FINAL

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Summary:

Comments:

To R.Griffith

From: ARF-Ecosystem Cons
Postmark: Nov 12,96 9:38 AM
Status: Previously read
Subject: Forwarded: 2520 BAER FINAL RPT

Comments:

From: ARF-Ecosystem Cons:R05A
Date: Nov 12,96 9:38 AM
Shasta-Trinity - Rock Fire (Final Report)

Previous comments:
From: MAIL:R05A
Date: Nov 08,96 3:33 PM

United States Department Of Agriculture | Forest Service | Shasta Trinity National Forests

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Reply To: 2520 Date: November 4, 1996

Subject: BAER Final Report, Rock Fire

To: Regional Forester
Attn: Rob Griffith

Enclosed is the Final Burned Area Emergency Report for the Rock Fire. The Rock Fire was located within the Yolla Bolly-Middle Eel Wilderness. All work was finished before the first damage producing storms. All work was completed with slightly fewer dollars than was authorized. If you have any questions regarding this report, or the work that was done, please contact Scott R. Miles at R05F14A.

/s/Karyn L. Wood, for
J. SHARON HEYWOOD
Forest Supervisor

Enclosure

USDA-FOREST SERVICE Date of Report: 10-18-96

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: **Rock Fire** B. Fire Number: **SHF-5344**

C. State: **California** D. County: **Trinity**
E. Region: **5** F. Forest: **Shasta-Trinity**
G. District: **Yolla Bolla**

H. Date Fire Started: **Aug. 14, 1996** I. Date Fire Controlled: **8-27-96**
J. Suppression Cost: **$ 3,396,906**

K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
1. Fireline waterbarred (miles) **2**
2. Fireline seeded (miles) **-0- to date**
3. Other (identify) **Dozer lines with ground cover added = 2 miles**

L. Watershed Number: **18-01-02-12-03**

M. NFS Acres Burned: **2527** Total Acres Burned: **2527**
Ownership type:
( )State ( )BLM ( )PVT ( )____ _____

N. Vegetation Types: **Mixed Conifers, Red Fir, Douglas Fir, Incense Cedar, Oaks, and Grasslands.**
O. Dominant Soils: **Yolla Bolly Family, Tallac Family, Neuns Family, and Deadwood Family; and Goulding Family**
P. Geologic Types: **Schist throughout the burned area. Graywacke & shale**

at lower elevations.

Q. Miles of Stream Channels by Order or Class:

1st: 14 2nd: 5 3rd: 1

R. Transportation System:

Trails: 7.0 (miles) Roads: -0- (miles)

PART III - WATERSHED CONDITION

A. Fire Intensity (Acres): 598 (low) 464 (moderate) 386 (high)

B. Water Repellant Soil (Acres): 290

C. Soil Erosion Hazard Rating (Acres):
268 (low) 1180 (moderate) -0- (high)

D. Erosion Potential: 491 tons/acre
E. Sediment Potential: 804.9 cu. yds/sq. mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 15 years.
B. Design Chance of Success: 70 percent.
C. Equivalent Design Recurrence Interval: 10 years.
D. Design Storm Duration: 6 hours.
E. Design Storm Magnitude: 3.7 inches.
F. Design Flow: 48 cfsm.
G. Estimated Reduction in Infiltration: 35 percent.
H. Adjusted Design Flow: 65 cfsm.

PART V - SUMMARY OF ANALYSIS

A. Describe Emergency:

The Rock fire burned 2527 acres; 2491 acres are in the North Yolla Bolly Wilderness Area. The Rock Fire overlaps more than 80%, with approximately 2500 acres burned by the Hermit Fire in 1988. During the Hermit Fire, the high intensity burning was concentrated at the middle of what was burned by the Rock Fire. During the Rock Fire, the high intensity burning occurred along the NW portion of the fire, the central middle portion at about the elevation of the Humboldt Trail, and at the eastern half of the fire area aligned SE to NW below the Humboldt Trail.

Six first order ephemeral and gullies draws were burned to a high intensity at ground level. These draws have the potential to downcut to bedrock due to increased runoff and the removal of riparian vegetation along with the burning out of some large woody debris in the channels and/or ephemeral swales.

B. Emergency Treatment Objectives:

1. Stabilize first order ephemeral draws and gullies by preventing downcutting or further downcutting (at Cedar Basing subwatershed.)

2. Keep the potential sediment and ash from within the burned area out of the South Fork Trinity River and its fisheries habitats.

C. Probability of Completing Treatment Prior to First Damage Producing Storm:
Land N/A Channel 90 % Roads N/A % Other N/A %

D. Probability of Treatment Success

	<----Years after treatment-----> 1	3	5
Land	N/A	N/A	N/A
Channel	90	95	95
Roads	N/A	N/A	N/A
Other	N/A	N/A	N/A

E. Cost of No-Action (Including Loss): $ 76,626

F. Cost of Selected Alternative (Including Loss): $ 57,513

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	[X] Soils	[ ] Geology	[ ] Range
[ ] Timber	[X] Wildlife	[ ] Fire Mgmt.	[ ] Engineering
[ ] Contracting	[ ] Ecology	[ ] Research	[X] Archeo- logy
[X] Silviculture	[X] Wilderness	[ ] _____	[ ]

Management Team Leader: George L. Cruz

Phone: 352-4211 or 246-5116 DG Address: R05F14D51A

H. Treatment Narrative: (Final Accomplishment)

Fifty five in-channel structures spaced an average of 100 to 200 feet apart were placed in six ephemeral and/or intermittent channels with a total length of 3 miles. Forty-four of the structures were grade control structures, (37 log and 7 rock structures). Eight rock structures and 2 log structures were installed to replace burned out logs. One in-channel structure consists of a rock energy dissipator at a trail crossing.

Eight logs were rearranged at one ephemeral channel to reduce the potential for erosion within the channel while still providing ground cover.

Only larger woody debris that was already on the ground and rocks were use to put in the in-channel structures. Only the use of hand saws and two-person crosscut saws was allowed. The 55 in-channel structures will prevent or reduce downcutting and maintain channel gradients. The height from the streambed to the top of each grade control structure does not exceed 12". The height of each of the 9 structures put in to replace burned out logs does not exceed the height of the log that it replaced.

Only three of the in-channel structures are visible from the Humboldt or Pettijohn trails. One of these is the rock energy dissipator at a trail crossing. The use of rock is appropriate to control erosion on wilderness trails while maintaining a natural appearance consistent with a wilderness experience. The other 2 structures are the log structures that replaced burned out logs. The crew took care to make these structures look as natural in appearance as is possible in an intermittent stream.

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									
None recommended									
B. CHANNEL TREATMENTS									
GRADE CONTROL STRUCT.	EACH	349	55	$19,200					$19,20
C. ROADS AND TRAILS									
D. STRUCTURES									
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
F. TOTALS									$19,20

PART VII - APPROVALS

1. /s/Karyn L. Wood, for
J. Sharon Heywood — **November 8, 1996**
Forest Supervisor (Signature) — Date

2. /s/ _____
Regional Forester (Signature) — Date