United States Department of Agriculture | Forest Service | R6

Reply to: 2520 | Date: August 16, 1994

Subject: Round Mountain Fire Rehabilitation

To: Chief

Region 6 is currently operating with limited funding authority for burned area rehabilitation. A copy of the completed 2500-8 form requesting authorization for funding to treat the Round Mountain fire on the Wenatchee National Forest is enclosed for your review and approval.

/s/James T. Gladen (for)

JOHN E. LOWE
Regional Forester

Enclosure

USDA-FOREST SERVICE Date of Report: 8/10/94

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

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated EFFS-FW22 funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 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

[ ] 3. Final report - following completion of work

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Round Mountain B. Fire Number: P68542

C. State: Washington D. County: Chelan
E. Region: R-6 F. Forest: Wenatchee
G. District: Lake Wenatchee

H. Date Fire Started: 7/24/94 I. Date Fire Controlled: 8/8/94
J. Suppression Cost: $ 1,500,000

K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
  1. Fireline waterbarred (miles) 12.0
  2. Fireline seeded (miles) 12.0
  3. Other (identify) _____

L. Watershed Number: 17020011 06 A Lower Nason
17020011 06 D Butcher-Kahler
M. NFS Acres Burned: 454 Total Acres Burned: 3400
Ownership type:
( )State ( )BLM (2946)PVT ( )____ _____

N. Vegetation Types: North slopes - Grand fir/vine maple
South slopes - Douglas-fir/ceonothus
O. Dominant Soils: SRI--137,138,139,143 - volcanic ash mantling glacial till and weathered sandstone. Steep slopes, highly erosive
P. Geologic Types: Glacial till over interbeded sandstone bedrock. Extensive debris slides developing alluvial fans in valley bottoms.
Q. Miles of Stream Channels by Order or Class:
class I 3.0 mi. class III 2.3 mi. class IV 4.5 mi. _____
R. Transportation System:
Trails: 3.4 (miles) Roads: 20 (miles)

PART III - WATERSHED CONDITION

A. Fire Intensity (Acres): 1942 (low) 568 (moderate) 515 (high)

Burn Intensity Acres by Ownership and Drainage
Round Mtn Fire

	High	Moderate	Low	Unburned	Total
Kahler Creek					
Forest Service	85	108	261	0	454
Longview Fibre	378	110	1268	275	2031
TOTALS (Kahler)	463	218	1529	275	2485
Nason Creek					
Forest Service	0	0	0	0	0
Longview Fibre	52	350	413	100	915
TOTALS (Nason)	52	350	413	100	915
TOTAL (All)	515	568	1942	375	3400

B. Water Repellant Soil (Acres): 150

C. Soil Erosion Hazard Rating (Acres):
_____ (low) _____ (moderate) 3400 (high)

D. Erosion Potential:* 677 tons/acre
E. Sediment Potential: 406 cu. yds/sq. mile

* FOR HI AND MODERATE BURN INTENSITY ONLY.

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 5 years.
B. Design Chance of Success: 80 percent.
C. Equivalent Design Recurrence Interval: 10 years.
D. Design Storm Duration: 24 hours.
E. Design Storm Magnitude: 4.3 inches.
F. Design Flow: 91 cfsm.
G. Estimated Reduction in Infiltration: 30 percent.
H. Adjusted Design Flow: 133 cfsm.

PART V - SUMMARY OF ANALYSIS

A. Describe Emergency:

The Round Mountain fire area contains many important factors that were considered in determining the proposed course of action. They are:

The fire area suffered flood damage in 1990;

It is directly adjacent to high quality streams and lake environments;

The area contains highly erosive soils and possesses a history of debris problems;

It is highly visible from 2 state highways, both of which are major recreational corridors.

Most of the High and Medium burn intensity is directly adjacent to stream channels.

This treatment targets both high and moderate intensity burn areas, stream channels, debris chutes, and road drainage problems. This treatment best addresses concerns relating to erosive soils and riparian and stream impacts due to the close proximity of high intensity burns to channels. Because a high percentage of the more severely burned areas are immediately adjacent to active stream channels, this treatment attempts to reduce detrimental impacts to water quality, soil productivity, and downstream values.

B. Emergency Treatment Objectives:

The emergency treatment objective is to provide soil cover and promote infiltration by establishing vegetation through seeding and fertilization. This should reduce soil loss from slopes thereby maintaining site productivity, reducing stream sedimentation and maintaining fish habitat.

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

Land 90 % Channel 90 % Roads 90 % Other 90 %

D. Probability of Treatment Success

	<----Years after treatment-----> 1	3	5
Land	80%	85%	90%
Channel (seed&dams)	80%	90%	90%
Roads	80%	80%	80%
Other (slope structures)	80%	80%	80%

E. Cost of No-Action (Including Loss): $ 1,900,000

F. Cost of Selected Alternative (Including Loss): $ 170,000

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	[x] Soils	[x] Geology	[x] Range
[x] Timber	[x] Wildlife	[ ] Fire Mgmt.	[x] Engineering
[ ] Contracting	[x] Ecology	[ ] Research	[ ] Archaeology
[X] Fish Bio__	[x] Land. Arch.	[ ] _____	[ ] _____

Team Leader: \s\ Carl Davis
Phone: (509)662-4335 DG Address: C.Davis:R06F17A

H. Treatment Narrative:
Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.

Land Treatments (See Appendix 1 for summary seed mixes)

Purpose: To minimize soil loss by providing vegetative soil surface cover and subsurface root mass. This should help maintain site productivity and reduce sediment delivery to streams.

Treatment: Aerial seed and fertilize all high and moderate intensity burn areas. Seed 4 miles of channel (debris chutes) to reduce potential for debris delivery to Nason Creek (Use channel mix). See Appendix for species and rates.

Treatment: Contour fell small diameter trees in some high intensity burn areas.

Channel Treatments

Purpose: Prevent sediment from uplands to be delivered to streams.

Treatment: Install log terraces on 4 miles of 1st order stream channels.

Road and Trail Treatments

Purpose: Prevent materials from plugging culverts to reduce the hazard of channel blockage at those sites, reducing the risk of road washouts and downstream damage.

Treatment: Improve existing culverts and drain dips and install new culverts and drain dips. Close, rip and revegetate abandoned roads and do some spot surfacing. As part of road closure, some culverts will be replaced or removed.

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	Non-Fed $ ident.	Fed $ 403 ident.	Total $
A. LAND TREATMENTS									
Aerial seed & fertilize (upland forest)	acres	55.37	193	10,700		890		49,300	60,000
Aerial seed & fertilize (channels)	acres	67.17	25	1,700					1,700
contour felling	acres	50.00	85	4,250					4,250
B. CHANNEL TREATMENTS									
Check dams	each	400.00	5	2,000		10		4,000	6,000
C. ROADS AND TRAILS									
Drainage (culvert/drain	miles	8784	10	87,840					124,700
Restoration (vegetation)	miles	369	10	36,860					
D. STRUCTURES									
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
				42,495					42,495
F. TOTALS				184,145				53,300	237,445

PART VII - APPROVALS

1. /s/ Sonny O'Neal — 8/11/94
   Forest Supervisor (Signature) — Date

2. /s/ John E. Lowe — 8/11/94
   Regional Forester (Signature) — Date

APPENDIX 1

ROUND MOUNTAIN FIRE
SEEDING RECOMMENDATION

SEED MIX FOR CHANNELS

SPECIES	COST/LB	PLS LBS/AC	PLS SEEDS/ SQ.FT.	SEEDS/LB	COST/ACRE
soft white winter wheat (Madsen)	.12	50	15	12,000	6.00
Slender wheatgr. (Pryor)	2.00	12	42	150,000	24.00
Yellow sweetclover	.50	2	12	262,000	1
TOTAL FOR SEED		74	72		31.00

Fertilize with Ammonium Nitrate Sulfate (ANS=30% N) to get 20 lbs of N/ac.

Fertilizer (30-0-0-6)	.09	66			6.17
Application (seed & fert)					30.00
TOTAL COST/AC OF TREATMENT					67.17

SEED MIX FOR NON-FOREST

SPECIES	COST/LB	PLS LBS/AC	PLS SEEDS/ SQ. FT.	SEEDS/LB	COST/ACRE
soft white winter wheat (Madsen)	.12	50	15	12,000	6.00
Annual ryegrass	.50	3	15	217,000	1.50
TOTAL FOR SEED		53	30		7.50

Fertilize with Ammonium Nitrate Sulfate (ANS=30% N) to get 20 lbs of N/ac.

Fertilizer (30-0-0-6)	.09	66			6.17
Application (seed & fert)					30.00
TOTAL COST/AC OF TREATMENT					43.67

SEED MIX FOR FOREST LANDS

SPECIES	COST/LB	PLS LBS/AC	PLS SEEDS/ SQ. FT.	SEEDS/LB	COST/ACRE
soft white winter wheat (Madsen)	.12	50	15	12,000	6.00
Slender wheatgr. (Pryor)	2.00	6	42	150,000	12.00
Red clover	1.20	1	6.5	282,000	1.20
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TOTAL FOR SEED		57	51.5		19.20

Fertilize with Ammonium Nitrate Sulfate (ANS=30% N) to get 20 lbs of N/ac.

Fertilizer (30-0-0-6)	.09	66			6.17
Application (seed & fert)					30.00

TOTAL COST/AC OF TREATMENT.....					55.37