

Date of Report: August 16, 1994BURNED-AREA REPORT
(Reference FSH 2509.13)PART I - TYPE OF REQUEST

A. Type of Report

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

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name: Trail/Border complex B. Fire Number: P11144 & P11148
C. State: Montana D. County: Ravalli
E. Region: Northern (R1) F. Forest: Bitterroot
G. District: Stevensville & Darby
H. Date Fire Started: 8/3/94 I. Date Fire Controlled: 8/14/94
J. Suppression Cost: \$ 3,350,000
K. Fire Suppression Damages Repaired with EFFE-PF12 Funds:
1. Fireline waterbarred (miles) 10
2. Fireline seeded (miles) 0
3. Other (identify) 200 yds road waterbarred & seeded + 4 road turn-outs
L. Watershed Number: 1701020504-A
M. NFS Acres Burned: 358* Total Acres Burned: 358
Ownership type:
() State () BLM () PVT () _____
* Total area within firelines= 513 acres
N. Vegetation Types: Subalpine fir/beargrass & subalpine fir/menziesia
O. Dominant Soils: Andic Cryochrepts, Dystric Cryochrepts, Lithic Cryochrepts with very cobbly surfaces & loamy-skeletal family
P. Geologic Types: Volcanic ash over quartzite and granite
Q. Miles of Stream Channels by Order or Class:
none - all areas are headlands or ridgetops
R. Transportation System:
Trails: 3 miles Roads: 2 miles

PART III - WATERSHED CONDITION

A. Fire Intensity (acres)**: 78 (low) 254 (moderate) 26 (high)

** only those areas actually burned within the firelines

B. Water-Repellent Soil (acres): 311

C. Soil Erosion Hazard Rating (acres):

18 (low) _____ (moderate) 340 (high)

D. Erosion Potential*** : 80 tons/acre x 340 acres = 27,000 tons

E. Sediment Potential****: 860 cubic yards / square mile = 460 cu. yds

*** Assuming a short duration, high intensity storm event, with average snowmelt runoff conditions, soil loss would be more like 1 ton/acre

*** Also assuming storm flow, with snowmelt conditions, would be about 10 cu. yds/ sq mile.

PART IV - HYDROLOGIC DESIGN FACTORS

Deleted per Instructions (FSH 2509.13) for No Treatment Recommendation

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Soil Erosion and Productivity:

The soils burned are derived from volcanic ash cap, which are somewhat hydrophobic naturally during dry seasons. By removing the litter and duff layer, these soils become highly hydrophobic. The moderate to high fire intensity burns remove most of the litter and duff layers, making these soils highly hydrophobic. However, most areas of moderate to high intensity still have abundant woody debris on site, and beargrass and other shrub roots are still viable, which speeds recovery and impedes erosion. The Erosion Potential of 80 tons/acre is based on an average loss of 1/2 inch of soil during a high intensity, infrequent rainstorm (10-50 year return interval). Natural soil building processes in this area would replace that 1/2 inch in less than 100 years. This is within the range of soil loss due to natural fire/erosion cycles that historically characterize these landscapes, and not considered to be significant. Erosion potential under normal snowmelt runoff is estimated at about 1 ton per acre.

Sediment Potential and Water Quality

Due to the topographic position of the fire, high on the slopes and ridgetops, the delivery efficiency of the eroded material is low. In addition, with the large quantity of woody debris left onsite and the beargrass and shrub roots intact, most of the eroded material will remain onsite. Sediment potential is estimated at about 860 cubic yards per square mile during a high intensity, infrequent rainstorm, which would equal 460 tons. The fire burned headlands and ridgetops far from any live stream. In addition, the burn is scattered over three third order drainages, which further distributes the effects. This quantity of sediment should not generate significant long term effects in any of the drainages. Under normal snowmelt runoff, the sediment potential would be more like 10 cubic yards per square mile.

Flood Risk and Potential for Damaging Facilities

The only private facility that could potentially be affected by flood runoff from the burn would be the Stansbury Mine. However, most of the flood flows would naturally be routed around the Mine and not directly affect it. The access road to the upper set of claims is just under the Border Fire, but no culverts or major fills are at risk. All other private facilities are miles downstream from the fire. NFS roads are at slight risk of damage due to storm runoff.

B. Emergency Treatment Objectives:

None recommended

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range
<input checked="" type="checkbox"/> Timber	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input type="checkbox"/> Research	<input checked="" type="checkbox"/> Archaeology
<input checked="" type="checkbox"/> Botany	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Team Leader: Gary Decker

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PART VII - APPROVALS

1. /s/Steve Kelly 8/18/94
Forest Supervisor Date
2. _____
Regional Forester Date