

UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

FOREST  
SERVICE

R5

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REPLY TO: 2520/6520

DATE: October 6, 1987

SUBJECT: Authorization for Expending Emergency Burned  
Area Rehabilitation Funds (FFF-092) -- Jeep Fire

TO: Forest Supervisor, San Bernardino NF

Attached is a revised Burned Area Report (FSH 2509.13, Report FS-2500-A).

You are authorized to expend FFF-092 funds for emergency burned area  
rehabilitation as indicated in Part VI of FS-2500-8 form.

/s/David M. Jay  
PAUL F. BARKER  
Regional Forester

Enclosure

cc: RF Office  
Healy (PB)  
RW&CR  
WS&A (W01B)

UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

FOREST  
SERVICE

R5

REPLY TO: 2520  
6520

DATE: September 14, 1987

SUBJECT: Jeep Fire Emergency Burn Rehabilitation Request

TO: Forest Supervisor, San Bernardino National Forest

Your request for \$6,250 (\$7,500 shown on Part VI should be \$6,250 as shown in narrative) for seeding and \$4,000 for patrolling of the Jeep Fire is approved. The funds for patrolling are approved for use in determining if additional measures are needed to protect emergency treatments (e.g., more fencing to protect seeded areas from OHV's).

Maintenance of emergency treatments is not an appropriate use of FFF-102 funds (see FSM 2523.21a #5). Consequently, the \$2,000 for vehicle control maintenance is not approved.

If you have any questions, please contact Chuck Goudey of the Range and Watershed Management Staff at (415) 556-1564.

/s/ Dave for

PAUL F. BARKER  
Regional Forester

cc: RF Office  
S.Loe, SBNF  
B.Healy, P&B  
Recover (Electronic Mailing List)

UNITED STATES                      FOREST  
DEPARTMENT OF                      SERVICE                      SBNF  
AGRICULTURE

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Reply To: 2520 Watershed Protection  
                    and Management

Date: September, 2, 1987

Subject: Jeep Fire Emergency Rehabilitation

To: ARF, Range and Watershed Management

Enclosed is our Burned Area Report (FS-2500-A) with Narrative, the Suppression Related Rehabilitation Plan, map of the fire with areas needing seeding, EA for road closure, and a report from the Angeles on the successful seeding of Zorro fescue. We realize that we are suggesting some unique measures (patrol and vehicle control measures), but the potential for significant watershed damage from unauthorized vehicle use is great. We tried to discuss the proposed measures with your shop prior to submitting the report, but found that your staff that deals with emergency rehabilitation are not going to be in for some time. We would like to order seed in the next couple of weeks. If you have any questions regarding this report and request for funding, please contact Steve Loe or Katherine Foster.

/s/RICHARD L. STAUBER  
RICHARD L. STAUBER  
Forest Supervisor

Enclosures

## BURNED AREA REPORT

(Reference FSH 2509.13, Report FS-2500-A)

PART I - TYPE OF REQUEST

1. Type of Report
  - ☐ A. Funding (Request for estimated FFF funds)
  - ☐ B. Accomplishment Report
2. Type of Action
  - ☐ A. Initial (estimated funding is first requested)
  - ☒ B. Interim
    - ☒ Updating the initial funding request.
    - ☐ Supplying information for accomplishments to date on emergency work underway.
  - ☐ C. Final
    - ☐ Best estimate for funds needed to complete eligible rehabilitation measure.
    - ☐ Following completion of funded work.
    - ☐ Negative report.

PART II - FIRE LOCATION

1. Fire Name (from Form FS-5100-29): Jeep Fire
2. Forest Supervisor's Fire No. (from Form FS-5100-29): BDF-87-3532
3. State: California
4. County: San Bernardino
5. Region: R5
6. Forest: San Bernardino
7. Ranger District: Arrowhead
8. Date Fire Started: 23 August 87
9. Date Fire Controlled: 26 August 87
10. Estimated Suppression Costs: \$500,000
11. Fire Suppression Damages Repaired with FFF 102 Funds:
  - 1.5 miles (firelines waterbarred)
  - 15 - 20 acres (firelines seeded)
  - Other (identify) Gates and fencing installed to control vehicle access
12. Fire Intensity: 20% (low)    30% (medium)    50% (high)

PART III - NATIONAL FOREST SYSTEM PROBLEM INVENTORY

1. Watershed No.: Deep Creek (PWI 49)
2. NFS Acres Burned: 1490
3. Water Repellant Soil: variable % of NFS acres burned
4. Vegetation Types: desert grassland, juniper-pinon woodland, alder-willow
5. Geologic Types: granites
6. Soil Erosion Hazard Rating:  
10% (low)      10% (medium)      80% (high)
7. Erosion Potential: 16,380 cu. yds/sq. miles
8. Miles of Stream Channels by Regional Order or Classes:  
4.5 mi Order 1      1 mi Order 2      1.5 mi Order 3
9. Miles of Forest Service Trails:
10. Miles of Forest Service Roads by Maintenance Levels:  
\_\_\_\_\_ miles (Level I)      \_\_\_\_\_ miles (Level II)  
\_\_\_\_\_ miles (Levels III, IV, V)

PART IV - CALCULATED RISK AND CLIMATIC EVALUATION

1. Estimated Vegetative Recovery Period: 5 to 25 years.
2. Chance of Success Desired by Management: \_\_\_\_\_ percent.
3. Equivalent Design Recurrence Period: \_\_\_\_\_ years.
4. Related Design Storm Duration: \_\_\_\_\_ hours.
5. Related Design Storm Magnitude: \_\_\_\_\_ inches.
6. Related Design Flow \_\_\_\_\_ cfs.
7. Estimated Reduction in Infiltration: \_\_\_\_\_ percent.
8. Adjusted Related Design Flow: \_\_\_\_\_ cfs.

PART V - SUMMARY OF SURVEY AND ANALYSIS

1. Skills Represented on Burned Area Survey Team ("x" appropriate boxes):  
☒ Hydrology      ☒ Soils      ☒ Geology      ☒ Range  
☐ Timber      ☒ Wildlife      ☐ Fire Mgmt.      ☒ Engineering  
☐ Contracting      ☒ Local Mgmt.      ☐ Research      ☒ Botany
2. Describe Emergency: See attached narrative
3. Emergency Rehabilitation Objective: See attached narrative
4. Probability of Completing Treatment Prior to First Major Damage Producing Storm:  
Land 90%      Channel 100%      Roads \_\_\_\_\_ %      Other \_\_\_\_\_ %
5. Net Environmental Quality Benefit Index:  
☒ Significant      ☐ Not Significant
6. Net Social Well Being Benefit Index:  
☒ Significant      ☐ Not Significant
7. Benefit/Cost Ratio:
8. Net Benefits: \$ \_\_\_\_\_
9. Cost Effectiveness Index: ☐ I.      ☐ II.      ☐ III.      ☐ IV.

PART VI - ELIGIBLE EMERGENCY REHABILITATION MEASURES OR TREATMENTS  
AND SOURCE OF FUNDS

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	NFS Lands					Other Lands			All Lands
	Units	Unit	No. of	FFP 092	Other \$	No. of	Federal\$	Non-Federal	Total
		Cost	Units	\$	ident.	Units	ident.	identify	\$
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<b>A. LAND</b>									
(1) a. Seeding	Acres	\$70	125	\$7,500	\$1,250				\$8,750
(2) b. Veh. Cont. Mtce.	Acres	2.67	1500	\$2,000	\$2,000				\$4,000
(3) c. L.E. Patrolling	Acre	4.00	1500	\$4,000	\$2,000				\$6,000
d.				---NON QUALIFYING					
e.									
<b>B. CHANNELS</b>									
a. Opening water									
courses	Miles								
b. Stabilizing									
streambanks	Miles								
c.									
d.									
e.									
<b>C. ROADS AND TRAILS</b>									
a.									
b.									
c.									
<b>D. MAJOR STRUCTURES</b>									
a. Preplanned -									
from Forest									
Plans									
<b>E. TOTAL</b>				<b>\$7,500</b>	<b>\$5,250</b>		<b>\$</b>	<b>\$</b>	<b>\$18,750</b>

PART VII - APPROVALS

/s/RICHARD L. STAUBER \_\_\_\_\_ 9/2/87  
Forest Supervisor (Signature) Date

/s/ANDREW A. LEVEN \_\_\_\_\_ 10/6/87  
Regional Forester (Signature) Date

- (1) SEEDING IS CORRECTED FROM \$6,250 (RF 9/14/87 LTR) TO 7,500 (ORIGINAL REQUEST).  
 (2) NON QUALIFYING - SEE RF'S 9/14/87 LTR.  
 (3) ALTHOUGH WE ORIGINALLY APPROVED THIS, THE WO HAS ADVISED THAT IT DOES NOT QUALIFY FOR FFP 092 FUNDING. COVER MAINTENANCE AND MONITORING WITH P&M FUNDS.

## NARRATIVE TO ACCOMPANY 2500-8 FOR THE JEEP FIRE

The Jeep fire started on August 23, 1987, and was declared controlled on August 26. Since the fire was declared controlled, additional flare-ups have occurred, resulting in continuing minor suppression efforts.

The fire burned quite hot considering the desert influence and relatively sparse vegetation on the site. Fire history maps indicate that most of the area had not burned in recorded history, so much of the woody vegetation was mature. Fifty percent of the area burned with a high intensity, and removed most of the protective ground cover. The soils in the area are decomposed granite having a high erosion potential. Evidence of gullying was observed in areas of deeper soils wherever water was concentrated. With the removal of the cover adjacent to channels, increased flows and erosion are expected. Since it has been so long since the last disturbance, significant amounts of material have been stored at the bottoms of the slopes adjacent to the channels. In addition to the potential for gully erosion, significant sheet and rill erosion can be expected during storm events.

The area of the burn is heavily used by vehicles, with several designated vehicle routes, and an adjacent staging area. Vegetative barriers that have been fairly effective at controlling use off of the designated routes have been removed in the burned area. The lack of vegetative barriers in such a heavy vehicle use area create a high potential for significant long-term damage in the affected watersheds. The lack of personnel to adequately enforce vehicle use regulations was somewhat of a problem in the area before the burn, but is now critical to watershed health.

The primary streams affected by the fire are Willow Creek and Maloney Creek, which are tributary to Deep Creek, a State designated Wild Trout Stream. Portions of Willow Creek and Maloney Creek riparian areas and adjacent alluvial terraces were burned. Deep Creek is identified as a critical watershed with strict sediment constraints in LMP, and it has been a focus of public interest in the planning process. The Wild Trout Management Plan for Deep Creek lists sediment as a primary habitat concern. Natural sediment loading is high in this stream. Good spawning habitat appears to be limited. Increased sediment from the burn will adversely affect trout reproduction and productivity. The extent of the damage will depend on the flows the next several winters.

A survey team made up of a hydrologist, soil scientist, wildlife biologist, geologist, recreation manager, engineer, botanist, and District Ranger surveyed the burned area for needed rehabilitation. In addition, Tom Ryan, Zone Soil Scientist was consulted for his opinion. The following treatment needs were identified:

Repair of Suppression Damage FFF 102 (See attached Suppression Rehab. Plan and EA for road closures related to OHV use. Work is completed.

Emergency Watershed Rehabilitation FFF 092

- Seed alluvial streamside terraces with Zorro Fescue at 10 lb./acre of coated seed. Seed will be driven to drop points and seeded by hand with a FS crew.

Additional seed to bring the total to 15 lbs. per acre will be supplied by the Forest from project supplies. Buckwheat, a common native species on the site, will be purchased with project funds and seeded on a trial basis. In the long run, this shrub may help discourage off-road use much better than grasses. (est. 25 acres)

- Seed relatively accessible headland basins with evidence of rill and gully erosion and high intensity burn. Seed with 10 lbs./acre of coated Zorro Fescue. Additional project seed will be mixed to bring the total to 15 lbs./acre. Seed will be driven as close as possible to the sites and applied by FS crew (est. 100 acres).

- Additional patrol effort to limit damage from illegal vehicle use. Two person months of patrol effort for each of the next two years will be needed to provide adequate control. Additional special patrol effort may be required depending upon recovery rates on the burn. This effort will be a combination of individual and task force patrol.

- Maintenance of structural vehicle control measures. Three gates and one half mile of fence have been installed with suppression funds to control vehicle use. Based on past experience, it is expected that these structures will have frequent vandalism problems. Failure to maintain these key structures could result in serious damage to the burned watersheds.

#### Summary of Funding Needs by Fiscal Year

	FY 87	FY 88	FY 89
Seed	\$6,250 (FFF 092)		
	\$1,250(other)	-	-
Seeding		\$1,250 (FFF 092)	
Structural Mtce.		\$1,000 (FFF 092)	\$1,000 (FFF 092)
		\$1,000 (other)	\$1,000 (other)
Patrol and Follow-up Eval.		\$2,000 (FFF 092)	\$2,000 (FFF 092)
for Additional Needs		\$1,000 (other)	\$1,000 (other)
Total	\$7,500	\$6,250	\$5,000

#### Other Alternatives and Justification for Chosen Plan

- Do Nothing. This alternative is unacceptable due to the critical nature of the fishery, high public use, and potential of significant damage. The failure to intensively patrol and control OHV use will undoubtedly result in numerous hill climbs and new travelways that will be virtually impossible to eliminate once they are started. Waiting for natural recovery and seeding from adjacent unburned areas will be a slow process that could take many years to establish adequate cover to retard erosion.



- Seed with annual rye and blando brome. Although the cost of seeding would be less with this mixture, and it has been traditionally used on the s. California Forests, results have not been nearly as successful as with Zorro fescue on harsh sites (see follow-up reports on Angeles NF Zorro seeding project). There is also significant public concern regarding the seeding of annual rye and its affect on future recovery of natural vegetation. Zorro fescue is naturalized in the burned area, has a fair chance of getting established quickly, and is much more acceptable internally and with the public.

- Seed without vehicle control. Immediate erosion would hopefully be reduced with an adequate seed catch, however, significant damage to the watershed would result from uncontrolled vehicle use. Past experience indicates that numerous tracks and hill climbs would develop. Vehicles would eventually get into the stream bottoms and begin to develop a system of roads and trails that would begin to have serious impacts. Some gullying and rill erosion was evident before the fire, and vehicle abuse would greatly accelerate site deterioration.

- The preferred alternative of seeding coupled with several years of strict vehicle management has potential of significantly reducing watershed damage and maintaining the productivity of the site and downstream Wild Trout fishery.

## JEEP FIRE SUPPRESSION REHABILITATION PLAN

Team Members: Steve Loe, Wildlife Biologist (Team Leader); Katherine Foster, Hydrologist; Dennis Inman, Geologist; Pamela Brown, Botanist; Thomas Ryan, Zone Soil Scientist; Laurie MacDonald, Soil Scientist; Paul Schaefer, OHV Specialist; Bob Ota, Engineer; Sandy Hogan, District Ranger.

## I. Fire Area

## A. Cat Lines (Divisions A and D)

Cat lines which are "fall line" will be waterbarred by Forest Service dozer wherever blade was down and vegetation removed. Crews will then seed by hand, and pull brush back onto the line. If the cat line is visible from the road, possible OHV access will be blocked by barriers (rocks, berms); hidden from view by piled brush; or fenced off with barbed wire fencing.

If cat damage is limited in nature (ie. blade not down, but cat was walked over area), brush will be pulled back on track, if necessary, and access hidden from view or blocked off, as noted above.

## B. Hand Lines

## 1. Maloney and Willow Creek Areas

Where line is in or near creek drainage, crews will remove debris and slash from the creek, or near the creek. It will be scattered on the line (if line is not very close to the creek), or back into the burned area (if line is in or very near the creek). Where soil has been extensively disturbed by suppression activities (hose lays, pulling hose lays, foot traffic), seeding will be done.

## 2. Other fireline areas (general)

Slash and brush will be pulled back onto the bare line whenever possible. Extended "fall-line" hand lines will be waterbarred or trenched.

## C. General Access

The Jeep Fire area will be protected from OHV access by a temporary closure of three roads: Caterpillar (3N39 and its feeder 3N46), and Loop (3N34E). Two gates, and approximately 500 feet of barbed wire fencing will prevent OHV access to the burned area. See Environmental Assessment and Decision Notice for description of implementation and time frames.

## II. Rock Camp (Fire Camp Area) (Eric Sweetman, Logistics, will coordinate)

A. Parking Areas will be monitored for oil spills, etc. If necessary, area will be cleaned and/or excavated and removed.

B. Fences which were cut will be repaired. Wooden fences will be checked for damage, and repaired as necessary.

C. Buildings will be checked, utilities turned off, and repairs made as necessary.

D. The general grounds area will be cleaned up, the wash area trenches will be filled in and seeded, and hand seeding will be done in exposed areas.