United States Department of Agriculture | **Forest Service** | **Nez Perce National Forest** | **Route 2, Box 475 Grangeville, ID 83530 208 983-1950**

File Code: 2520-3 **Date:** October 7, 2003
Route To:

Subject: Revised Burned Area Report - Slims Complex

To: Regional Forester

Enclosed is an amended Slims Complex Fire Burned Area Report funding request for estimated WFSU-SULT funds. This includes the Slims and Poet fires and the portion of the Sapp fire that is north of the Salmon River on the Nez Perce Forest. The initial request was for $284,471. Further field review indicates a need for several more armored drivable dips on the Indian Hill road. The request is amended to $373.571.

Please contact Pat Green, Forest Ecologist, if you have any questions or concerns regarding this matter. She can be reached at the number listed above and will gladly assist you.

/s/ Bruce E. Bernhardt
BRUCE E. BERNHARDT
Forest Supervisor

cc: Bruce D Sims, Pat Green

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

Date of Report: Sept 5, 2003

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: Slims complex

B. Fire Number: ID-NPF-014

C. State: Idaho

D. County: Idaho

E. Region: 01

F. Forest: Nez Perce

G. District: 06 – Moose Creek 05-Red River

H. Date Fire Started: 7 July 2003 (Slims)
10 Aug (Poet)
17 Aug (Sapp)

I. Date Fire Contained: Not known
Not known
Sept 3, 2003

J. Suppression Cost: $21,000,000 to date for Slims/Poet complex
$2,000,000 to date for Sapp/Richardson complex (Richardson is in R-4)

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles):

Slims: 30 miles hand line, 22 miles of machine line, temp road and skid trails to obliterate, an estimated 24 acres safety zones, parking areas, drop points and helispots to rehabilitate

Poet: 9.3 miles of hand line to obliterate, 3.4 miles of machine line to obliterate, 1 acre of parking area/safety zone to rehabilitate

Sapp: about 5 miles of hand line obliterated, the remainder (12.9 miles) was mostly scratch line.

2. Fireline seeded:

Slims: 30 acres of machine line, safety zones, helispots, and temp roads seeded as part of obliteration.

Poet: none

Sapp: none

3. Other (identify): road repair on Falls Point Rd 443

L. Watershed Number: 1706030202: Lower Meadow, Squirrel, Rabbit, Little, and Bluff Creeks, 1706030203-22: Otter Creek, 1706020704: Bargamin, Poet, Green, and Hot Springs Creeks, 1706020703: Big Mallard, Myers, Fivemile, Camp and Noble Creeks

M. Total Acres Burned:
NFS acres: Slims: 12,011, Poet: 2569, Sapp north of the Salmon River: 9675 as of August 28
Total NFS acres: 24,255; Other Federal (**0**); State (**0**); Private (**20**)

N. Vegetation Types: Cedar, grand fir, subalpine fir, Douglas fir, lodgepole pine, ponderosa pine

O. Dominant Soils: Dystrochrepts, Vitrands, Andic Cryochrepts, Haploxerolls, Xerochrepts

P. Geologic Types: Belt gneiss and schist, and decomposed Batholith granitics

Q. Miles of Stream Channels by Order or Class:
Slims: 1st order-23.5, 2nd order- 4.3, 4th order-.1, 5th order-5.8 miles
Poet: 1st order -2.8, 2nd order-2.8, 3rd order-.5, and 4th order 2.5 miles
Sapp: 1st order-6.3, 2nd order-1.2, 3rd order 1.8, 4th order-.6, and 7th order-1.5 miles

R. Transportation System - Trails: Slims: 18.0 mi., Poet: 2.7 mi., Sapp: 7.3 mi.; Roads: Slims: 10.9 mi., Poet .9 mi., Sapp none.

PART III - WATERSHED CONDITION

A. Burn Severity (**percent**): Slims: 62% unburned, 7% low, 18% moderate, 13% high
Poet: 49% unburned or low, 36% moderate, 15% high
Sapp: 85 % low, 15% moderate, <1% high

B. Water-Repellent Soil (**percent**):

Slims: 62% is unburned with 54% water repellency, 13% is moderate burn with 36% water repellency, and 13% is severe burn with 45% water repellency. Low severity burn was not sampled.

Poet: 49% is unburned or low with 52% water repellency, 36% is moderate with 51% water repellency, and 15% is high with 55% water repellency

C. Soil Erosion Hazard Rating (**percent**): Slims: 21% (low); 68% (moderate); 11% (high)

D. Erosion Potential: Slims: 37.5 tons/mi^2 (year 1) and 8.3 tons/mi^2 (year 2)

E. Sediment Potential: Slims: 77 tons per year (year 1) and 17 tons per year (year 2) at the mouth of Meadow Creek

PART IV - HYDROLOGIC DESIGN FACTORS for Slims fire

A. Estimated Vegetative Recovery Period, (years): 5 years for understory and 30 for overstory

B. Design Chance of Success, (percent): 80%

C. Equivalent Design Recurrence Interval, (years): 10 years

D. Design Storm Duration, (hours): 6 hours

E. Design Storm Magnitude, (inches): 1.4 inches

F. Design Flow, (cubic feet / second/ square mile): 27.5 cfsm

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

H. Adjusted Design Flow, (cfs per square mile): 64.4 cfsm

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Threat to life and private property:

Slims fire: Some potential exists for high water flows and debris torrents in stream channels that may impact trail or road traffic.

Poet fire: None

Sapp fire: This area always has some risk for debris torrents due to terrain and climate. This risk has been little affected in Myers Creek above Alison Ranch, but may have been increased in the small tributary above Yellow Pine Bar. Private water developments exist at Allison Ranch and Yellow Pine Bar.

Threat to federal property:

Potential loss of road and trail tread or drainage structures due to increased runoff or sloughing. This risk is highest in Slims fire on Squirrel Creek due to very steep slopes and extensive severe burn, and in the Poet fire on the Bargamin Trail 581 due to highly erodible soils, and on the Sapp fire on the Bat Point Trail 503 due to steep slopes and high risk for runoff and sloughing.

Threat of water quality deterioration:

Slims fire burned primarily in Meadow Creek, an important watershed for steelhead and spring Chinook salmon. One tributary, Squirrel Creek, burned severely. An emergency exists to due projected water yield and sediment increases from the fire that are expected to increase in the Squirrel Creek drainage, and unnamed small tributaries of Meadow Creek. The Meadow Creek drainage is otherwise in good to excellent condition, much of it roadless, and water quality effects should be of short duration. The terrain is dominated by very steep unstable slopes and numerous high gradient channels susceptible to debris torrents. An old low standard road to Indian Hill lookout traverses the severely burned area and this road will require substantial drainage improvements and regular patrols to better withstand the expected runoff. Effects of failure of drainage systems of roads and trails will magnify negative water quality effects beyond natural. A bridge, the Indian Hill road, and the Meadow Creek trail below the burned area are at some risk of damage from increased flows and debris torrents. Improved road and trail drainage will minimize these effects and protect federal investments.

Poet fire burned in upper Bargamin Creek, an important, mostly roadless watershed for steelhead, spring Chinook, and bull trout. Soils in this burn are decomposed granitics and very highly erodible, but most streams are buffered from overland flow by broad alluvial valleys vegetated with intact wetland plant communities.

Sapp fire burned in Lower Mallard Creek and along main Salmon River, almost wholly within the Frank Church Wilderness Area. Tributaries are steep, transport-dominated streams with depositional features at their mouths. Debris torrents are not uncommon in unburned settings and are likely to increase with burning. Only a small proportion of Myers Creek burned above Alison Ranch; the tributary above Yellow Pine Bar burned entirely, but with low severity. Overland flow and sediment transport were evident from a one-inch rainfall. This homestead at Yellow Pine Bar gets its water from this stream, on NFS land. They have applied for a special use permit. This is being investigated. Some stabilization may prove to be warranted.

Threats to ecosystem integrity: The expansion of invasive non-native plants into fire-disturbed areas from nearby source areas poses a significant threat to the integrity of roadless plant communities and ecosystem processes.

On the Slims fire, spotted knapweed is established at campgrounds and along portions of roads. The risk of spread to burned areas is high in some areas.

On the Poet fire, weeds are currently little present and the risk is considered slight.

On the Sapp fire, most of the burned area is highly susceptible to weed invasion, and sulfur cinquefoil and spotted knapweed are well established near trails and homesteads.

Invasion or expansion of noxious weeds is likely to alter soil stability, nutrient cycling, wildlife habitat, and fire regimes, with consequences for long-term ecological diversity and stability.

Threats to heritage resources:

On the Slims fire, the Indian Hill road was built by the Civilian Conservation Corps; its primitive out sloped character and minimal drainage improvements may predispose the road to erosion and damage, with attendant loss of heritage resource values.

The Poet fire perimeter includes portions of the southern Nez Perce Trail, and this trail is coincident with trail 581 where it has gullied and needs rehabilitation. The fire itself is not considered a threat to heritage resources.

The Sapp fire generally burned at low severity and no identified heritage resources are at risk because of the fire.

Threats to threatened and endangered plants and animals:

All fires: No emergency exists if timely road and trail stabilization occurs. Aquatic habitats are in good condition, fish populations are well distributed, and large refounding areas exist upstream of the burned area. No emergency exists for threatened or endangered wildlife species. The severity and burn mosaic of the fire may result in short term displacement of some species, and benefit others that require early seral or snag habitat. The fire severity and extent are well within natural ranges, and large areas of similar unburned habitat occur nearby.

B. Emergency Treatment Objectives:
Primary objectives of the treatments are to sustain ecological integrity in the dominantly roadless and wilderness areas, minimizing water quality effects from roads and trails, and minimizing spread of noxious weeds. Additional treatments for road or trail stabilization, or the domestic water source at Yellow Pine Bar may be recommended pending completion of further assessments.

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

Land **80**%; Channel ___ %; Roads **80**%; Other **80** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	95
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss): Total: $500,000 includes replacement of failed road or trail segments, and broad scale weed treatments. Not calculated are costs to domestic water source and TS fish habitat loss.

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Pat Green

Email: pgreen@fs.fed.us Phone: 208 983-1950 FAX: 208 983-4099

Team members: Gary Loomis and Paul Christensen – trails
Nick Gerhardt and Marci Gerhardt – hydrology
Leonard Lake – botany and weeds
Steve Armstrong and Cindy Schacher – archaeology consultation
Fred Bower – road engineering
Katherine Thompson and Tarita Carrothers– fisheries
Steve Blair – wildlife
Pat Green – ecology and soils

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:

Weed Treatments

Objective

The purpose of this treatment is to maintain ecosystem integrity by treating selected sites where burned susceptible habitats have been invaded by knapweed as well as the nearby infestations serving as source areas to the invasions. By reducing the amount of weed seed in the area, and treating new populations, native plant communities can have time to recover with less competition form non-native invasive plants.

Methods

Slims: Treat burned areas within or adjacent to source weed populations, including campgrounds and roads with Transline in Fall 2003 and spring 2004 using an ATV mounted sprayer within 500 feet of roads and trails, where source areas are present or new invasions present (20 acres). Effects of herbicide treatments at the proposed rates and locations are addressed in the USDA Weed EIS (1996).

Poet: None

Sapp: Treat burned areas within or adjacent to source weed populations, selected trails and roads with picloram (Tordon) in fall 2003 or spring 2004 using a backpack sprayer within 500 feet either side of selected trails and within 500 feet of the Salmon river, where source areas are present, or new invasions present (88 acres). Treat 1 acre with hand grubbing on riverside beaches. Treat 500 feet on each side of the Salmon River trail from Whitewater Ranch in unburned infested areas that would provide seed to invade burned areas (1.6 miles, 19 acres). Treat 100 feet either side of the lower 2 miles of the Whitewater Road (48 acres). Effects of herbicide treatments at the proposed rates and locations are addressed in USDA Weed EIS (1999) for the Frank Church and USDA Weed EA (1988). Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is approved by NOAA Fisheries fo upland sites.

Channel Treatments:

None are proposed at this time. Further investigation may show that some treatment is warranted to prevent damage to the domestic water source at Yellow Pine Bar.

Road Treatments:

Replace Culverts in Ephemeral Draws and Intermittent Streams

Objective
Emergency conditions in high severity burn areas have been assessed for increased flows. This treatment is to ensure that culverts are capable of passing flood flows.

Method
As a minimum the effective cross-sectional area of the culvert should be equal to or greater than cross-sectional area of bank full stream. Engineering design will be applied to install culverts**.**

Clean Culvert Inlets and Outlets

Objectives
Culvert inlet and outlets will be cleaned to improve road drainage to accommodate the threat of increased flows on steep roads that have been burned.

Method
Clean debris and sediment out of inlet basin with a backhoe or by hand, and clean outlet to provide free drainage down stream channel.

Road Storm Patrol

Objective
The most critical objective is to clear existing drainage structures of debris, clean and reshape drainage ditches, and road blading to maintain effective out sloped drainage capacity.

Method
Forest crews will perform inspections, clean culverts, repair and clean ditches and re-grade road segments to maintain drainage effectiveness on out slope segments after storms and runoff events.

Armor Culvert Outlets

Objective
Armor culverts outlets where the fillslope has been burned with high severity and on fillslopes with sparse vegetation and soils that are highly erodible to dissipate energy of water to prevent gullying and downcutting on fillslopes.

Method
Place rock around culvert outlet and below the culvert on the outfall. Incorporate existing vegetation into the rock if possible.

Open Top Wood Culvert Repair and Placement

Objective
Open top culverts will be built and repaired to improve road drainage to accommodate the threat of increased flows on steep roads that are out sloped where regular water bars cannot be used.

Method
Construct water bars using pre-made to order wood open top water bars, ordered for the road width. Skew at 20-45 degrees as needed for specific road locations.

Drain Dips

Objectives
This treatment will decrease the threat from flood damage on roads and delivery of sediment to streams by draining water from the road surfaces in high and moderate severity fire areas.

Methods
The drainage dips will be designed to drain water off of the road, but still allow motorized vehicle crossing. The dips are typically skewed 20-45 degrees and the outlets will be armored in some cases.

Hydromulch and Seed

Objective
The purpose of hydro-mulching and seeding is the rapid establishment of grass cover on severely burned cut and fill slopes where there is potential for water and sediment to contribute to flood flows, impact roads, and increase overland flow erosion.

Method
Hydromulching will be accomplished from the road using a hydromulcher with the target treatments being the cutslopes and the fillslopes up to 75 feet above and below the road. Hydromulching with a tackifier, with a high moisture level to hold seed on the slope will be used. Hydro-mulch should be applied as far above and below the road as possible in areas of high burn severity. Hand seeding will be used on hard to reach places.

Hazard Tree Removal

Objective
This treatment reduces the chance for damage to life or property by reducing the risks of trees falling on vehicles or persons on roads and trails.

Method
Selectively fell and remove hazardous trees in areas of burn that are hazards to life or property above roads and trails.

Trail Treatments:

Trail Drainage Improvements

Objective
Approximately 32 miles of trail are expected to be at risk due to fire damage or because they are inadequate to handle increased post-fire runoff. This may result in effects to water quality. Objectives are to stabilize trail tread to prevent erosional loss and to minimize water quality impacts.

Slims: Trail numbers are 726 (a National Recreation Trail), 603, and 700, 22 miles
Poet: Trail numbers are 502 and 581, 2.7 miles
Sapp: Trail numbers 503 and 96.2 (Main Salmon River trail), 7.3 miles

Method
This will be done through re-establishment and supplementation of drainage structures: installing or replacing water bars and drainage dips on 18 miles of trail, installing drain dips on 4 miles of trail, cleaning ditches, drains and culverts of rock and debris on the total 32 miles of trail, reconstruction of drains, ditches, culverts, armored crossings, and spot stabilization and outsloping trail to provide for better drainage on 4.6 miles of trail.

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.)

Objectives are to determine effectiveness and results of BAER treatments in terms of post-fire response. Cross sections (for which we have historic data for the years 1988 and 2001) will be re-established at the mouth of Meadow Creek. Additional cross-sections will be added as deemed necessary. Selected fish habitat parameters may also be added. They will be read fall 2003, 2004, 2005. Results will be reported in the Forest Monitoring Report for the subsequent years.

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

Armored

			NFS Lands				Other Lands				All
		Unit	# of	WFSU	Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT $	$	units	$	Units	$	$
A. Land Treatments										
Weed treatments - trails	acres	300	128	$38,400	$0		$0		$0	$38,400
Weed treatments - roads	acres	200	48	$9,600	$0		$0		$0	$9,600
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$48,000	$0		$0		$0	$48,000
B. Channel Treatments										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Upsize metal CMP	ea	3000	5	$15,000	$0		$0		$0	$15,000
Replace broken 18 inch CMP	ea	3000	1	$3,000						$3,000
culvert clean inlet and outlet	ea	429	6	$2,574	,,,,,,,,,,,,,,,	,,,,,,,,,,,	$0		$0	$2,574
storm patrol	ea	600	6	$3,600						$3,600
armor outlet	ea	200	12	$2,400						$2,400
clean open top culvert	ea	25	51	$1,275						$1,275
replace wood open top culvert	ea	400	17	$6,800						$6,800
armor open top culvert	ea	200	5	$1,000						$1,000
armored drain dips	ea	900	124	$111,600						$111,600
hydromulch	ea	1905	36	$68,580						$68,580
seed	acres	202	36	$7,272						$7,272
hazard tree removal	ea	59	40	$2,360						$2,360
remove slide material	ea	2500	1	$2,500						$2,500
grade, outslope, clean ditch	miles	600	12.1	$7,260	$0		$0		$0	$7,260
Trail drainage work	miles	3800	22	$83,600						$83,600
Subtotal Road & Trails				$318,821	$0		$0		$0	$318,821
D. Structures										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$0	$0		$0		$0	$0
E. BAER Evaluation										
Salary	days	250	15	$3,750	$0		$0		$0	$3,750
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$3,750	$0		$0		$0	$3,750
F. Monitoring										
Meadow Creek x-sections	year	1000	3	$3,000	$0		$0		$0	$3,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$3,000	$0		$0		$0	$3,000
G. Totals				**$373,571**	**$0**		**$0**		**$0**	**$373,571**

PART VII - APPROVALS

1. */s/ Philip N. Jahn (for)* 9/5/03
   Forest Supervisor (signature) Date

2. _____ _____
   Regional Forester (signature) Date