

EXTRA

USDA-FOREST SERVICE

Date of Report: June 16, 1997

BURNED-AREA REPORT
(Reference FSH 2509.13, Report FS-2500-8)

PART I - TYPE OF REQUEST

A. Type of Report

- [] 1. Funding request for estimated FFFS-FW22 funds
[X] 2. Accomplishment Report

B. Type of Action

- [] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)
[] 2. Interim Report
 [] Updating the initial funding request based on more accurate site data and design analysis
 [] Status of accomplishments to-date
[X] 3. Final report - following completion of work

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name: Eldorado B. Fire Number: ANF 2877
C. State: California D. County: Los Angeles
E. Region: Pacific Southwest (05) F. Forest: Angeles (01)
G. District: Mt. Baldy (52)
H. Date Fire Started: June 30, 1996 I. Date Fire Controlled: July 15, 1996
J. Suppression Cost: \$ 122,459
K. Fire Suppression Damages Repaired with FFFS-PF12 Funds:
 1. Fireline waterbarred (miles) .75 (handline)
 2. Fireline seeded (miles) 0
 3. Other (identify) 0
L. Watershed Number: 1807010602 (Watershed Unit #125)
M. NFS Acres Burned: 95 Total Acres Burned: 95
 Ownership type:
 () State () BLM () PVT () _____
N. Vegetation Types: Chamise Chaparral, Northern Mixed Chaparral
 Canyon Live Oak
O. Dominant Soils: Trigo, granitic substratum - Exchequer families -
 Rock Outcrop complex
P. Geologic Types: Precambrian Igneous, Metamorphic Rock Complex,
 Mesozoic Granite
Q. Miles of Stream Channels by Order or Class:
 I - 0 II - 0.3 III - 0 IV - 0
R. Transportation System:
 Trails: 0 (miles) Roads: 2.0 (miles)

PART III - WATERSHED CONDITION

- A. Fire Intensity (Acres): 5 (low) 42 (moderate) 48 (high)
- B. Water Repellant Soil (Acres): 38
- C. Soil Erosion Hazard Rating (Acres):
0 (low) 4 (moderate) 91 (high)
- D. Erosion Potential: 201 tons/acre
- E. Sediment Potential: 36,743 cu. yds/sq. mile

PART IV - HYDROLOGIC DESIGN FACTORS

- A. Estimated Vegetative Recovery Period: 7 years.
- B. Design Chance of Success: 90 percent.
- C. Equivalent Design Recurrence Interval: 10 years.
- D. Design Storm Duration: 96 hours.
- E. Design Storm Magnitude: 16.7 inches.
- F. Design Flow: 2263 cfs.
- G. Estimated Reduction in Infiltration: 18.9 percent.
- H. Adjusted Design Flow: 4527 cfs.

PART V - SUMMARY OF ANALYSIS

A. Describe Emergency:

1. Threat to Human Life: The drainages in the East Fork of San Gabriel Canyon are steep and can produce heavy runoff. Although the Eldorado Fire was relatively small (95 acres); two of the three affected drainages were completely burned. The closest human habitation is located less than 1 mile downstream. This is a privately owned campground, which is used by thousands of recreationists on a yearround basis.
2. Threat to Property: There have been extensive improvements made recently to the privately owned Camp Williams Campground which is located just south of the Eldorado Fire area. These improvements included grading and developing new campsites, installing picnic tables and trees, and general rehabilitation of the camping areas.

The county maintained Shoemaker Road (2N11) bisects the Eldorado Fire. This is a 2 lane asphalt road with a chip sealed surface. Along the 1740 linear feet of road surface burned over by this fire are 4 drainage culverts. It is anticipated that there will be an increase in sediment which will be deposited into these culvert basins. The possibility of these culverts becoming plugged by this increased amount of sediment is great. In addition, there is a high potential for erosion from bypass flows.

The East Fork is used extensively for recreational purposes, primarily water play activities. This area has an extremely high recreation value to the visiting public. The southernmost boundary of the fire is at water's edge. From this edge, there is a gradual bench approximately 60' deep, which then rises dramatically to steep slopes. This bench area is a popular dispersed picnic site. It will be subjected to severe deposition of sedimentation.

3. Loss of Control of Water: Slopes within the burned area are very steep and water will run off rapidly. Water will run directly into the East Fork of the San Gabriel River. Control of this water will be achieved at the San Gabriel Reservoir which is located downstream approximately 6 miles.
4. Threats to Water Quality: Some water quality degradation will occur from the burned vegetative material and from sediment that will end up in the East Fork. This condition can be expected for 1-3 years after the burn.
5. Threats to Long-Term Productivity: Based on the field survey, the average soil loss over the burned area was calculated to be about 201 tons per acre per year. However, soil damage appears to be minor. The fire was hot and fast, and approximately 95% in the high intensity areas, the soil damage appeared to be moderate. There are hydrophobic soils naturally occurring.

B. Emergency Treatment Objectives:

The emergency treatment objectives are to maintain site productivity and control the potential erosion. In addition, provide recommendations which allow for the existing structures to continue to function while the watershed recovers.

In addition, emergency treatment objectives should provide reassurance to private landowners and recreationists that efforts are being made to stabilize steep slopes.

C. Probability of Completing Treatment Prior to First Major Damage Producing Storm:

Land 100 % Channel % Roads 100 % Other 80 %

D. Probability of Treatment Success

	<----Years after treatment----->		
	1	3	5
Land	70	80	90
Channel			
Roads	100	100	100
Other	90	100	100

E. Cost of No-Action (Including Risk): \$ 315,871

F. Cost of Selected Alternative (Including Risk): \$ 146,264

G. Skills Represented on Burned-Area Survey Team ("x" appropriate boxes):

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range
<input type="checkbox"/> Timber	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input type="checkbox"/> Research	<input checked="" type="checkbox"/> Archaeology
<input checked="" type="checkbox"/> NCRS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Team Leader: Karen Fortus

Phone: (818) 335-1251 ext. 249 DG Address: K.Fortus:R05F01D52A

H. Final Treatment Narrative:

Road Surface Treatment: Inspection of the road surface showed that there were no effects on the surface related to the fire or fire suppression activities. Therefore, there is no recommendation for any rehabilitation measures related to the road surface.

Drainage Structure Treatment: Due to the possibility of existing culverts becoming plugged by increased sediment from the burned area, culvert riser extensions were installed on four culverts. These extensions were designed to allow for the possibility of sediment buildup in the basin, around the culvert inlet elevation, yet allow the culvert to continue to function. These structures worked very well and met the treatment objective.

Road Closure Device: The recommendation for the placement of a gate was rejected by the County of Los Angeles Department of Public Works, who is responsible for the safety and maintenance of Shoemaker Road. They supported their concerns by providing a letter stating that they would implement storm watch during intense storm periods and patrol the road.

Hydromulching Application:

It was recommended that hydromulching be applied to the fill slopes and drainages associated with Shoemaker Road. The total acreage proposed for hydromulching was approximately 7 acres. Seeding application rate was as follows:

Qty	Seed Type	Seed/Lb
20 lbs	Cucamonga Brome	78,000
20lbs	Buckwheat	300,000
10 lbs	Deerweed	650,000

Also included in the hydromulch application was:

1800 lbs of paper mulch
80 lbs of tackifier

This treatment was selected due to past performance results and has been effective in meeting treatment objectives for the Eldorado burned area. Three years ago the Forest hydroseeded a severely eroded fill slope which is located

less than 1 mile from the burned area using the seed mix specified above. Excellent results in germination and slope stabilization were obtained.

Aerial Seeding: Aerial seeding had been a recommendation but was determined by the District Fire Management Officer and the District Resource Officer to be too costly for the benefits gained. Hand seeding was considered but due to the extreme steepness of the area and concern for employee safety, it was also eliminated from implementation.

PART VI - EMERGENCY REHABILITATION TREATMENTS AND SOURCE OF FUNDS BY LAND OWNERSHIP

NOTE: Emergency rehabilitation is work done promptly following a wildfire and is not to solve watershed problems that existed prior to the wildfire.

Line Items	Units	Unit Cost \$	NFS Lands			Other Lands			All
			Number of Units	FFFS- FW22 \$	Other \$	Number of Units	Fed \$	Non-Fed \$	Total \$
					ident.		ident.	ident.	
A. LAND TREATMENTS									
Seeding	acres	49	90	4410					4,410
Hydromulch	acres	1130	7	7910					7,910
B. CHANNEL TREATMENTS									
C. ROADS AND TRAILS									
Gate - Shoemaker Road	EA	7500	1	7500					7,500
D. STRUCTURES									
Culvert Riser Extension	EA	9050	4						36,200
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
BAER Team	days	1600	2						3,200
F. TOTALS									
									59,220

PART VII - APPROVALS

1. /s/ MICHAEL J. ROGERS
Forest Supervisor (Signature)

06/19/97
Date