USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: 09/11/03

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[x] 1. Funding request for estimated WFSU-SULT 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 or design analysis
[ ] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Burnt Ridge Sheep Camp Complex B. Fire Number: P17138

C. State: Montana D. County: Meagher, Judith Basin and Wheatland

E. Region: Northern (01) F. Forest: Lewis and Clark (15)

G. District: Judith, Musselshell and White Sulphur

H. Date Fire Started: 08/14/03 I. Date Fire Contained: 09/07/03

J. Suppression Cost: $6,009,000 (total for complex)

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 9.9 (handline), 21.4 (dozerline)
2. Fireline seeded (miles): 20 (planned)
3. Other (identify): 6.2 miles system roads waterbarred/rolling dips installed

L. Watershed Number: 100301030101, 100401030102 and 100401030103

M. Total Acres Burned: 2107 acres – Ant Park only, 2178 acres - total complex
NFS Acres (2178) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: alpine fir/whitebarkpine, alpine fir/heartleafed arnica, alpine fir/pinegrass

O. Dominant Soils: brown silt loam topsoils (4-8” thick), clayloam or silty clay loam subsoils (20-40” thick) containing 35-50% angular cobble.

P. Geologic Types: limestone and some intrusive granitic rocks

Q. Miles of Stream Channels by Order or Class: 1st order ephemeral- 4.6 miles, 2nd order ephemeral/intermittent- 2.4 miles

R. Transportation System - Within Ant Park Fire perimeter only

Trails: 0.0 miles Roads: 4.3 miles

PART III - WATERSHED CONDITION

A. Fire Severity – soils (acres): 622 (low / unburned) 886 (moderate 3) 599 (moderate 4)
Burn Severity Classes-
1- Unburned - 158 acres
2- Mostly unburned – 464 acres
3- Moderate severity with inclusions of up to 20% high severity – 886 acres
4- Moderate severity with inclusions of up to 50% high severity and/or 30% low severity – 599 acres

Where fire occurred, timber canopy was completely consumed, resulting in high fire intensity.

B. Water-Repellent Soil (acres): 743

Hydrophobicity- Highly variable throughout. Weak, moderate and strong hydrophobicity was observed within single sites and across burn severity classes. Approximately 50% of the burned area has moderate hydrophobicity with minor inclusions of strong hydrophobicity.

C. Soil Erosion Hazard Rating (acres):
516 (low) 983 (moderate) 970 (high)

D. Erosion Potential: 23 to 134 tons/acre (upslope erosion for mod-high erosion hazard sites)

E. Sediment Potential: 2.3 to 13.4 tons/acre (delivered to burned ephemeral draws)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):	grass/forbs-1-2 years timber- 5-50 years
B. Design Chance of Success, (percent):	90
C. Equivalent Design Recurrence Interval, (years):	>100yr (NOAA, 1973)
D. Design Storm Duration, (hours):	1.0
E. Design Storm Magnitude, (inches):	2.0
F. Design Flow (cfs per square mile):	1.3 (Q=CIA, C=0.001, I=2.0, A=640)
G. Estimated Reduction in Infiltration, (percent):	60%
H. Adjusted Design Flow (cfs per square mile):	384 (Q=CIA, C=0.3, I=2.0, A=640)

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The fire resulted in moderate severity burn and moderate hydrophobicity across most of the area. Due to the relatively steep terrain, most of the area is considered to have a moderate or high erosion hazard. However, the main concern is risk of noxious weed infestations.

Suppression efforts on the Burnt Ridge Complex involved approximately 18 miles of bulldozer-cleared fireline. Suppression actions included heavy equipment traffic and grading on the 4.3 miles of roads within the fire perimeter and on 6.1 additional miles outside the fire perimeter. Roads impacted include: 837, 487, 2056, 6418, 6464, 6466 and several non-system two-track roads converted to full tread roadways.

These disturbances have created conditions favorable to subsequent noxious weed infestations. An effort was made to inspect contracted equipment for any evidence of weeds before deployment, but seed contamination could easily have gone undetected. Many machines came from distant locations where they could have easily acquired seeds from spotted knapweed, Russian knapweed, Canada thistle, houndstongue, whitetop, or other noxious and nuisance weeds.

Other values at risk include downstream brook trout populations in the West Fork Lost Fork River and water quality of the North Fork Smith River. A sediment pulse is expected to occur during intense rain events for the first growing season after the fire, especially in the North Fork Smith drainage. Some of this sediment is expected to be routed to the West Fork Lost Fork River and headwater ephemeral channels of the North Fork. Emergency treatments to reduce hillslope erosion are not proposed because 1) no perennial streams exist within or immediately below the fire perimeter, 2) natural regeneration is anticipated within the next growing season and will help to stabilize soils, and 3) an unburned strip along to the West Fork Lost Fork should provide a depositional area for most upslope sediment loads within that drainage.

B. Emergency Treatment Objectives: Reduce the threat of noxious weed infestation by monitoring roads and firelines used for suppression activities.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm: **Not Applicable**

Land __ % Channel __ % Roads __ % Other __ %

D. Probability of Treatment Success: **Not Applicable**

	Years after Treatment		
	1	3	5
Land			
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss): **$5,000 - $10,000**

F. Cost of Selected Alternative (not Including Loss): $4,320

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	[x] Soils	[ ] Geology	[ ] Range
[ ] Forestry	[x] Wildlife	[ ] Fire Mgmt.	[ ] Engineering
[ ] Contracting	[ ] Ecology	[ ] Botany	[ ] Archaeology
[x] Fisheries	[ ] Research	[ ] Landscape Arch	[ ] GIS

Team Leader: Mark Nienow

Email: mnienow@ fs.fed.us Phone: 406-791-7740 FAX: 406-761-1972

H. **Treatment Narrative: Not Applicable**

(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: Forest wide NEPA has been completed for weed treatment. Treatment to limit the spread of existing noxious weeds. The fire area will need to be surveyed annually in 2004-2006 and beyond to detect and treat any noxious weed infestations that may occur. This job will require driving all open routes with an ATV equipped for spraying, and walking rehabilitated firelines and obliterated roads with a backpack sprayer.

Channel Treatments: none proposed

Roads and Trail Treatments: none proposed

Structures: none proposed

H. **Monitoring Narrative:**

GS-5 Range Technician: 1 pay periods @ $105/day	$1,000
Leased ATV with weed sprayer: 20 days @ $55/day	$1,100
TOTAL ANNUAL COST	$2,200

If infestations are located and cover a significant area, funding will be requested for treatment measures, i.e., herbicide application. A Forest level EIS on Noxious Weed Control has been completed.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

				$0			$0		$0	$0
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
				$0			$0		$0	$0
				$0			$0		$0	$0
G. Monitoring Cost										
GS-5 technician	days	105	10	$1,050			$0		$0	$1,050
							$0		$0	$0
backpack sprayer							$0		$0	$0
Leased ATV w/ spraye	days	55	20	$1,100			$0		$0	$1,100
Subtotal Structures				$2,150			$0		$0	$2,150
H. Totals				**$4,350**			**$0**		**$0**	**$2,150**

PART VII - APPROVALS

1. /s/ ROLANDO ORTEGON — 09/11/03
   Forest Supervisor (signature) — Date

2. _____ — _____
   Regional Forester (signature) — Date