F1-239

CALFED Category III Proposal

Cosumnes River Basin Project



Focusing Efforts in
Tributaries including:

North Fork Cosumnes
Middle Middle Fork Cosumnes
Middle Dry Creek
Big Canyon
Clear Creek
and
Lower Camp Creek Watersheds

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RFP Project Group Type: Watershed Project Implementation



I-005198

## EXECUTIVE SUMMARY

Eldorado National Forest Watershed Improvements and Fire Hazard Reduction in the Cosumnes River and South Fork American River Basins

The Eldorado National Forest has developed two proposals for CALFED Category III projects in the upper watersheds of the Cosumnes River and Lower South Fork American River Basins. Projects include hydrologic restoration work, trail and road improvements and or maintainence, meadow restoration and improvements and fire hazard reduction.

Riparian resources and associated beneficial uses of water will be enhanced through the implementation of projects that decrease non-point sources of pollution, and improve water yield. Through the strategic application of fuel reduction currently occurring on the forest to reduce excessive surface and ladder fuel loads a reduction in wildfire intensity and spread will occur. The proposed projects aid and enhance the forest in linking the strategic application of fire hazard reduction projects as part of the total forest fuel and vegetation management program.

The approach utilized existing watershed improvement and fuel reduction treatments that have been identified in several of the forests environmental analysis, where funding was not included or unavailable.

The proposed activities are consistant with planned Forest Health projects which will be implemented on the forest within the next three years. The identified tasks will not be needed as a result of the planned management activities, but represent needed activities which have been identified during the project planning process, and will not be adequately funded through forest resources to be accomplished in the near future.

Overall watershed health within the upper watershed areas of the Bay-Delta ecosystem is an essential component of providing for health of the Bay-Delta dependent aqcuatic resources. The Eldorado National Forest projects will serve to improve the sediment balance, local storm hydrographs, the quality, quantity and timing of stream flow, and reduce the potential for high intensity wildfires within these watersheds. The improvement of these areas will reduce risks of the cummulative effects of future potential large storm and fire events to downstream beneficial uses of water, including the Bay-Delta ecosystem.

Budget proposals are included by watershed with estimated budget for each treatment and adminstrative overhead estimated at 12%. Fire hazard reduction uses a unit of measure in acres for a specific treatment, while the other work sometimes includes combinations of tasks lumped together. For example non-point pollution through road improvement work could be several tasks, cleaning ditches, removing berms, spot rocking etc.

The qualifications of the Eldorado National Forest staff are commensurate with the required federal X118 qualifications for personel. Employees which will be involved with the proposed projects will perform at the assigned duty level for which they are qualified. Specialists which will be involved in the project implementation include the Forest Soil Scientist, Forest Hydrologists, Forest

Fire Management Specialist, Forest Engineer, and district fire, timber, wildlife, and resource personel.

Monitoring will include opportunities to incorporate the Region 5 Best Management Practices Evaluation Program and other fire management and watershedmonitoring required annually by the Forest Land and Resource Management Plan (USDA, 1998). Monitoring will also be accomplished through on site inspections and interdisciplinary reviews.

Local support for the proposed projects includes El Dorado County Officials, and the El Dorado County and Georgetown Divide Resource Conservation Districts.

**Project Description & Approach:**

The following watershed and fire hazard treatment opportunities exist in El Dorado County in the Cosumnes River Basin. Watershed project work extends throughout 6 tributary watersheds: North Fork Cosumnes, Middle Middle Fork Cosumnes, Middle Dry Creek, Clear Creek, Big Canyon, and in the Lower Camp Creek Watersheds. Treatments focus on controlling sources of active erosion and improving hydrologic function and soil productivity in areas that are compacted as well as restoring watershed vegetative species and stand structure that supports recurring low intensity wildfires consistent with historic fire return intervals. Fuel management includes strategic application of fuel reduction zones to decrease excessive surface and ladder fuel loads utilizing prescribed fire in combination with hand thinning and piling.

**Expected Benefits:**

Riparian resources and associated beneficial uses of water will be enhanced by decreasing non-point sources of pollution, improving the water storage capacity of the watershed. Wildfires can have devastating effects on watershed health that in turn, affects the quantity, timing and quality of inflows to the Delta and San Francisco Bay from the upper watersheds. Benefits of these projects include decreasing threat of wildfire to life property and resources. A reduction in wildfire intensity and spread will aid in fire control at smaller sizes and decreased fire suppression costs. A decrease in high intensity wildfire will prevent accelerated runoffs during the times of peak flows and reduce the transport of soil particles and sediment, protect soils, water, and other resource values such as: wildlife, timber, air, recreation and heritage resources.

Fire including, prescribed fire will remain an essential element of these watersheds and will be controlled by the reduction of fuel loads to levels that are consistent with maintaining watershed and forest health.

**Background:**
The Cosumnes River is one of the only large streams in the Sierra Nevada that has very limited hydrologic modifications. As such, the potential to influence downstream water quality and quantity is of great concern. California Department of Fish and Game records document the Cosumnes River as historically supporting a fall chinook salmon run. In the 1950-60's the run averaged about 1000 fish. That number declined to 1-200 by the mid 1980's. There are no records of salmon in the Cosumnes in the 1990's. The presence of areas known to have poor watershed conditions increases this concern. Findings of the recent Sierra Nevada Ecosystem Project indicate the following:

> "The aquatic/riparian systems are the most altered habitats of the Sierra Nevada. Riparian areas have been damaged extensively. Extensive sediment yield into streams remains a widespread water quality problem." (Sierra Nevada Ecosystem Project, Vol 1).
>
> "Fire is a natural evolutionary force that has influenced Sierran ecosystems for a millenia. Live and dead fuels in todays conifer forests are more abundant and continuous than in the past. Fuel accumulation has increased fire severity more than any other recent human activity. An

increasing number of homes and people are at high risk of loss from wildfire unless hazards are mitigated." (Sierra Nevada Ecosystem Project, Vol 1).

Other recent publications have documented the existing condition related to fire hazard and risk of ignition in the Sierra Nevada. The California Spotted Owl: A Technical Assessment of its Current Status contains recommendations to treat surface and ladder fuels as necessary to create a mosaic of fuel profiles that will minimize the probability of extensive stand-destroying wildfires.

Since the early part of this century, two major activities have worked together to greatly influence the structure and function of the forest we see today in the mid-elevations on the Eldorado. The first activity, and the one of greater effect, is fire exclusion; the second is selective harvesting of the large, old ponderosa and sugar pine. Fire exclusion and harvest practices over the last century have caused an increase in the density of fire-intolerant conifer species, such as white fir and incense cedar, both of which are easily killed by low-intensity surface fires typical of a historic fire regime. This has caused an increase in shading to the forest floor and a constantly occurring duff layer, resulting in the inability of shade-intolerant species, such as ponderosa pine and sugar pine, to survive in numbers that would allow for the continuation of these species and the habitats they represent.

These changes have caused an increase in the risk of crown fires. The lack of fire and past harvest practices have caused an increase in surface fuels. Where the predominant overstory still exists, there are now dense understory canopies that, combined with the added surface fuels, create fuel ladders into these upper crowns. These predominant trees should represent the most fire resistant component of the forested ecosystem, but the fuel ladders have put these trees and watersheds at risk. These trees are also at risk from drought-induced stress, caused by high competition levels represented by dense understory canopies.

Resource specialists from the forest conducted a landscape level analyses that identified highest priority areas that if treated would provide the greatest reduction in fire hazard and risk of ignition. The forest identified areas in need of treatment because they represent a substantial deviation from what would be expected to occur under a historic fire regime in terms of vegetative structure and content. The Cosumnes River Basin watersheds which are under focus in this proposal are high priority areas. These watersheds are lower elevation watersheds that are influenced by suburban development which also contribute to the domestic water supplies for much of El Dorado County and the outlying community of Grizzly Flats.

Throughout the Lower Camp Creek and North Fork Cosumnes Watersheds past management activities, dispersed recreation use and special uses have reduced soil porosity and soil cover. These compacted areas have higher runoff capabilities because of reduction of soil infiltration. Concentrated runoff from these areas has also accelerated erosion offsite.

**Proposed Scope of Work:**

The Eldorado National Forest has prioritized watersheds on the forest which have the greatest need for wildfire hazard mitigation. The forest is using

this information to strategically link treatments across the landscape. While these projects assist in that linkage, these are only a select few of the projects needed to link existing planned and completed treatments together.

**Middle Middle Fork Cosumnes and Dry Creek Watersheds:**

Fire hazard reduction projects will focus hand surface and ladder fuel treatments utilizing chainsaws and handtools on reducing fuel build on 200 acres in streamside management zones and along ridgetops and south facing slopes within the Big Mountain Prescribed Burn Area.

**Camp Creek and Clear Creek Watersheds:**

Fire hazard reduction projects will focus hand surface and ladder fuel treatments utlizing chainsaws and handtools adjacent to residential development and downslope into the Camp Creek watershed, the Sly Park Outdoor Education Center and an USFS administrative site on 100 acres.

The outdoor education center utilizes a network of trails which are used by approximately 6,000 six graders from the greater Sacramento Area on a yearly basis. Active erosion is currently occurring along much of this trail system. Erosion Control work is needed to correct existing problems and to demonstrate trail erosion control techniques in the outdoor classroom setting. Proposed work includes erosion control practices on 7 miles of hiking trail.

The unique low elevation Flemming Meadow and its surrounding area has been impacted by dispersed recreational uses, resulting in impacts to water resources from eroding unauthorized trails and powerline right of ways. Funding would be utilized to control impacting recreational uses in the area to improve the existing meadow condition, and to reduce sediment production from roads. This project is documented under the Fidder Forest Health Environmental Analysis under watershed improvement needs.

Treating non-point source pollution through road improvement work on roughly 5 miles of roads. Work would include reestablishing proper drainage, cleaning ditches, removing berms, spot rocking, out sloping etc.

Throughout the Lower Camp Creek area, past management activities, dispersed recreation use and special uses have reduced soil porosity and soil cover. These distrubed and compacted areas have higher runoff capabilities because of reduction of soil infiltration and soil cover. Concentrated runoff from these areas has also accelerated erosion offsite.

Restoring soil productivity and hydrologic function on roughly 50 acres of compacted road surfaces, landings and skid trails.

**North Fork Cosumnes and Big Canyon Creek Watersheds:**

Fire hazard reduction projects for 100 acres will be along roads 100' each side and focus treatments of surface and ladder fuels utilizing chainsaws and handtools adjacent to the Grizzly Flat Community in to enhance effectivness and link other fuel and vegetative treatments in the area.

Restoring soil productivity and hydrologic function on roughly 100 acres of compacted road surfaces, landings and skid trails, and treating non-point source pollution through road improvement work on roughly 10 miles of

roads. Work would include reestablishing proper drainage, cleaning ditches, removing berms, spot rocking, out sloping and subsoiling etc.

**Lower Middle Fork Cosumnes:**
Fire hazard reduction projects will focus treatments of surface and ladder fuel reduction utilizing prescribed fire which includes some hand treatments utilizing chainsaws and handtools in protection area #1 and #2 on 770 acres within the Lower Middle Fork Project Analysis Area.

**Fire Hazard Reduction projects** will entail treatment of large areas of brush and submerchantable conifer reproduction (ladder fuels) in the Camp Creek, Clear Creek, Big Canyon and North Fork and Middle Middle Fork Cosumnes and Lower Middle Fork Cosumnes watersheds would include hand piling, limbing and thinning, pruning and piling manzanita brush and submerchantable (< 10" diameter) small conifer trees in combination with the use of prescribed fire to reduce the ability of the fire to spread and climb into tree crowns and reduce the intensity of future wildfires that significant damage to existing resource values. Treatments would be done with 5-20 person crews utilizing chainsaws and handtools.

Financial project work plans will be completed prior to allocation of funding. Monthly project managers statements will be utilized to and track expenditures.

**Monitoring and Data Evaluation:**

The National Forest will utilize monitoring data funded by The Nature Conservancy and EPA and collected by the California Department of Fish & Game as part of the Cosumnes Watershed Demonstration Project .

Monitoring will be accomplished through on site inspections and interdisciplinary reviews. Additionally, the forest will utilize the Best Management Practice Evaluation Program and other fuels and watershed monitoring required annually by the Forest Land Resources Management Plan (USDA, 1988). These evaluations are conducted annually by the Forest Hydrologist and the Fire Management Officer.

**Implementability:**

National Forest management is controlled and guided by numerous state and federal, laws, regulations and policies. All forest management projects will be in compliance with legislation that includes but is not limited to the following:

Organic Administration Act of 1897; Multiple Use Sustained Yield Act of 1960; National Forest Management Act (NFMA) of 1976; National Environmental Policy Act (NEPA) of 1969; Endangered Species Act of 1973; Clean Water Act of 1972; and the Porter Cologne Water Quality Control Act of 1989.

Environmental analysis and documentation required under NEPA is in place for most all of the above described projects ie; Lincoln Log Forest Health Project, Sly Guard Multiproduct Sale, Middle Middle Fork and Lower Middle Fork and Fiddler Forest Health environmental analysis, and various other

prescribed fire environmental analysis on all districts. Trail work could need minimal documentation . Prior to implementation however sensitive plants, wildlife and cultural sites will be revisited to determine if circumstances have changed or if further analysis will be necessary to ensure protection of resources. There are no other permits or easements required, however adjacent private landowners will be encouraged to adopt similar practices on neighboring lands.

CalFed Category III Proposal - Cosumnes River Basin Project
Submitted by USDA Forest Service, Eldorado National Forest

## Costs and Schedule

| Watershed<br>Task to complete | Budget Costs:<br>Base Cost | Misc & Material | Admin Overhead @ 12% | Total Cost w/admin |
|---|---|---|---|---|
| **MM Fork Cosumnes & Dry Cr:** | | | | |
| Fire hazard reduction 200ac | 240/ac | 10/ac | 6,000 | $56,000 |
| **Camp Cr and Clear Cr:** | | | | |
| Fire hazard reduction 100ac | 240/ac | 10/ac | 3,000 | $28,000 |
| Sly Park Ed Center Trail 7 mi | 2000/mi | | 1,680 | $15,680 |
| Flemming Meadow 15ac | 3360/ac | | 6,048 | **$56,048** |
| Restoring hydrolgic function 50ac | | | 1,800 | **$16,800** |
| Road improvement work 5 mi | | | 6,000 | $56,000 |
| **North Fork Cosumnes and Big Canyon Creek Watersheds:** | | | | |
| Fire hazard reduction 100ac | 240/ac | 10/ac | 3,000 | $28,000 |
| Road improvement work 10 mi | | | 26,400 | **$246,400** |
| Restoring hydrologic function 25ac | | | 900 | **$ 8,400** |
| **Lower Middle Fork Cosumnes:** | | | | |
| Fire hazard reduction 740ac<br>(Watershed Protection area #1, & #2) | 190/ac | 10/ac | 17,760 | $165,760 |
| total for 3 years | | | | $677,080 |

(7)

## Schedule of Work

| Watershed Task to Complete | Survey of changed Circumstances | Start Date | Completion Date |
|---|---|---|---|
| **MM Fork Cosumnes & Dry Cr:** | | | |
| Fire hazard reduction 200ac | 10/1/97 & 98 | 11/1/97 | 10/31/2000 |
| **Camp Cr and Clear Cr:** | | | |
| Fire hazard reduction 100ac | 10/1/97 | 11/1/97 | 10/31/2000 |
| Sly Park Ed Center Trail | 9/97 | 9/97 | 10/31/2000 |
| Flemming Meadow | 10/97 | 6/98 | 10/31/2000 |
| Restoring hydrologic function | 10/97 | 8/98 | 10/31/2000 |
| **North Fork Cosumnes and Big Canyon Creek Watersheds:** | | | |
| Fire hazard reduction 100 ac | 10/1/97 & 98 | 11/1/98 | 10/31/2000 |
| Road improvement work | 10/97 | 8/98 | 10/31/2000 |
| Restoring hydrologic function | 10/97 | 8/98 | 10/31/2000 |
| **Lower Middle Fork Cosumnes:** | | | |
| Fire hazard reduction 740 ac | 10/1/98 & 99 | 11/1/99 | 10/31/2000 |

No negative third party impacts are anticipated as a result of this proposal. Any impacts are considered to be desirable thru in increase in watershed health and function, while reducing the potential for losses to life, property and resources from large intense wildfires.

**Applicant Qualifications:**

The Forest Service employs a staff of professionals who are trained to complete the tasks at hand. The staff includes but is not limited to hydrologists, a geologist, a soils scientist, botanists, a fire management specialist, a fuels specialist, wildland fire suppression crews, archaeologists, wildlife biologists, road construction and maintenance crews, heavy equipment operators and forest and road engineers.

Forest Hydrologists and Forest Fire Management Specialist have drafted this proposal and are best suited to provide technical support for the projects.

Permanent, seasonal and temporary wildland fire suppression personnel would be best suited to accomplish fire hazard reduction projects and may also be utilized for at a portion of the erosion control work for trails in the Camp and Clear Creek Watersheds. Other organized fire crews may utilized or contracted.

Soil productivity and hydrologic function restoration would be accomplished by either the forest construction and maintenance crew, forest equipment operators or by contracting approximately 10% forest operators and 90% contract.

**Compliance with contract requirements, standard terms and conditions:**

Any and all contract work would be in compliance with the guidelines set forth in the CALFED Request for Proposal Requirements as applicable to Federal agencies in addition to those required by federal guidelines.

El Dorado County Resource Conservation District and Georgetown Divide Resource Conservation District
100 Forni Road, Suite A • Placerville, CA 95667 • Phone (916) 295-5630, FAX (916) 295-5635

July 25, 1997

CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

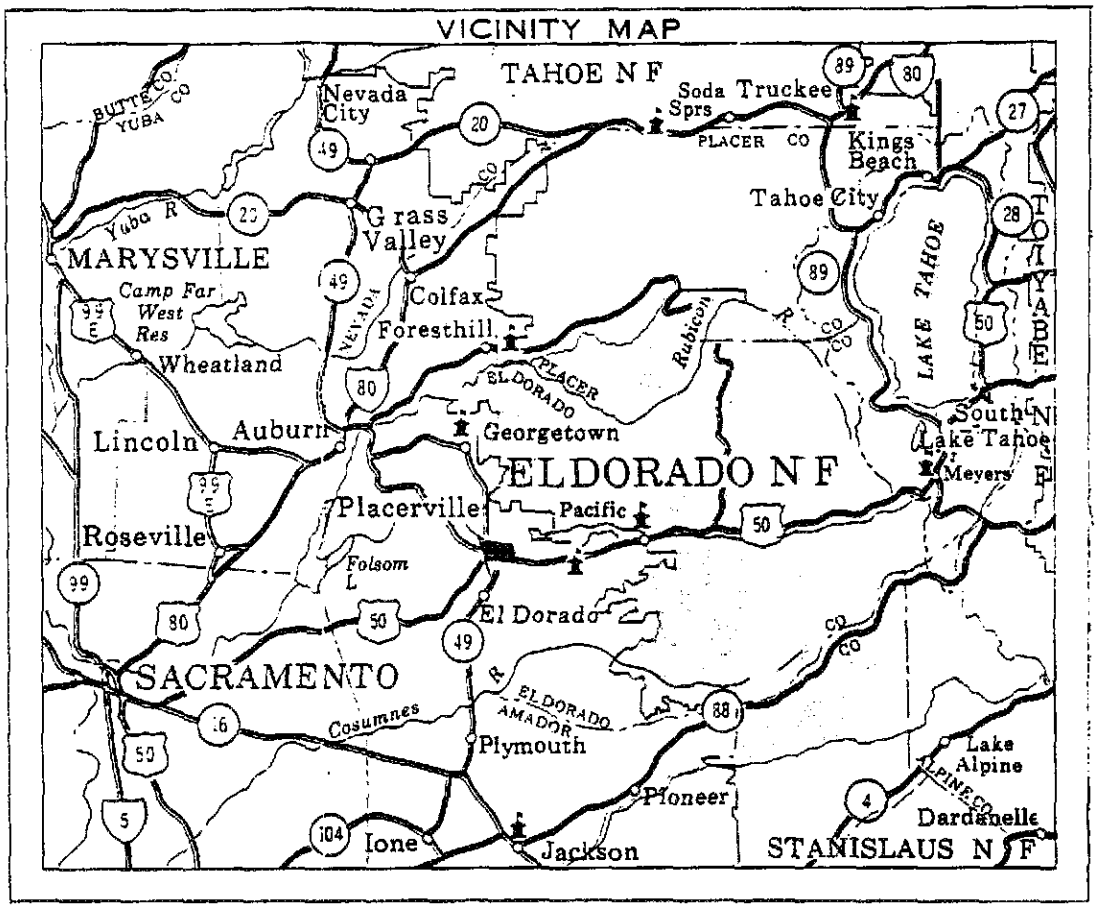
Dear CALFED Bay-Delta Program:

As a local agency in EL Dorado County, our Resource Conservation District is very supportive of any efforts that would improve the state of our local watersheds, the Cosumnes and South Fork American Rivers. We are particularly impressed with the program being advocated by the Eldorado National Forest for your Category III program. Many of the projects they are proposing are ones that we have worked on with them in the past and expect to support in the future. These innovative and very necessary projects are exactly the kinds of efforts the CALFED process should be supporting.

Thank you for your consideration of this important proposal.

Regards,

Mark F. Hicks
Program Manager


VICINITY MAP
TAHOE N F
BUTTE CO
YUBA CO
Nevada City
Soda Sprs
Truckee
PLACER CO
Kings Beach
Tahoe City
Yuba R
Grass Valley
MARYSVILLE
Camp Far West Res
Wheatland
Colfax
Foresthill
NEVADA CO
Rubicon R
LAKE TAHOE
TOIYABE
Lincoln
Auburn
EL DORADO
PLACER
Georgetown
South Lake Tahoe
Meyers
EL DORADO N F
Placerville
Pacific
Roseville
Folsom L
El Dorado
SACRAMENTO
Cosumnes R
EL DORADO
AMADOR
Plymouth
Lake Alpine
ALPINE CO
Pioneer
Dardanelle
Ione
Jackson
STANISLAUS N F



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