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

Date of Report: 9/28/05

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: Signal Rock

B. Fire Number: Incident# MTBRS005142, P1B3S6

C. State: MT

D. County: Ravalli, Granite

E. Region: R1

F. Forest: Bitterroot, Beaverhead - Deerlodge

G. District: Darby/Pintlar

H. Date Fire Started: 8/9/05

I. Date Fire Contained: Not yet contained

J. Suppression Cost: Not yet determined

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (7 miles):
2. Fireline seeded (miles):
3. Other (identify):

L. Watershed Number: 170102050901 (Upper Skalkaho Creek), 170102050902 (Daly Creek),

M. Total Acres Burned:
NFS Acres(13327) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: mixed conifer, lodgepole, grassland

O. Dominant Soils: Not known

P. Geologic Types: sedimentary, metamorphic, calc-silicates

Q. Miles of Stream Channels by Order or Class: 10 miles 1st order, 5 miles 2nd order within fire perimeter

R. Transportation System

Trails: 10 miles Roads: 2 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 6614 (low) 5291 (moderate) 1323 (high)

B. Water-Repellent Soil (acres): 1323

C. Soil Erosion Hazard Rating (acres):
9260 (low) 2645 (moderate) 1323 (high)

D. Erosion Potential: 0.023 tons/acre, 17.8 cubic yards / square mile

E. Sediment Potential: 7.31 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5 yrs – understory, 30 yrs - overstory

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 5

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1

F. Design Flow, (cubic feet / second/ square mile): 35-65

G. Estimated Reduction in Infiltration, (percent): 20

H. Adjusted Design Flow, (cfs per square mile from the burned area): 45 to 65 cfs

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency: The Signal Rock Fire was limited to USFS lands. The area burned is located in the isolated headwaters area. There are no public safety concerns from post fire debris torrents or flooding. Threats determined include trail erosion from post-fire hydrology and snag hazard around trails from burned trees.

- The Easthouse National Recreation Trail (FT313) runs through the middle of the fire, along the Sapphire divide. Other trails listed above branch off this trail and provide access from trailheads and other areas. This trail will be used to access the fire area for monitoring, and also will be used by recreationists and hunters soon after the fire is controlled. There is a need to provide safe conditions along the trail where it traverses through burned stands, and to prevent fire-related erosion to the trail tread.

- Noxious weeds may be introduced into the area as a result of the fire.

B. Emergency Treatment Objectives: Prevent trail erosion & sedimentation to local streams, prevent injury and hazard to public users.

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

Land __ % Channel __ % Roads __ % Other **80** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Channel			
Roads			
Other (trails)	95	95	95

E. Cost of No-Action (Including Loss): **see attached cost-risk analysis**

F. Cost of Selected Alternative (Including Loss): **see attached cost-risk analysis**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Ed Snook

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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.)

Removal Hazard Tree - Trails

Objective:

This treatment reduces the chance for injury or loss of life from falling snags on trails by reducing the number of hazard trees along the trails.

Methods

Fell and remove any hazardous burned trees (within one tree height) that are located along trails. Maintain snags >12" where possible for wildlife trees, however do not compromise safety.

Erosion - Trails

Objective

Approximately 5 miles of trail are expected to be at risk of deterioration from additional runoff and sediment from post-fire conditions. The threats are from upland slope erosion and flow being deposited on the trail. The trails were not designed for the increased flow that may occur during the first few years following the fire when soil erosion of the trail surface and fill-slope is anticipated. Failure of drainage culverts and water bars may cause stream capture onto trail surface area causing soil erosion, including loss of the trail by rilling and gullying. Trail Numbers 313, 77, 156, 1315, 131 for a total of 10 miles of trail are included in this treatment.

Methods

Methods for reducing this risk include 185 water bars, which would be used to direct and divert flow to areas off the trail or to drainage ways. These treatments would reduce the risk of the trail washing out and transporting sediment to streams, and gully formation in the trail itself.

I. **Monitoring Narrative:**

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Noxious weeds will be monitored during FY 06 to determine if they have been introduced as a result of the fire. Field review of the burned area will be done during June, 2006 to determine if immediate treatment is necessary. If treatment is required an interim BAER request will be submitted to allow treatment within the first year following fire containment.

Water bars constructed will be evaluated to ensure effectiveness.

PART VI --
EMERGENCY STABILIZATION AND REHABILITATION TREATMENTS AND SOURCE OF FUNDS BY LAND OWNERSHIP

TABLE VI

			Bitterroot NF	
		Unit	# of	WFSU
Line Items	**Units**	**Cost**	**Units**	**SULT $**
A. Land Treatments				
Subtotal Land Treatments				
B. Road and Trails				
Install/Maintain Waterbars on Trails	waterbars	68	185	$12,490
Hazard Tree Reduction (10 miles-road and trails)	miles~(10 trees per mile)	374	10	$3,740
Subtotal Road & Trails				**$16,230**
C. BAER Evaluation				
Implementation Team				$1,193
RSAC Remote Sensing				$500
Subtotal BAER Evaluation				**$1,693**
D. Monitoring (FY 06 needs)				
Monitor Weeds	acres	23	50	$1,150
Subtotal Monitoring				**$1,150**
E. Totals				**$19,073**

9/29/2005

PART VII - APPROVALS

Recommended by:

/s/ Ed Snook — 9/28/05
BAER Team Leader — Date

/s/ David T. Bull — 9-30-05
Forest Supervisor (signature) — Date

_____ — _____
Regional Forester (signature) — Date