

61028

Attachment H

COVER SHEET (PAGE 1 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Proposal Title: South Fork Willow Cr. Bluffs Prescribed Fire for Fuels Reduction + Management
 Applicant Name: U.S.D.A. Forest Service, Sierra National Forest, M. Varet's Ranger District
 Mailing Address: P.O. Box 10, North Fork, CA. 93644
 Telephone: (209) 877-2218 ext. 3150
 Fax: (209) 877-3108

Amount of funding requested: \$ 490,000.00 for 5 years

Indicate the Topic for which you are applying (check only one box). Note that this is an important decision: see page __ of the Proposal Solicitation Package for more information.

- Fish Passage Assessment
- Floodplain and Habitat Restoration
- Fish Harvest
- Watershed Planning/Implementation
- Fish Screen Evaluations - Alternatives and Biological Priorities
- Fish Passage Improvements
- Gravel Restoration
- Species Life History Studies
- Education

Indicate the geographic area of your proposal (check only one box):

- Sacramento River Mainstem
- Delta
- Suisun Marsh and Bay
- San Joaquin River Mainstem
- Landscape (entire Bay-Delta watershed)
- Sacramento Tributary: _____
- East Side Delta Tributary: _____
- San Joaquin Tributary: Willow Creek
- Other: _____
- North Bay: _____

Indicate the primary species which the proposal addresses (check no more than two boxes):

- San Joaquin and East-side Delta tributaries fall-run chinook salmon
- Winter-run chinook salmon
- Late-fall run chinook salmon
- Delta smelt
- Splittail
- Green sturgeon
- Migratory birds
- Spring-run chinook salmon
- Fall-run chinook salmon
- Longfin smelt
- Steelhead trout
- Striped bass

COVER SHEET (PAGE 2 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Indicate the type of applicant (check only one box):

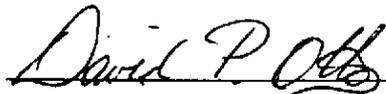
- | | |
|--|--|
| <input type="checkbox"/> State agency | <input checked="" type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

Indicate the type of project (check only one box):

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> Research | |

By signing below, the applicant declares the following:

- (1) the truthfulness of all representations in their proposal;
- (2) the individual signing the form is entitled to submit the application on behalf of the applicant (if applicant is an entity or organization); and
- (3) the person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section II.K) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

 _____

(Signature of Applicant)

Acting for: *Curtis E. Palmer.*

CALFED PROPOSAL

I. EXECUTIVE SUMMARY

a. **TITLE:** SOUTH FORK WILLOW CREEK BLUFFS PRESCRIBED FIRE FOR FUELS REDUCTION AND MANAGEMENT, Minarets Ranger District Sierra National Forest

b. Project Description and Primary Biological/Ecological Objectives

This multi-year prescribed fire fuels reduction and management project is being proposed to substantially reduce the risk of catastrophic fire on the South Fork Willow Creek Bluffs (SF Bluffs). Willow Creek, a major tributary to the San Joaquin River, is located on the Minarets Ranger District of the Sierra National Forest. Our project objectives are to 1) maintain or improve the current timing of water delivery from the SF Bluffs through fuel load reductions, 2) reduce potential for dramatic 3-5 year hydrograph changes that would result from a wildfire, 3) enhance the ecosystem by re-introducing fire as a natural process, and 4) protect natural resources and improvements on both public and privately owned lands. We plan an aggressive management strategy in a pro-active effort to reduce the risk of catastrophic wildfire and the associated effects on forest health, riparian and aquatic habitats. The proposed project area is chaparral habitat with pine and oak stands and is approximately 2,560 acres. Treatment of the heavy build-up of natural fuels is planned to reduce fire risk hazards. This will return us to a more natural fire regime process.

A wildfire would effect over 12,000 acres and numerous miles of riparian areas. A stand destroying wildfire would cause a substantial alteration to the hydrograph and would effect the delivery of water to the Bay-Delta. Steep slopes, reduced infiltration, highly erodible soils, hydrophobic soils, and a recovery period of 3-5 years would result in accelerated sediment contributions to the San Joaquin River. This area was analyzed in the Willow Creek Landscape Analysis (Sierra N.F. 1995) and this project is a high priority in the implementation schedule.

We have met CALFEDs evaluation criteria as follows:

* **ECOLOGICAL AND BIOLOGICAL BENEFITS**

- maintain reliable clean/cold water delivery to San Joaquin River and Bay-Delta
- reduce risks of dramatic alteration to hydrograph due to catastrophic fire
- reduce risks to San Joaquin River water management options
- project benefits all Bay-Delta priority species that depend on adequate year-round flows

* **APPLICANT'S ABILITY**

- federal agency, USDA Forest Service
- successes in planning, cooperative ventures, and construction of miles of fuelbreaks, defensible fuel profile zones, and completion of prescribed fires

* **TECHNICAL FEASIBILITY AND TIMING**

- feasibility study will be completed in the first phase
- key phases and multi-year year entries
- existing fuelbreaks, defensible fuel profile zones

* **COST SHARING AND LOCAL INVOLVEMENT**

- external contributions in form of labor and equipment
- Forest Service funds will be used for implementation (up to 50%)
- in-kind services through human resource crews
- tremendous local support and involvement (landowners and community)

* **COMPATIBILITY AND BENEFITS TO NON-ECOSYSTEM CALFED OBJECTIVES**

- assists CALFED in meeting water quality, water supply and habitat improvement objectives in the Bay-Delta

* **COST**

- funding request reasonable considering urban interface, population centers, project location, and values at risk

-cost effectiveness will be maintained through use of state, federal and county cooperators and partners, with reasonable overhead

* **MONITORING, ASSESSMENT, AND REPORTING**

-pre and post fire monitoring for each burn project

-progress reports to be submitted after completion of agreed-upon phases

c. **Approach/Tasks/Schedule** (Please refer to Table 1 for details)

Year 1: Project feasibility, Planning, Fire History Analysis

Year 1 - 5: Burn Units

Year 5 ->: Start Re-burn Units

d. **Justification for Project and Funding by CALFED**

This project is being proposed for CALFED funding because it has potential to maintain and/or improve the quality, quantity and timing of water yield contributing to San Joaquin River system and ultimately to the Bay-Delta area. This prescribed fire proposal will dramatically reduce the risk of catastrophic fire on the SF Bluffs. By reducing the potential for a high intensity, stand replacing wildfire, we expect the clean, cold water contributions to the San Joaquin River to be maintained and provide a reliable source throughout the year. A wildfire would cause a marked effect on the hydrograph causing shorter, more accelerated run-off periods and less water retention for 3-5 years until watershed recovery was reached. In addition, a large increase in the sediment delivery to Willow Creek, the San Joaquin River and numerous hydroelectric impoundments along that river. Sediments in these impoundments cause excessive wear on the turbines, a reduction in the storage capacity, and in management options for year-round water delivery to the Bay-Delta area. This project would contribute towards the CALFED Ecosystem Restoration Program Plan goal to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta. This project would benefit all of the priority species that depend on year-round sources of water.

e. **Budget Costs and Third Party Impacts**

<u>BUDGET SUMMARY</u>	<u>CALFED</u>	<u>OTHER PARTNERS/ USFS CONTRIBUTIONS</u>	<u>TOTAL</u>
Annual Average Costs	\$ 81,800	\$ 25,500	\$154,000
TOTAL COSTS	\$490,000	\$128,000	\$537,000

Third party impacts would be smoke in the air during burning and potential escape fire.

f. **Applicant Qualifications**

Federal agency, U.S. Forest Service, interested and committed to ecosystem restoration. This area is our most critical fire risk area on the District.

g. **Monitoring and Data Evaluation**

Pre and post burn monitoring and data collection will be conducted to determine if objectives are met, if pre-fire conditions meet prescriptions, and to meet the needs of our environmental analysis (also see III, part F. Monitoring)

h. **Local Support/Coordination with other Programs/Compatibility with CALFED objectives**

Local support and coordination has been extensive for a similar projects and we expect the continued support of the community.

II. TITLE PAGE

a. Title of Project

SOUTH FORK WILLOW CREEK BLUFFS PRESCRIBED FIRE FOR FUELS REDUCTION AND MANAGEMENT

b. Applicant: *USDA Forest Service*
Sierra National Forest
MINARETS RANGER DISTRICT
Curtis Palmer
P.O. Box 10
North Fork, CA 93643
(209) 877-2218
(209) 877-3108 (FAX)

c. Type of Organization and Tax Status

Federal Agency, Tax-exempt.

d. Tax Identification Number and/or Contractor license, as applicable

Not Applicable.

e. Technical and Financial Contact person(s), address, phone/FAX/e-mail (if different from above)

See above.

f. Participants/Collaborators in Implementation

We expect a variety of individuals, private landowners, permittees, groups, associations, and agencies to provide assistance with all aspects of implementation of the proposed multi-year project. We can count on continued support in providing workforce and equipment, assisting with information dissemination, and monitoring.

Some of the participants/collaborators include; National Resource Conservation Service, Coarsegold Resource Conservation District, California Department of Forestry, California Department of Fish and Game, Madera County Private Industry Council, Madera County Fines Commission, North Fork Chamber of Commerce, North Fork Community Development Council, North Fork Rancheria, Sierra Vista Scenic Byway Committee, Cascadel Homeowner's Association, and the Yosemite Area Audubon Society. These cooperators, share common goals and commitment to conserving our natural resources and protecting our watersheds.

g. RFP Project Group Type(s) (Construction; Acquisition; Other Services)

Other Services.

III. PROJECT DESCRIPTION

a. Project Description and Approach

Because of fire suppression in this area and across the Sierra Province over the past 90 years, the risk of a catastrophic, strand replacing fire is very high. The question for this area is not "if", but "when" will a major fire event occur?

In order to maintain a productive watershed and eliminate the potential of a catastrophic fire event in this area, prescribed burning is our only feasible management option. Given the Air Quality regulations, we propose multiple year entries to complete this prescribed fire project. Burning up to 800 acres per year would complete the first entry within 5 years. Maintenance burns would commence after the first entry and continue for approximately 10 years. Upon completion of the entire project, we expect a reduction in the brush component, a maintenance of the hydrograph, and a more diverse vegetation component. This area will be more resilient to wildfires and allow a more natural fire regime to take place. This moves us towards our desired condition for the area.

b. Proposed Scope of Work

The planning will consist of five tasks: 1) project feasibility study, 2) National Environmental Policy Act (NEPA) analysis, 3) fire history analysis, 4) fuel loading/profile analysis, and 5) burn plan development.

Project preparation will consist of two tasks: 1) project hand work (line construction, fuel preparation) and 2) tractor work (line construction and brush crushing).

Implementation will consist of the actual ignition portion of the project. Multiple years and methods will be needed. Hand ignition will occur in the forested area at the top of the burn and other areas where it can safely and efficiently be accomplished. Aerial ignition will be utilized in inaccessible units.

The monitoring & reporting will be ongoing throughout the life of the project. Accomplishment reports will be prepared along with fiscal and accounting records annually or as needed. Resource element monitoring will take place according to agency requirements and project needs.

c. Location and/or geographic boundaries of project

The project area is about 2,560 acres of National Forest System Lands of the Sierra National Forest, Minarets Ranger District; located in the Willow Creek watershed, Willow Creek is a tributary to the San Joaquin River, approximately 2 miles SE of Bass Lake, 3 miles NE of the community of North Fork, and within Madera County. The legal description is: Township 7 & 8 South; Range 23 East Sections 29,30, 31, 32, 5 & 6, Mount Diablo Base Meridian. The area is on a west facing slope of Peckinpah Ridge at 3000-5600 feet in elevation, and boarded on the north by Browns Creek, starting at the 5600 foot elevation, downslope to its intersection with the Browns Creek trail (23E07) and Road 7S09A. The western border is Forest Service (FS) Road 7S09. The south boundary will be constructed on an appropriate ridgeline to the north of Peckinpah Creek. The eastern boundary will follow the 5600 elevation contour, tie into FS Road 7S94 to Browns Creek on the northeast corner. The project area is essentially unroaded except at the upper (northern) and lower (southern) boundaries. The average slope is 35% plus with large rock outcroppings scattered throughout. (See maps on pages 17 and 18).

d. Expected benefit(s)

Expected primary benefits are: 1) help maintain or improve the current timing of water delivery from the SF Bluffs through fuel load reductions, 2) reduce potential for dramatic 3-5 year hydrograph changes that would result from a wildfire, 3) enhance the ecosystem by re-introducing fire as a natural process, 4) protect natural resources and improvements on both public and privately owned lands.

Treatment of the unnatural accumulation of fuels is planned to reduce fire risk hazards. This will allow post project prescribed natural fires to burn in the area with modified suppression strategies. Our desired condition is a vegetation component that is more resilient to wildfires. Prescribed fire will open up and rejuvenate the chaparral stands and would provide areas for gathering of Native American plant materials.

Direct benefits to the watershed are expected by reducing wildfire conflagration potential and associated hydrophobic soil conditions, accelerated run off, increased erosion and watershed degradation.

Secondary Benefits

Reduction of fuels would not only reduce risks to the watershed, timber resources, and wildlife habitat, but would also reduce threats to adjacent private lands and local communities. Adjacent timber stands provide revenue to both local and distant communities, and Madera County. These same timber stands provide wildlife habitat for such species as the California spotted owl, pine marten, and fisher. Aquatic and riparian habitats would be protected through implementation of these treatments, assisting in our conservation efforts for Collomia and western pond turtles.

The project area is located in the San Joaquin Deer Herd range. The prescribed burn will create a mosaic pattern, rejuvenate deer browse species and create openings, while maintaining deer cover areas. Providing more optimum conditions for deer may result in increased deer numbers and a subsequent increase in hunting opportunities and success.

If a catastrophic fire event occurs within this area, resistance to control would be extreme, would alter the present fuels profile and result in increased erosion and stream sedimentation. A Cumulative Watershed Effect Analysis (CWE) has shown the area to be in the Moderate to High CWE sensitivity rating class. In the event of a wildfire, we expect a high vulnerability to experiencing a CWE within the first 2 - 3 years.

The primary threat is due to the high, unnatural fuel loading and dense brush throughout the project area. Upon completion of this project, fire effects would be returned to a more natural regime and wildfires would be considered ecosystem maintenance events. The highly flammable fuels will return to a more natural desired condition.

e. Background and Biological /Technical Justification

Wildfire occurrence is predominately lightning caused with an average of 2.5 fires per year over the last 25 years. These fires are usually accompanied with significant rainfall and occur at the higher elevations of the project area. Human caused fires over the last 25 years have averaged 2.2 annually. These fires occur near residential and/or roaded areas and are usually attributed to debris burning, equipment use and escaped campfires. The majority of these fires have started directly below the project area. If a fire escapes initial attack, it would quickly move to the steeper slopes and higher fuel loading within the project area. Due to the increasing urbanization in the immediate area, we anticipate more human caused fires in the future.

Because of the inaccessibility of the area, firefighting forces would have a slim chance of achieving initial attack objectives and we would rely heavily upon aerial resources to slow the fire spread. If a wildfire escaped initial attack, the current strategy would be to let the fire burn to the top of the project area and concentrate resources in areas on the southern end to protect population centers along Douglas Station road and the Cascadel Subdivision. The next opportunity to stop the fire would be along a forest transportation corridor along the top of Peckinpah Ridge, east of the project area. We anticipate approximately 12,000 acres could burn in the event of a wildfire. Riparian areas have high fuel accumulations that are outside of the natural range of variability. These areas are at risk of being destroyed by a wildfire.

Fuel loads run between 30-90 tons per acre with heaviest concentrations occurring in brush fields with pockets of dead standing timber and downed logs. Exclusion of fire over the last 90 years has drastically changed the vegetative cover. Dense stands of oak and brush normally killed by frequent fires gradually replaced the open ponderosa pine/grass & oak woodland areas on the lower half of the slope. As drought, insects and disease took their toll on the pine stands and oaks, brush (manzanita, ceanothous & mountain mahogany) and bear clover filled in and dominate the area today. At present, ponderosa pine is found at about one quarter of the levels of the early 1900's. As the pines, oak and brush died and fell to the ground, the downed woody material component increased dramatically.

The following tables from the Willow Creek Landscape Analysis (1995) describe the Fire/Fuels Indicators, Existing Conditions, and Desired Conditions for the project area.

The lower 2/3 of the project is brush and oak woodland and ponderosa pine as described in the table below:

<u>Indicator</u>	<u>Existing</u>	<u>Desired</u>
Fuel Loading (tons/acre)	30-90	20
Flame Length (feet)	6-7	5
Rate of Spread (chains/hr)	9-13	7
Percent of Area		
Ponderosa pine	0-5	35
Brush/Oak woodland	95	35

The upper 1/3 of the project is predominantly a mixed conifer stand and is described in the table below:

<u>Indicator</u>	<u>Existing</u>	<u>Desired</u>
Fuel Loading (tons/acre)	50	21
Flame Length (feet)	4	3
Rate of Spread (chains/hr)		
Open Grass	46	21
Overstory	3	2
Brush	13	7

Because of the size, access difficulty and view sensitivity, the project will take approximately 7-10 years to complete. Burning approximately 800 acres per year will move us towards our desired condition where catastrophic type fires will no longer be a threat to the watershed and it will be allowed to perform its natural ecological roll.

Management direction for this area is outlined in the Willow Creek Landscape Analysis, 1995 and the Sierra National Forest Land & Resource Management Plan, 1991, Chapter 4, page 4-46. The primary emphasis is to provide adequate protection of watershed values on highly erosive soils through our management activities.

f. Monitoring and Data Evaluation

Pre and post burn monitoring of the project area will be completed in order to implement various aspects of the project and to evaluate the effectiveness of the

burn in meeting the project objectives. Monitoring reports will be completed each year, and submitted annually to the CALFED for the duration of the project proposal.

Fuels/Weather Monitoring

Fuels and weather monitoring would begin prior to completion of the environmental document and over the period of time to complete the project. This monitoring would be seasonal, and conducted prior to the burning to determine when the site(s) come into burn prescription, and during the burn to track any changing conditions.

Random downed woody material sampling plots will be established throughout the project area to provide pre and post burn fuel loading estimates. Fuel profile to be inventoried will be:

- 0 - .24 inches
- 0.25 - 0.99 inches
- 1.00 - 2.99 inches
- 3.00 + inches
- Duff depth
- Fuel depth

The standard method for inventorying downed woody material as outlined in GTR-INT-16, September, 1974 by James K. Brown will be utilized.

Live fuel moisture readings will be collected from established plots 3 months prior to burning. Standard live fuel moisture sampling procedures will be used for target species and will be collected every 2 weeks for 3 months prior to burn and weekly 1 month prior to burn. These measurements are critical to calculating prescribed fire behavior.

1000 hour time lag fuels (dead 3 - 6 inch fuels) will be sampled for moisture content on the same schedule as for the live fuel moisture.

Vegetation Monitoring

This includes collection of data and mapping of vegetation species, structure, composition, and spatial arrangement using aerial photographs and topographic maps. Additional information will include slope class and aspect. Photo points will be established and mapped with photos taken prior to and after each burn. This information will also be used to determine maintenance schedules of prior burn areas, and determine changes between pre and post burn vegetation composition.

Soil Monitoring

Soil monitoring will occur within each burn unit by establishing post burn transects across the landscape to record soil cover.

Historic and Prehistoric Culture Monitoring

Archaeological surveys will occur for each burn unit by establishing post burn transects across the landscape to locate and record any sites exposed by the burn.

g. Implementability

Pursuant to the NEPA an environmental analysis will be completed. Scoping will identify potential issues and concerns within and outside the agency for the proposed project. Supporting documentation will include: a Cumulative Watershed Effects report; a Biological Assessment pursuant to the Endangered Species act; a Biological Evaluation for Forest Service Sensitive Species; Archaeological Reconnaissance Report, Air Quality Regulation Conformity Calculations report; and, a Prescribe Burn Plan. Sierra National Forest Resource Management Plan (1993) standards and guidelines will be followed in implementation of the project, which

includes Best Management Practices (BMP's) to meet water quality objectives. The project will have specific design standards or mitigations to comply with the Endangered Species Act, Historic Preservation Act, BMP's, Clean Air Act, and others, as deemed necessary.

IV. COSTS AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT

a. Budget Costs

Up to 50% of the implementation costs will be requested annually through Forest Service funding sources. CALFED funding is imperative to this project, as Forest Service funds would never be able to cover the total cost of the project.

Potential partership funding may also be available and contingent on CALFED funding. We plan for contributions in the form of labor and equipment from California Department of Forestry. We anticipate in-kind services through human resource crew assistance (ie: California Conservation Corp, and County Private Industry crews). Partnerships may include Madera County Fines Commission, California Department of Fish Game, and the California Chapter of the Mule Deer Foundation for deer habitat improvement. Funding is extremely limited from these last sources and, at most, amount to about \$2000.00 annually from each source for project implementation only.

Table 1 - Cost Breakdown Table

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin.	Service Contracts	Material and Acquist. Contracts	Misc. and other Direct Costs	Total Cost
Phase 1 Task 1 Project Feasibil @ CALFED	80	\$2,000					2,000
Phase 1 Task 2 Planning @CALFED	1360	\$34,966	\$13,410				48,376
Phase 1 Task 3 Fire Hist @CALFED	360	\$10,000			Vehicles & Supplies \$1,000		11,000
Phase 1 Task 4 Fuels Inv @CALFED	320	\$5,800					5,800
Phase 1 Task 5 Hand Line @CALFED	2,400	\$33,600			Vehicle & Supplies \$2,000		35,600
Phase 1 Task 6 Burn Plan @CALFED	224	\$5,600					5,600
Phase 1 Task 7 Weather @CALFED	48	\$900		Mainten Fees \$300			1,200
Phase 1 Task 8 Ignition Units 1-3 @CALFED	1,440	24,500			Equipment Supplies 1,000	Meals 90 people 4 days 5,000	30,500
@AGENCY	1,440	24,500			1,000	5,000	30,500

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin.	Service Contracts	Material and Acquist. Contracts	Misc. and other Direct Costs	Total Cost
Phase 2 Task 1 Monitoring Inventory @CALFED	80	\$1,450					1,450
Phase 2 Task 2 Burn Plan @CALFED	160	\$3,600		Tractor Line Cons 7,500			11,100
Phase 2 Task 3 Hand Line @CALFED	2,400	\$33,600			Vehicles & Supplies \$2,500		36,100
Phase 2 Task 4 Wx monitor @CALFED	48	\$900		Service Fees 300			1,200
Phase 2 Task 5 Ignition Units 4-5 @CALFED& @AGENCY	1,072 1,072	\$22,850 \$22,850			Vehicle & Supplies \$1,500 \$1,500	Meals 90 People 3 Days \$4,000 \$4,000	28,350 28,350

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin.	Service Contracts	Material and Acquist. Contracts	Misc. and other Direct Costs	Total Cost
Phase 3 Task 1 Monitoring Inventory @CALFED	80	\$1,450					1,450
Phase 3 Task 2 Burn Plan @CALFED	160	\$3,600		Tractor Line Cons \$7,500			11,100
Phase 3 Task 3 Hand Line @CALFED	2,400	\$33,600			Vehicles & Supplies \$2,500		36,100
Phase 3 Task 4 Wx monitor @CALFED	48	\$900		Service Fees 300			1,200
Phase 3 Task 5 Ignition Units 6-8 @CALFED & @AGENCY	1,072 1,072	\$22,850 \$22,850			Vehicle & Supplies \$1,500 \$1,500	Meals 90 People 3 Days \$4,000 \$4,000	28,350 28,350

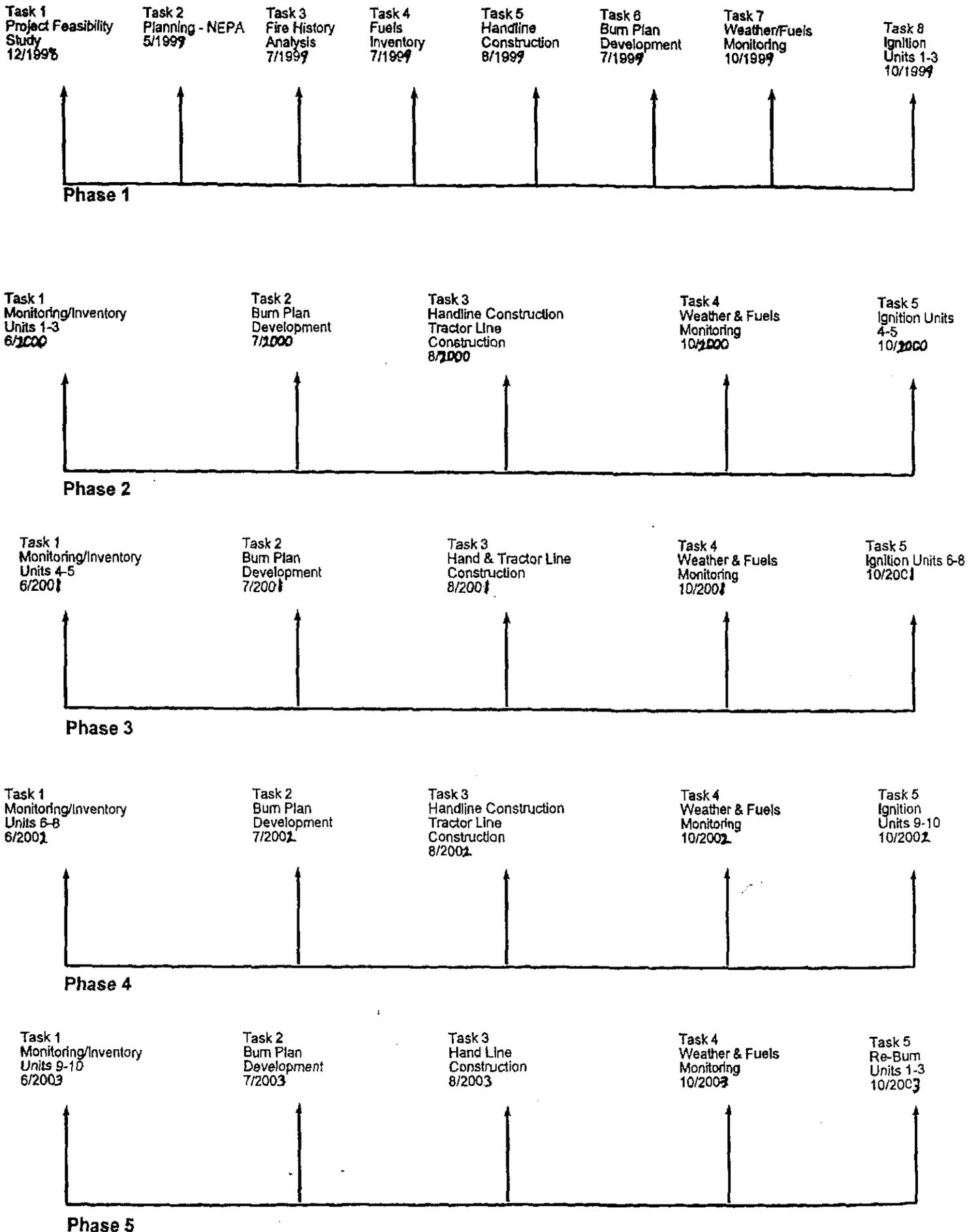
Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin.	Service Contracts	Material and Acquist. Contracts	Misc. and other Direct Costs	Total Cost
Phase 4 Task 1 Monitoring Inventory @CALFED	80	\$1,450					1,450
Phase 4 Task 2 Burn Plan @CALFED	160	\$3,600		Tractor Line Cons 7,500			11,100
Phase 4 Task 3 Hand Line @CALFED	2,400	\$33,600			Vehicles & Supplies \$2,500		36,100
Phase 4 Task 4 Wx monitor @CALFED	48	\$900		Service Fees 300			1,200
Phase 4 Task 5 Ignition Unit 9&10 @CALFED& @AGENCY	1,072 1,072	\$22,850 \$22,850			Vehicle & Supplies \$1,500 \$1,500	Meals 90 People 3 Days \$4,000 \$4,000	28,350 28,350

Project Phase and Task	Direct Labor Hours	Direct Salary and Benefits	Overhead Labor (General, Admin.	Service Contracts	Material and Acquist. Contracts	Misc. and other Direct Costs	Total Cost
Phase 5 Task 1 Monitoring Inventory @CALFED	80	\$1,450					1,450
Phase 5 Task 2 Burn Plan @CALFED	80	\$1,800					1,800
Phase 5 Task 3 Hand Line @CALFED	1,200	\$16,800			Vehicles & Supplies \$1,000		17,800
Phase 5 Task 4 Wx monitor @CALFED	48	\$900		Service Fees 300			1,200
Phase 5 Task 5 Ignition Units 4-5 @CALFED& @AGENCY	536 536	\$11,425 \$11,425			Vehicle & Supplies \$750 \$750		12,175 12,175

(@ Indicates source of funding for phase/task and wether its for O&M costs)

Scheduled Milestones

Table 2:



c. *Third Party Impacts*

SMOKE: Particulate matter (PM-10) concentrations will be adhered to as established for the San Joaquin Airshed. Annually, the project will produce 70 tons (or less), the maximum permitted amount.

RISK: Utilizing conservative prescriptions will mitigate the risk of escape fire during project implementation. The prescribed burns will only be done when adequate fire fighting forces are available.

V. *APPLICANT QUALIFICATIONS*

The following professionals and technicians will be involved in the planning, implementation, and monitoring of this project: botanist, silviculturalist, landscape architect, archaeologist, soil scientist, hydrologist, geologist, wildlife and fisheries biologists, district ranger, fire management officer, and fuels officer. All US Forest Service personnel have completed training, education, and have experience which qualifies them to work in these positions.

Prescribed burn plans will be completed by fire and fuels management officers and signed off by appropriate line officers.

Project implementation includes such specialists as: firefighters, fire management officers, fuels officer, and other fire qualified personnel.

Specialized equipment includes fire engines, water tankers, dozers, and helicopters.

Several prescribed burns have been successfully conducted on the Minarets Ranger District. Two recent projects include the Cascadel and Clearwater Burns completed in 1989 and 1995, respectively. Both burns were about 800 acres each.

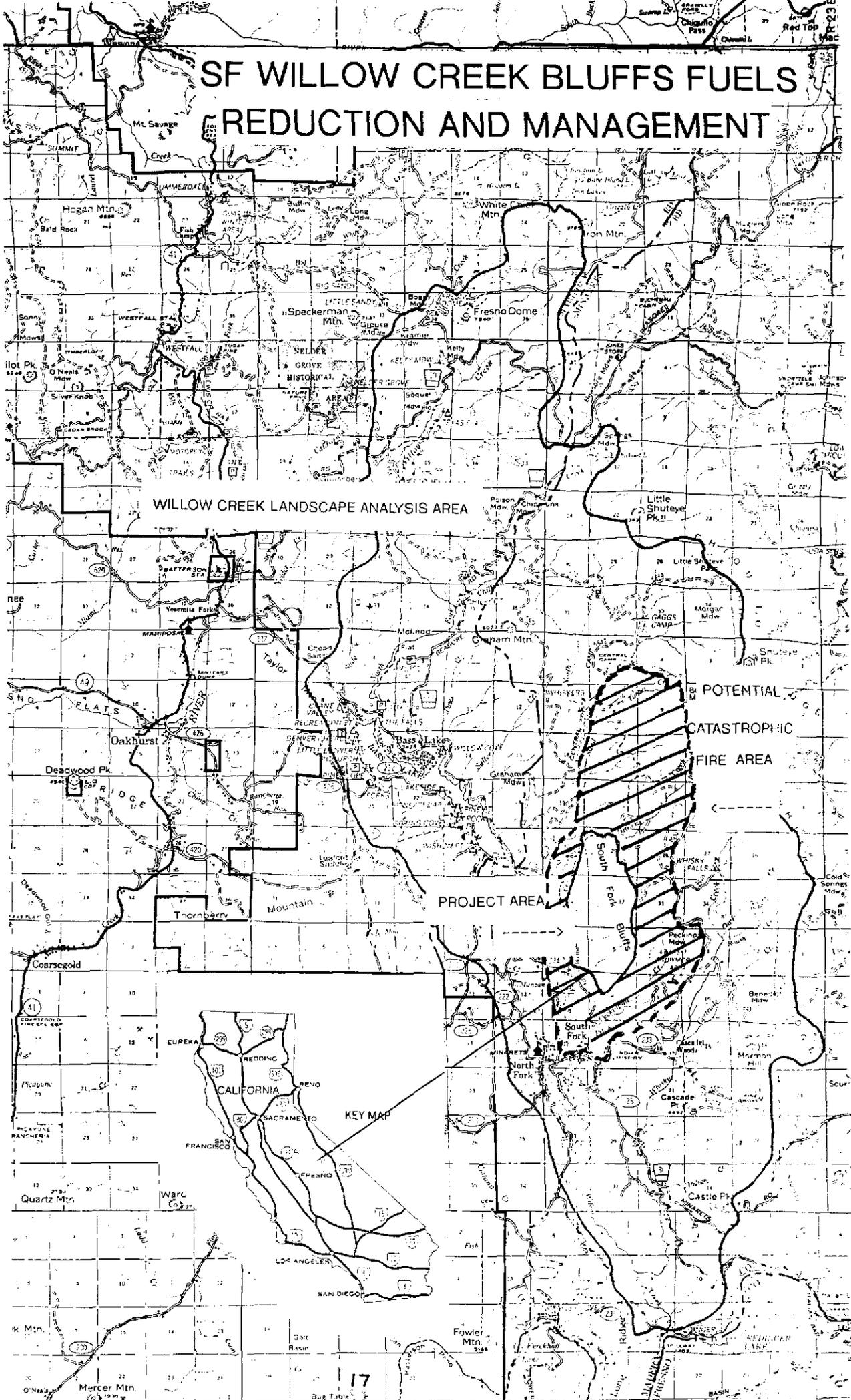
VI. *COMPLIANCE WITH STANDARD TERMS AND CONDITIONS*

As a federal agency we have to abide with federal and state laws and regulations. In doing so, in spirit and concept, we wish to cooperate with the State of California to meet the needs and obligations of both parties. Our Regional Office (Grants and Agreement Coordinator) and the State of California subsequent to approved funding will enter cooperatively into a Memorandum of Understanding defining the terms and conditions for use of the funds, administration and monitoring. See Attachment Memorandum of Understanding.

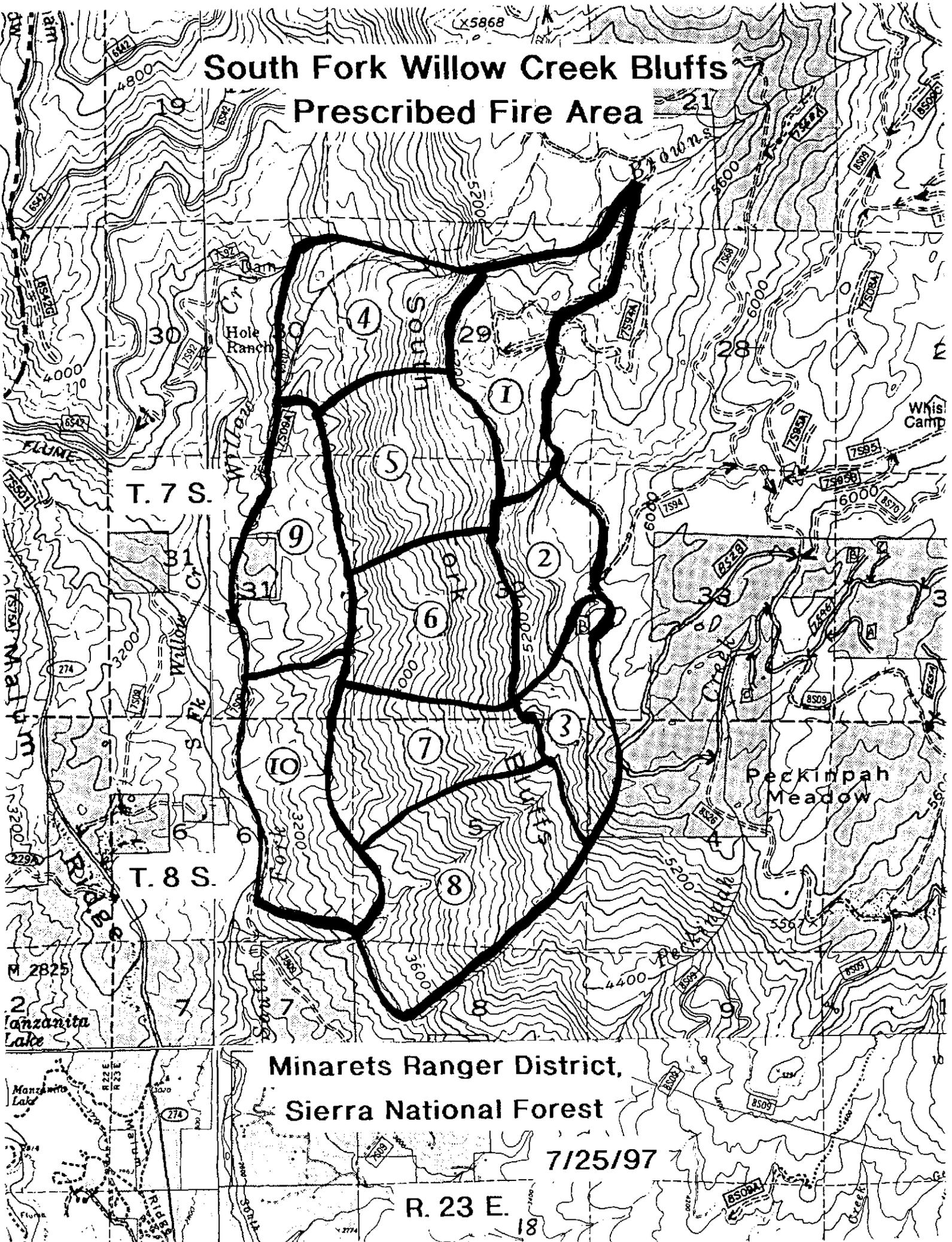
O. *CONTRACT REQUIREMENTS*

Per Table D-1 attachment to CALFED Bay-Delta Program, Request for Proposals for standard contract clause and related proposal submittal requirements for services; we will submit and sign the appropriate terms and conditions and standard clauses prior to signing of the final contract.

SF WILLOW CREEK BLUFFS FUELS REDUCTION AND MANAGEMENT



South Fork Willow Creek Bluffs Prescribed Fire Area



Minarets Ranger District,
Sierra National Forest

7/25/97

R. 23 E.