DOCUMENT HEADER

Document name: FINAL BAER REPORT FOR BIE Document type: WRD

Drawer: rehab Folder: 96 report finals
Received from: Bill Brown

Last modified on Jun 20,97 1:17 PM by R.GRIFFITH

Author: Bill Brown Typist: Bill Brown

Filed on: Jun 23,97 2:33 PM Message attached

Subject: BIEDEBACH

Summary:

Comments:

To R.GRIFFITH:R05A

From: Bill Brown Acting for: Land Mgt. Plannin
Postmark: Jun 20,97 1:53 PM
Status: Certified Previously read
Subject: FINAL BAER REPORT FOR BIEDEBACH

Comments:
3 OF 7 DOCUMENTS

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 EFFS-FW22 funds
[X] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

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: Biedebach B. Fire Number: ANF 4604

C. State: California D. County: Los Angeles
E. Region: Pacific Southwest (05) F. Forest: Angeles (01)
G. District: Valyermo (54)

H. Date Fire Started: September 1, 1996 I. Date Fire Controlled: September 9
J. Suppression Cost: $ 1,500,000.00

K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
1. Fireline waterbarred (miles) 3.2 (2.6 dozerline, .6 handline)
2. Fireline seeded (miles) 2.8*
3. Other (identify) .25 mi. of PCT repaired, Add. work needed ($3,250)
*** - Fireline seeded "naturally" by pulling back berms and brush, and adding additional cut brush to develop seed bank and retard erosion.**

L. Watershed Number: 1809020603, 1807010602

M. NFS Acres Burned: 601 Total Acres Burned: 618
Ownership type:
( )State ( )BLM (17)PVT ( )

N. Vegetation Types: Semi-desert, oak-manzanita; Forest and Alpine, oak manzanita, chamise chaparral

O. Dominant Soils: Bakeoven Family-Lithic Xerothents-Sur Family, moderate deep complex (45-80% slope); Olete-Kilburn Families, Mollic Haploxeralfs, Pool Complex (40-70% slope); Haploxeralfs-River Wash Association (2-25% slope)

P. Geologic Types: Precambrian igneous, metamorphic rock complex, mesozoic granite; pre-cretaceous metamorphic rocks

Q. Miles of Stream Channels by Order or Class:
I - 0.0 II - 0.0 III - 1.8 IV - 7.0

R. Transportation System:
Trails: 1 (miles) Roads: 5 (miles)

PART III - WATERSHED CONDITION

A. Fire Intensity (Acres): 419 (low) 57 (moderate) 92 (high)

B. Water Repellant Soil (Acres): 130

C. Soil Erosion Hazard Rating (Acres):
0 (low) 24 (moderate) 544 (high)

D. Erosion Potential: 19.8 tons/acre
E. Sediment Potential: 9040 cu. yds/sq. mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 10 years.
B. Design Chance of Success: 75 percent.
C. Equivalent Design Recurrence Interval: 40 years.
D. Design Storm Duration: 24 hours.
E. Design Storm Magnitude: 10 inches.
F. Design Flow: 150 cfsm.
G. Estimated Reduction in Infiltration: 23 percent.
H. Adjusted Design Flow: 164 cfsm.

PART V - SUMMARY OF ANALYSIS

A. Describe Emergency:

The Biedebach Fire area covered approximately 618 acres; 601 acres were Forest Service and 17 acres were private, although the private area was essentially unburned. Burn intensity over the entire area was predominantly low with isolated patches of high and moderate areas. Burn intensities across the entire fire area were divided into 15% high, 9% moderate and 76% low burn intensity and unburned. Slopes are steep, averaging 60-65% within the fire area and are highly erodible. Vegetation is primarily moderately dense to open stands of mixed conifer with patches of chaparral along ridgetops and landslide scarps.

Bedrock along Blue Ridge within the fire area is a metamorphic rock known as the Pelona Schist. The Pelona Schist formation is recognized for its instability and susceptibility to landsliding. Due to past landslide activity on the north side of Blue Ridge, the Wright Mountain Slide, there was concern from the community of Wrightwood and Forest Service Management for increased potential for landslides due to the wildfire. Investigations by geologists on the BAER team determined that the wildfire did not cause any significant increase in landslide potential in Acorn or Flume Canyons.

Summary of Primary Resources at Risk

1) Threat to Life and Property:

Lupine Campground - This campground contains one toilet and several picnic tables. Heavy debris flows or a landslide could destroy the campground and

associated facilities. There is a loss of recreational use in the short term while the while the campground is closed for safety reasons.

Flume Canyon Trail, 8W36 - This trail connects Guffy Campground with the town of Wrightwood. The trail was burned over for approximately 3/4 of a mile. Increased sediment movement could cover the trail in the form of a debris flow.

Forest Service Road 3N39 - This road surface is potentially at risk due to increased sediment volumes that could overtop the road and/or loss of stream crossings due to culvert inability to pass increased glow and sediment volumes. Road fills are at risk of accelerated rill and gully erosion. Existing gully systems associated near this road are likely to be enlarged due to increases in flows.

2) Loss of Water Control and Water Quality:

Landslides - See Geology Report for specific risks.

3) Threat to Long Term Soil Productivity:

Soils are highy erodible, slopes are steep, burn intensities were primarily low to moderate with moderate to high fire induced hydrophobicity within moderately and intensely burned areas (approximately 23% of the burn area). Much of the remaining area has a natural hydrophobicity just at the very surface. Average post-fire soil loss over the burn area was calculated to be 16.8 tons per acre, based on methods described in Quantifying Soil Movement, R3 USFS Dave Anderson, 1993. This figure exceeds the approximate rate of soil formation for forest soils in California, which is one ton per year.

B. Emergency Treatment Objectives:

Objectives of the proposed treatments include:

- Reduce sedimentation from hillslopes directly above Lupine Campground.

- Protect Forest Service Road 3N39 and Forest Service Trail 8W36.

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

Land **100** % Channel **NA** % Roads **100** % Other **NA** %

. Probability of Treatment Success

	<----Years after treatment----->		
	1	3	5
Land	75%	80%	90%
Channel	NA	NA	NA
Roads	80%	75%	70%
Other	NA	NA	NA

E. Cost of No-Action (Including Loss): $ 85,690.00

F. Cost of Selected Alternative (Including Loss): $ 77,466.00

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	[X] Soils	[X] Geology	[ ] Range
[ ] Timber	[X] Wildlife	[ ] Fire Mgmt.	[X] Engineering
[ ] Contracting	[ ] Ecology	[ ] Research	[X] Archaeology
[ ] _____	[ ] _____	[ ] _____	[ ] _____

Team Leader: **William Brown**
Phone: **(818) 574-5258** DG Address: **B.Brown:R05F01A**

H. Final Treatment Narrative:

1. Further Fire Suppression Rehabilitation

The following fire suppression rehabilitation activities were accomplished:

Drag in soil, brush, rocks and trees for 1/2 mi. of the Pacific Crest Trail:

Reinstall one trail sign
Replaced two camp site barriers

2. Burned Area Emergency Rehabilitation Measures

Lupine Campground

- Approximately 79 acres of contour lopping and scattering of small conifer trees at selected locations on the lower third of slopes directly above Lupine Campground to help reduce surface erosion into the campground was completed. In addition, the placement of straw tubes on approximately 33 acres on burned area slopes 40% and less to reduce surface erosion was accomplished.

Forest Service Road 3N39

- Treatments included contour lop and scatter of trees on slopes directly above 3N39 near Guffy Campground to reduce sediment movement that could overtop the road and/or loss of stream crossings due to culvert inability to pass increased glow and sediment volumes. In addition, to protect road fills that were at risk due to accelerated rill and gully erosion, rock and wire dissipators were installed below culvert drainage extensions at six locations.

Forest Service Trail 8W36

- Recommended treatments included replacing damaged user control measures for safety, construction of access barriers, and redefining tread to alleviate the effects of any increase in the rate of sedimentation across the trail.

This treatment objective, however, was dropped from consideration by the Valyermo District Ranger who decided that it was not needed.

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.

			NFS Lands			Other Lands			All
Line Items	Units	Unit Cost $	Number of Units	EFFS-FW22 $	Other $ ident.	Number of Units	Fed $ ident.	Non-Fed $ ident.	Total $
A. LAND TREATMENTS									
Contour Lop and Scatter	ac	19	79	1500					1500
Straw tubes	lf	1.56	32500	50750					50750
B. CHANNEL TREATMENTS									
Road Damage Dis.	ton	76	54	4104					4104
C. ROADS AND TRAILS									
FS Trail 8W36	Job	5050	1	5050					5050
D. STRUCTURES									
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
BAER Team	p-day	250	50	12500					12500
F. TOTALS				73904					73904

PART VII - APPROVALS

1. /s/ MICHAEL J. ROGERS — 06/19/97

Forest Supervisor (Signature) — Date