to the **6-inch** dbh may be removed. Exception to this size limit shall be trees that have significant defect and/or which do not have a minimum of a 16-foot sawlog. Live but defective trees larger than the **6-inch** dbh providing cavities for obvious wildlife use will be retained.

Trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines. Larger overstory trees (> 6-inches dbh) do count as residual trees and, in order to reduce ladder fuels, shall have vegetation within their drip lines removed. Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

Criteria for residual trees (up to < 6-inch dbh):

Conifers: Leave trees that have single leaders and thrifty crowns with at least 1/3 live crown ratio.

Conifer leave tree species in descending order:

Sugar pine
Ponderosa pine
Douglas-fir
Knob-cone Pine
Gray Pine
White fir
Incense cedar

Intolerant to shade species have a higher preference as leave trees because their seed will be less likely to germinate in the understory.

3. Snags:

Snags are a conduit of fire during a wildland fire. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

18-inch diameter class or larger and not more than 30 feet in height which are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

Hardwood trees: Leave trees that have vertical leaders and thrifty crowns with at least 1/3 live crown ratio.

Hardwood leave-tree species in descending order:

Valley Oak – Riparian, less common

Big Leaf Maple- Riparian area, less common
Blue Oak - least leaf surface area, less volatile when burning
Black Oak - higher leaf surface area
Madrone - more volatile when burning
Live Oaks - most volatile when burning, branches closest to ground.

Brush: It is desirable to remove as much brush as possible within the shaded fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more that 5 feet wide.

Brush leave species in descending order:

Category 1

Dogwood –
Redbud -

Category 2

Toyon –
Buckeye –
Coffeeberry -
Lemmon Ceanothus - less volatile
Buck brush (Wedge leaf ceanothus) - smaller brush plant, less volatile

Category 3

Whitethorn - lower lying plant
Deer brush - larger plant, high leaf surface area, more volatile when burning
Manzanita - larger plant, high leaf surface area, more volatile when burning
Chamise - foliage contains highest amount of flammable oils, most volatile when burning
Yerba Senta
Poison Oak
Scrub Oak
Non-native species (such as olive, fig, etc.) will be considered on a case by case basis.

4. Wetlands:

Wetlands and riparian areas will not be adversely affected for treatment and ground operations.

5. Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

Appendix D.

AUBURN LAKE TRAILS
FIRE SAFE & FUELS REDUCTION PLAN
PROJECT SCHEDULE AND PRIORITIZATION MODEL

Fuel Treatment Groups	Priority With Group	Community Priority	Schedule	Remarks
Fuel Breaks				
PSFB	1	2	2003 & 04	Construction started 2003
Stoney Bar	2	5	2005	
Roses Bar	3	6	2006	
Common Areas				
A	-			No treatment
B	10	11		Low Priority
C	9	13		Low Priority
D	8	14		Low Priority
E	7	2	2004	Treat fuels with PSFB
F	6	2	2004	Treat fuels with PSFB
G	1	2	2003	Treat fuels with PSFB
H	4	2		Treat fuels with PSFB
I	3	8		Consider prescribed fire
J	2	9		THP underway
K	5	10		75% grass fuels
Inholdings				
I	1	15		Need owners permission
II	2	16		Need owners permission
~~III~~ IV	~~3~~ 4			
Lots				
Developed	1	1	2003	
Vacant	2	1	2003	
POA	3	7	2005	
Other				
Roadside	3	12		Some each year
Trails	4	-		Coop with Park
Cascade CG	1	3	2003	Fire waiting to happen
Recycle Area	2	4	2003	Better options

Priority for Other Actions

1. Wildfire Ignition Prevention Plan.
2. Formation of ALT Fire Safe Council.
3. Closure of Recycle Area and establishment of alternative for disposal of woody material.
4. Trail Fuel Treatment Plan.

Appendix E
BEHAVE RUNS

The BEHAVE fire behavior predication and fuel modeling system is a set of interactive computer programs that can be adapted to a variety of specific wildland fire needs. BEHAVE can predict: rate of spread, flame length, intensity, area perimeter, attack forces requirements, and spotting distances. The consultants use this program as a "check" on their experienced judgement in assessing the fire environment based on their years of experience.

Run 1

Run 1 is in the American Canyon in the Timber with Litter and Understory fuel model. The run starts in the drainage and is projected up canyon and up slope to a side ridge with a northeasterly facing slope where the Roses Bar fuel break is recommended. See map in Appendix for location. Fires in this fuel type burn in the surface and ground fuels. Crowning out, spotting and torching of individual trees is frequent, leading to difficult control but is basically a wind driven surface fire.

Fuel Model 10
Fire Behavior Inputs

1 Hour Fuel Moisture	4.0%
10 Hour Fuel Moisture	6.0%
100 Hour Fuel Moisture	8.0%

Rate of Spread and Flame Lengths on 45% Slope

Wind Speed Mile/Hr	Rate of Spread Feet Per Minute	Flame Length Feet
2	5	4
4	8	5
6	13	6
8	19	7
10	26	9

Spotting distance from the ridge top with a 6 mile per hour wind is predicted to be about 1600 feet.

Run 2

Run 2 is in the Middle Fork of the American River Canyon in the Timber, Hardwood fuel Model. The Run starts at the river and runs up canyon and up a 35 % north facing slope to a ridge with the planned Stoney Road fuel break. See map in Appendix for location. Fires run in the surface litter and have relatively long flame lengths. Concentrations of dead-down woody material will contribute to possible torching of trees, spotting and crowning, but basically is a wind driven surface fire.

Fuel Model 9
Fire Behavior Inputs

1 Hour Fuel Moisture	4%
10 Hour fuel Moisture	6%
100 Hour Fuel Moisture	8%

Rate of Spread and Flame Lengths on 35% Slope

Wind Speed Miles/Hr	Rate of Spread Feet /Minute	Flame Length Feet
2	3	2
4	8	3
6	14	4
8	24	5
10	35	6

Spotting distance from the ridge top is predicted to be 528 feet with a 4 mile per hour wind.

Run 3

Run 3 is off Highway 193 in a drainage just east of Logus Point Road on a south facing slope in the Grass Fuel Model. The run starts at the highway and runs north up a 6% slope with a 1 hour fuel moisture of 6% to Logus Point Road. See map in Appendix for location. Fires spread is governed by the fine, very porous and continuos herbaceous fuels that have cured. These are surface fires that move rapidly through the cured grass.

Rate of Spread and Flame length on 6% Slope

Wind Speed Miles/Hr	Rate of Spread Feet/Minute	Flame Length Feet
2	20	2
4	67	4
6	150	5
8	266	7

Spotting distance with 4 mile per hour wind is 500 feet.

Appendix F
Glossary of Wildland Fire Management Terms Used In the Auburn Lakes Trails Fire Safe and Fuels Reduction Plan[2]

Burning Index: A relative number related to the contribution that fire behavior makes to the amount of effort needed to contain a fire in a specific fuel type.

Cause of Fires: for statistical purposes fires are grouped into broad fire cause classes: lightning, campfire, smoking, debris burning, incendiary, equipment use, railroad, children, and miscellaneous.

Closed Area: Area in which specified activities such as entry are temporally prohibited because of acute fire hazard.

Dead Fuels: Fuels with no living tissue in which moisture content governed almost entirely by atmospheric moisture and solar radiation.

DBH: Diameter Breast High. Diameter of a tree at four and one half feet above the ground

Defensible Space: The area within the perimeter of a parcel or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire. The area is characterized by the establishment and maintenance of emergency vehicle access, water reserves, street names and fuel modification measures.

Fine Fuels: Fast drying dead fuels, generally characterized by a high surface area-to-volume ratio, which are less than 1/4 inch in diameter and have a timelag of one hour or less.

Fire Behavior: Manner in which fire reacts to fuel, weather and topography.

Fire Hazard: A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire Risk: The chance of a fire starting as affected by the nature and incidence of causative agents.

Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface).

Fuel: Combustible material.

Fuel Modification Area: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.

Fuel Reduction: Any manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

Shaded Fuelbreak: Generally wide (60-1000 feet) stripe of land on which native vegetation has been permanently modified so that fires burning into them can be more readily controlled. Visual is impact less, ground cover is more easily maintained, and microclimate more favorable.

Staging Area: Temporary on incident location where resources are assigned on a short availability basis.

Heavy Fuels: Fuels of large diameter (usually 3 inches or more; e.g. snags, logs, large branchwood,) that ignite and burn more slowly than fine fuels.

Herbaceous Fuels: Grasses, forbs, and other plants that contain little woody tissue.

Ladder Fuels: Fuels that provide vertical continuity between strata, there by allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease.

Litter: Top layer of the forest, or grassland floor, directly above the fermentation layer, composed of loose debris of dead sticks, branches, twigs, and recent fallen leafs or needles, little altered in structure by decomposition.

Preattack: Planned systematic procedure for collecting, recording, and evaluating prefire and fire management intelligence data for a specific planning unit or preattack block.

Red Flag Watch/Warning/Cancellation: Term used by fire weather forecasters to alert forecaster users to special and/or adverse weather conditions that present a high probability of extreme fire behavior. The Red Flag Watch is the first stage: it notifies the using agencies, usually 24 – 72 hours ahead of the event, that current and developing meteorological conditions may evolve into dangerous fire weather. If the adverse weather pattern continuous to develop and adverse conditions are expected within 24 hours, the second stage, Red Flag Warning, is given. The Watch/Warning is carried until specifically cancelled.

Urban/Wildland Interface: Line, area, or zone where structures and other human development meets or intermingles with undeveloped wildlands or vegetative fuels.

Wildfire: Any fire occurring on wildland that is not meeting management objectives and thus requires a suppression response.

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[2] Glossary of Wildland Fire Management Terms Used in the United States, Society of American Foresters July 1990.

Appendix G
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Appendix H
About The Authors

Eugene (Gene) Murphy

Gene is a graduate of the University of Minnesota with a Bachelor of Science degree in Forest Management. He is a Registered Professional Forester in California, has 10 years experience as a Consulting Forester that followed a 30 year career with the US Forest Service. He served on the Plumas (Assistant District Ranger), Stanislaus, (District Ranger) San Bernardino (Fire Staff Officer), El Dorado (Deputy Forest Supervisor) and Inyo (Forest Supervisor) National Forests. Fire management was an intraciall part of his Forest Service career and was a qualified Incident Commander for 10 years on a Regional Command Team.

His 45 years of professional services covers a broad range of wildland resource management including preparation of approximately 100 Fire Safe Plans for proposed and existing communities.

Douglas (Doug) Leisz

Doug is a Registered Professional Forester in California, has 20 years of Sierra Nevada forestry and fire safe consulting work following a 32 year career with the US Forest Service. His career with the Forest Service included line (he served 5 years as the Forest Supervisor of the El Dorado National Forest) and staff positions at every level ending as Associate Chief. With a BS in Forestry from UC Berkley he brings 52 years of professional experience in forest protection and management with a depth of experience in the Sierra Nevada.

His Consulting Forestry work covers a broad range of wildland management. He was science team member for the Sierra Nevada Ecosystem Project. For 2 years he served as a consultant for the California Oregon Transmission Project. Doug's consulting for 10 biomass power plants included work in California and Maine. He also has been involved in the preparation of 100 Fire Safe Plans.