

USDA-FOREST SERVICE

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 EFFS-FW22 funds
☐ 2. Accomplishment Report
☒ 3. No Treatment Recommendation

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name: Bitter-Nez Complex B. Fire Number: P11147
- C. State: Idaho D. County: Idaho
- E. Region: Northern (R1) F. Forest: Bitterroot
- G. District: West Fork
- H. Date Fire Started: 7/27/94 I. Date Fire Controlled: 10/31/94
- J. Suppression Cost: approx \$1,350,000
- K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
1. Fireline waterbarred (miles) .75
 2. Fireline seeded (miles) 0
 3. Other (identify) 2 helipads rehabed
- L. Watershed Number: 1706030114-B and 17-B
- M. NFS Acres Burned: 2816 Total Acres Burned: 2816
- Ownership type:
- () State () BLM () PVT () _____
- N. Vegetation Types: Douglas-fir/ninebark, Douglas-fir/snowberry, Douglas-fir/pinegrass, some subalpine fir/beargrass
*for Nick Cr.
- O. Dominant Soils: loamy-skeletal, Typic Ustochrepts; sandy-skeletal
Typic Ustochrepts; loamy-skeletal, Lithic Ustochrepts
- P. Geologic Types: grussy granite
- Q. Miles of Stream Channels by Order or Class:
- 0.6 mile of 2nd order, intermittent stream
- R. Transportation System:
- Trails: 5.5 miles Roads: 3.5 miles

PART III - WATERSHED CONDITION

- A. Fire Intensity (acres)**: 449 (low) 638 (moderate) 234 (high)
** only those areas actually burned within the firelines
- B. Water-Repellent Soil (acres): 1092
- C. Soil Erosion Hazard Rating (acres):
 (low) 221 (moderate) 1100 (high)
- D. Erosion Potential*** : 80 tons/acre x 1321 acres = 105,680 tons
- E. Sediment Potential****: 860 cubic yards / square mile = 1,770 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 dominated by very gravelly sandy loam surfaces. The moderate to high fire intensity burns remove most of the litter and duff layers, making these soils highly hydrophobic. However, many areas that burned with moderate to high intensity were small in acreage and had slightly burned to unburned zones below them. Also, most shrubs had viable roots which speeds revegetation and reduces 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

Most of the fire is on the upper one-third of the slopes, with only a few acres of riparian area burned. In addition, with the large quantity of woody debris left onsite, the shrub roots intact and unburned areas in between and downslope, most of the eroded material will remain onsite. Therefore, the delivery efficiency is low and most of the eroded material will not reach the Selway River. Sediment potential is estimated at about 860 cubic yards per square mile during a high intensity, infrequent rainstorm. Most of the fire burned headlands and ridgetops far from any live stream. In addition, the burn is scattered over several drainages, which further distributes the effects. This quantity of sediment should not generate significant long term effects in any live stream. 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 facilities that could potentially be affected by flood runoff from the burn Forest Road 468. Flood flow calculations were made for the Steep Creek drainage and routed to the culvert crossing on FDR 468. The burn will approximately double the 10 year, 6 hour storm at the culvert crossing, which could put this culvert at higher risk. The culvert presently has the capacity to carry this volume without overtopping the road. The risk that the culvert would become plugged is moderate, but there is a fairly good buffer to catch debris above the culvert. Since the culvert is in good condition, the recommendation is to leave it in place. The Forest will probably install debris racks upstream from the culvert on Steep Creek and Nick Creek, but this work would cost less than the \$2500 minimum request. This remainder of FDR 468 are at low risk of damage from fire runoff.

B. Emergency Treatment Objectives:

None recommended other than the two debris racks discussed previously.

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 type="checkbox"/> Timber	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input type="checkbox"/> Research	<input 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.

Stephen Kelly
Forest Supervisor

10/28/94
Date

2.

Regional Forester

Date