USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: 11/1/04

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[x] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[ ] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)

[x] 2. Interim Report
[x] Updating the initial funding request based on more accurate site data or design analysis
[ ] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: POWER FIRE

B. Fire Number: CA-ENF-017646

C. State: CA

D. County: AMADOR

E. Region: 5

F. Forest: 03

G. District: AMADOR

H. Date Fire Started: 10/06/04

I. Date Fire Contained: 10/22/04

J. Suppression Cost: TBA

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles):
2. Fireline seeded (miles):
3. Other (identify):

L. Watershed Number: 1804001201, 1804001200. 1804001202

M. Total Acres Burned: 16,823
NFS Acres(**13,738**) Other Federal ( ) State ( ) Private (3085)

N. Vegetation Types:MIXED CONIFER, OAK WOODLANDS, BRUSH

O. Dominant Soils: McCARTHY,JOCAL,WACA

P. Geologic Types: METASEDAMENTARY, GRANITICS, VOLCANIC MUDFLOW

Q. Miles of Stream Channels by Order or Class: 18mi perrennial,26 miles of seasonal

R. Transportation System

Trails: 8 miles Roads:79 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 9358 (low) 4395 (moderate) 3069 (high)

B. Water-Repellent Soil (acres) 2413:

C. Soil Erosion Hazard Rating (acres):
9318 (low) 3358 (moderate) 5046 (high)

D. Erosion Potential: 9.8 tons/acre

E. Sediment Potential: 6272 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 10yr

D. Design Storm Duration, (hours): 6hr

E. Design Storm Magnitude, (inches): 2.6”

F. Design Flow, (cubic feet / second/ square mile): 79.7

G. Estimated Reduction in Infiltration, (percent): 50% high, 25%mod,10%low

H. Adjusted Design Flow, (cfs per square mile): 81.3 For EPanther Cr. 40% burned

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency: Describe Emergency

Threat to Life and Property

A threat to human life, property, and water quality from the loss of control of water exists along Forest roads within the Power Fire area. Fall rains preceded completion of the BAER survey and assessment. The storms of October 16, 2004 to date have dropped an estimated 5 inches of precipitation on the Power fire resulting in a watershed emergency situation. The road drainage system has already been affected by increased runoff and sedimentation. Roadside drainage ditches are filled to capacity during the initial storm event and failure is imminent without clearance. There is an immediate need for continued access for administrative, private in-holder, and hydropower facility personnel.

The threat to life from increased rock fall and debris flow potential along the Salt Springs Road, Ellis Road and East Panther Road and interior roads and along the Tanglefoot and Blue Hole trails is an emergency caused by the fire. Rocks from cobble to boulder size may dislodge from steep burned slopes adjacent to the road, presenting a falling object or a road surface obstacle that can cause motor vehicle accidents. This same condition with rock fall exists at the Salt Spring Reservoir parking area, trailhead and along the trails, including the dispersed campsite on the reservoir on the Blue Hole trail. The potential treat to human life from rock fall exists at the Mokelumne and White Azaelea campgrounds, and the nearby whitewater boating put in site.

Snags along these roads present a threat to human life. Burned trees and limbs along roads may also present a threat to travelers and property upon falling, falling trees and limbs can roll onto roads from steep slopes above. Storm conditions in the fire area will likely increase the potential for both rock fall and downed trees.

There is also a threat to human life, safety, and forest resources from increased access for ohv into the burned area. Because of the fire, newly exposed access will be available down historic roads and skid trails that were previously revegetated. Ohv traffic will affect the recovery of the lower slope, and high intensity burned areas. The accessibility of the fire area caused by removal of vegetation constitutes an emergency threat to soil productivity. If the area remains open to motor vehicles, OHV recreation and other 4WD vehicles, soil displacement and compaction (and invasive weed introduction) is very likely. With the open areas created by the fire, illegal OHV trail expansion is a possibility.

Threat to Ecosystem Stability

There is a potential threat to Ecosystem Stability if noxious and invasive weeds can become established in the burned area in competition with native plant species. There are known sites near and within the area which will likely take advantage of the loss of competition, and increase up to 25% per year in area covered.

There is a threat to ecosystem stability in areas where access to the burned area allows for new ohv routes to become established, causing hill slope erosion and delay of area recovery from the fire.

Loss of Water Control

A threat of the loss of control of water exists on roads and trails if drainage structures are overcome by debris and sedimentation and do not function effectively. The resultant loss of road and trail structure could add to the degradation of water quality.

Flooding is not expected to be significant following the fire, and thus does not create an emergency under design flow conditions. Increased flows have a high probability of mitigation. Mitigation consists of the ability of the healthy riparian area to retard water velocities, disperse flows onto floodplains, and trap woody material along the way. However, people near the stream should exercise awareness of stream flow conditions and prudent caution during storm events

Deterioration of Water Quality

There is an emergency to water quality, as the East Bay Municipal Utility District (EBMUD)and the County of Amador depend on the North Fork of the Mokelumne River for drinking water supplies. EBMUD has extremely stringent water quality requirements for their treatment facilities. A reduction in ground cover in high burn severity and moderate burn severity areas will increase channel, rill, and sheet erosion from these areas, especially on steep slopes. Burned vegetation in riparian areas that normally filters out sediment ash, will result

in an increase in ash and sediment reaching stream channels, thereby impairing water quality. Water quality in the North Fork of the Mokelumne River will be affected, as the watersheds in the burn area will transport all constituents into the River. Sediment delivery as a result of landsliding, other slope movement, and erosion is also a risk to water quality of the Mokelumne River and its tributaries within and downstream of the burn area.

The loss of control of water on road fill on roads within the burned area would exacerbate the change in water quality during precipitation runoff events.

A Threat to Loss of Soil Productivity

Loss of soil productivity is identified as an emergency because of accelerated erosion from the compound effect of fire and potential road drainage issues.

A Threat to Federal Property

From the loss of control of water on roads and trails. Specific roads assessed by the Power BAER team included Panther Creek Rd, Ellis Rd., Salt Springs Road. Secondary roads within the burned area were inaccessible due to snag hazards and wet, unsurfaced road hazards, which precluded safe travel or walking for their assessment. The Tanglefoot and Blue Hole Trails were assessed from the air, and found to be at risk from rockslides, debris flows, falling snags, and some localized increased runoff.

A Threat to Heritage Resources

The Power Fire burned through a prehistoric archeological district that contains at least 71 documented sites. Due to the weather and hazard constraints present on the ground, the initial BAER survey team was not able to assess the risk to these resources from increased access, and from erosion from the surrounding burned area. It is anticipated that this assessment will take place as soon as the hazards are removed and the area is safe to enter.

A Threat to Threatened and Endangered Species

The burned area provides habitat for the California red legged frog. The aquatic biologist on the team assessed the area and did not determine that there is an emergency to the species at this time. No frogs have been identified in this area in several recent and historic surveys. The area also includes habitat for the bald eagle. The wild life biologist on the team has determined that there is not an emergency to that or any other wild life T&E species as a result of the Power Fire.

B. Emergency Treatment Objectives: Protect human life, federal property, water quality, and forest resources from hazard trees, loss of roadways and trails, especially at stream crossings, and damage from motorized vehicles in recovering burned areas.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm: The first damage producing storm occurred concurrently with the BAER team arriving on the incident. This is an early initial report to initiate funding for storm patrol and other treatments that are needed immediately to clear road drainage system for the next event, and keeping the public safe. Because much of the fire area is in a rain-on-snow zone these treatment measures (especially storm patrol) could be our most effective treatment measures in reducing fire induced storm effects on transportation system and water quality. Although the first damaging storm has occurred, winter is just now being within this rain-on-snow zones. Between storm events there is still time to implement effective treatments, such as storm patrol, to help prevent the of plugging of culverts which would increase the potential for road prism failure. Potential threats to human life, safety, loss of facilities and water quality could occur if this treatment is not implemented soon.

Land __ % Channel __ % Roads **65** % Other **70** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	90	90	95
Channel			
Roads	80	90	95
Other	90	95	95

E. Cost of No-Action (Including Loss): $ **3,350,000 plus the cost of human life and unknown costs of addditional treatment requirements for public water supply utilities.**

F. Cost of Selected Alternative (Including Loss): **$ 1,255,882**

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology [X] Soils [ ] Geology [X] Range [ ]
[X] Forestry [X] Wildlife [ ] Fire Mgmt. [X] Engineering [ ]
[ ] Contracting [ ] Ecology [ ] Botany [X] Archaeology [ ]
[X] Fisheries [ ] Research [ ] Landscape Arch [X] GIS

Team Leader: CHERYL MULDER

Team Members:
John Sweetman Forestry
Chuck Lofland Wildlife Biology
David Hunt Archeology
Jann Williams Fisheries
Cindy Podsiadlo Range
Casey Shannon Hydrology
Andrew Briebart Hydrology
Kristine Leep Hydrology
Larry Costick GIS
Jeff TenPas Soils
Rusty LeBlanc Engineering
Mike Bradshaw Engineering
Mike Taylor Botany
Sean McGinness Recreation

Email: cmulder@fs.fed.us Phone: (530)621-5246 FAX: (530)621-5246

H. **Treatment Narrative:**
Land Treatments:

- Straw mulch should be applied to road side hill slopes within the burned area to prevent accellerated erosion above road cuts and below roads where runoff will be the greatest.

- PG&E is implementing hillslope and hazard tree removel treatments to mitigat failure potential of their water transfer canal.

Channel Treatments: none are anticipated at this time.

Roads and Trail Treatments: Forest Roads:

- Install gates with warning signs to implement administrative closure to protect life and safety, and forest resources.

- Implement emergency storm patrol to clear roads and associated drainage structures after storm runoff events.

- Install closure informational and warning signs at gates and key access locations.

- Install 24" culvert with metal end section.

- Install culvert inlet treatments

- Hazard Tree Removal

- Implement emergency Storm Patrol on roads to keep drainage function during precipitation runoff events.

- Ellis Road Fill - stabilize fill slope. Buttress the fill by end-dumping 1,000 cubic yards (cy) of 1-meter size riprap from the road shoulder. Riprap will catch on natural bench 100 feet down slope
  Ellis Road Cut - stabilize cut slope. Buttress the cut slope by placing 100 cy of 1-meter size riprap into the cut slope failure area. Remove and grade the irregular base of the cut slope failure prior to placing the riprap.

Structures: none are proposed at this time.

I. **Monitoring Narrative:** no monitoring is proposed at this time

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

Line Items	Units	Unit Cost	# of Units	WFSU SULT $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
A. Land Treatments										
Straw Mulching	acres	75	333	$24,975			$0		$0	$24,975
herbicide	acres	150	1.4	$210			$0		$0	$210
slope stabilization								1	#######	$250,000
Subtotal Land Treatments				$25,185			$0		$0	$275,185
B. Channel Treatments										
Subtotal Channel Treat.				$0			$0		$0	$0
C. Road and Trails										
Storm Patrol				$30,000			$0		$0	$30,000
Signs				$8,000			$0		$0	$8,000
Hazard Trees	mi	3000	10	$29,000			$0		$0	$29,000
Gates	ea	5000	4	$20,000			$0		$0	$20,000
rd slope stabilization	cuyd	15	1000	$15,000			$0		$0	$15,000
rd cut stabilization	ls	3000	1	$3,000			$0		$0	$3,000
Storm Patrol	mi	2000	48	$96,000			$0		$0	$96,000
Signs	ea	6050	5	$30,250			$0		$0	$30,250
All Culvert Work Rds	LS	40950	1	$40,950			$0		$0	$40,950
Trail storm patrol	mi	750	8	$6,000			$0		$0	$6,000
Trail erosion control	mi	1000	8	$8,000			$0		$0	$8,000
trail head hazard signs	ea	4000	2	$8,000			$0		$0	$8,000
Subtotal Road & Trails				$294,200			$0		$0	$294,200
D. Structures										
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
BAER Team				$10,000			$0		$0	$10,000
members expenses	LS	45,500	1	$45,500			$0		$0	$45,500
Supplies				$250			$0		$0	$250
GIS Supplies	LS	1500	1	$1,500			$0		$0	$1,500
F. Monitoring	hr			$0			$0		$0	$0
G. Totals				**$376,635**			**$0**		**$0**	**$626,635**

Bold,Italisized words are the interim request $$ in addition to the initial request which was submitted very early in the survey process due to the impending precipitation event. CIm

PART VII - APPROVALS

1. *Michael A. Valdes (for)* *John D. Berry* — *11/2/04*
   Forest Supervisor (signature) — Date

2. /s/Bernie Weingardt — 11/8/04
   Regional Forester (signature) — Date