USDA-FOREST SERVICE FS-2500-8

Date of Report: 10/23/12

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization 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: Porcupine Fire

B. Fire Number: ID-NPF-000604

C. State: ID

D. County: Idaho

E. Region: 01

F. Forest: Nez Perce

G. District: Red River Ranger District

H. Fire Incident Job Code: P1G7VJ

I. Date Fire Started: 08/10/2012

J. Date Fire Contained: 10/19/2012

K. Suppression Cost: estimated 10/11/2012 $1,230,000

L. Fire Suppression Damages Repaired with Suppression Funds
1. Dozer Fireline repaired (miles): 5 as of 10/22/12
2. Hand Fireline repaired (miles): 0 as of

M. Watershed Numbers:
National Forest
17060301115AA (1 acre), 17060300109 (1951 acres), 170603010110 (154 acres), 170603020212 (26 acres), 170602070402 (8865 acres), 1706030114CC (7 acres), 170602070401 (352 acres), 170602070404 (122 acres), 170602070403 (1847 acres), 170602070427 (526 acres), 170602070430 (904 acres), 170602070428 (907 acres), 170602070406 (2207 acres), 170602070429 (2962 acres), 170602077531 (2330 acres), 1706020775AA (4 acres), 170602077505 (795 acres), 170602077507 (524 acres), 170602077508 (81 acres)

Non-National Forest Lands- None

N. Total Acres Burned:
NFS: 24,566 acres Other Federal (BLM): -0- State: -0- Private: -0-

O. Vegetation Types: Common forest types include Grand fir/Beargrass/Lodgepole pine

P. Dominant Soils: The dominant soil Great Groups found in the burn area are andic and entic cryochrepts. Most soils in the burn area have surface layers formed in loess that has been influenced by volcanic ash. A layer of this loess was deposited on the survey area approximately 6,700 years ago by the eruption of Mount Mazama in Oregon. Additional loess that has been influenced by volcanic ash was deposited by eruptions of Mount St. Helens and Glacier Peak. These loess deposits range from over 36-inches thick in depressions to very thin deposits that may be mixed with underlying materials on steep southerly aspects at lower elevations to no deposits on the most southerly end of the burn area. Soil surface layers formed in loess are an excellent medium for plant growth. Soils with the thickest loess surface layers tend to be the most productive. Although most soil surface layers are formed in loess that has been influenced by volcanic ash or loess mixed with subsoil material, lower soil layers are formed in materials derived from other sources. This ash influenced surface layer is resistant to erosion when undisturbed, but if disturbed it has a high risk of surface erosion.

Q. Geologic Types: The dominant geologies for the burn area are Idaho batholith granitics, Precambrian schist, and Middle Proterozoic quartzite. Soils formed on the Precambrian micaceous schist are highly susceptible to mass wasting events.

R. Miles of Stream Channels by Order or Class:

National Forest
1st order 56.23 miles, 2nd order 25.41 miles, 3rd order 4.07 miles, 4th order 3.85 miles Total miles 89.55 updated

S. Transportation System

Trails: National Forest	17	miles	Other	miles
Roads: National Forest	8.2	miles	Other	___ miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 4625 (low) 10,427 (moderate) 596 (high)

B. Water-Repellent Soil (acres): 9572

C. Soil Erosion Hazard Rating (acres): 6520(low) 8306 (moderate) 9729 (high)

D. Erosion Potential: 1.87 (low) 3.16 (moderate) 6.1(high)

E. Sediment Potential: exists, not substantiated

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2-4 grass/shrubs 20-50 conifers

B. Design Chance of Success, (percent): 60

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

D. Design Storm Duration, (hours): 1 hr

E. Design Storm Magnitude, (inches): 2.2 inches

F. Design Flow, (cubic feet / second/ square mile): 35-45 cfs/sq.mi.

G. Estimated Reduction in Infiltration, (percent): 60

H. Adjusted Design Flow, (cfs per square mile): 40-90 cfs/sq. mi.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The primary values at risk resulting from the Porcupine Fire are transportation infrastructure (trails and native vegetation communities).

Infrastructure: Due to fire effects, modest rain events could potentially cause extensive erosion and mass movement on steep hillslopes throughout the burned area. Additionally, reduced canopy interception, combined with lack of groundcover and hydrophobicity will cause small areas of increased runoff response compared to pre-fire conditions. Thus, streams in and downstream of the burned area are likely to generate higher stormflows in the first few years following the fire. Larger flow events in part are a function of increased surface runoff from bare hillslopes. Furthermore, burned and exposed soils are more susceptible to entrainment and transport to stream channels. There is a low risk to the road system due to location of the roads on the landscape and the low road mileage within the fire area. Much of the fire area is unroaded. There is a high risk for erosion and trail damage related to the fire on the extensive trail system within the Porcupine Fire.

Water quality: The streams in the burned area generally maintain good water quality. Erosion from steep burned hillslopes compromise water quality for short periods through transport and depostion of fine sediment in important fishery streams.

Fisheries: Drainages in the Middle Salmon – Chamberlain include Sabe and Bargamin Creeks. Fish species in these watersheds that could be affected include Snake River spring/summer chinook salmon (in Sabe and Bargamin Creeks), Snake River steelhead trout (all drainages), and Columbia River bull trout (all drainages). These species are listed as threatened under the Endangered Species Act (ESA). Other species include spring chinook salmon (Little Clearwater River, Running Creek, and Salamander Creek), westslope cutthroat trout (all drainages), and interior redband trout (all drainages). Spring chinook salmon in the Clearwater basin, westslope cutthroat trout, and interior redband trout are Region 1 sensitive species. Other Region 1 sensitive aquatic species are not known to occur in these streams.

Fire burned throughout uplands and into the riparian, in places removing canopy from the overstory and exposing soils. Specific areas where adverse effects are mostly likely to occur are associated with pockets of high fire severity, particularly in upper Bargamin and tributaries and one area in Lynx Creek. Widespread adverse effects that would result in stream habitat degradation are not expected, however, because high severity areas are generally located on ridges and side slopes with adequate buffering from unburned or low severity burned riparian areas. Any debris torrents that occur in 1st order streams could result in short term but local adverse effects to stream habitat the upper reaches of mainstem Bargamin Creek. Low or no effects from the fire are expected in Sabe Creek because of lack of large blocks of high severity. Large pockets of high severity are located in Salamander Creek, but these areas are on the Bitterroot National Forest and have been assessed in a separate BAER report.

Heritage: After a review of the Nez Perce National Forest Heritage Resource Department Files, it was determined that 2 previously documented sites were located within the Porcupine Fire area and within the potential effect from the fire. One site was affected by the fire and the other site was Burnt Knob Lookout which was wrapped and protected during the fire. One window was broken during the suppression effort and will be replaced with by the Forest during suppression repair.

Native vegetation/Soil Productivity: Native communities and soil productivity may have a low level of risk from expansion from existing populations to adjacent areasin the burn area. Disturbance may increase the susceptibility of an otherwise intact plant community to weed invasion by increasing the availability of the

limited resource Hobbs) 1989. The weed of highest concern in the Porcupine fire area is spotted knapweed. Most of the existing spotted knapweed sites are found outside the fire perimeter in the first 2 miles of the 468 road where it branches off from the 222 road. There was an existing spotted knapweed site at Poet Creek Campground on the 468 road but the population was treated in previous years and recent monitoring indicates there is no knapweed present at this site. The risk of weed population spread in the moderate and high burn areas next to existing knapweed populations is high in the fire perimeter. The 468 road should be monitored from its junction with the 222 road to prevent weed spread into the burn area from adjacent populations.

B. Emergency Treatment Objectives:
Emergency treatment objectives are to protect trail susceptible to damage from erosion and elevated runoff within and immediately downstream of the burned area, and to prevent the expansion of noxious weeds population spreading to adjoining areas burned in the fire, while providing for BAER implementation worker safety.

Drainage on trails will be improved to allow for discharge of elevated runoff in a manner that protects both the travel surface and stream water quality and aquatic habitat. Known populations of noxious weeds will be monitored in the first growing season following the fire.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land 70**%** **Channel** N/A **Roads/Trails** 70% **Protection/Safety** 90%

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Heritage	na	na	na
Weed treatment	50	50	50
Channel	na	na	na
Roads/Trails	70	80	90
Protection/Safety*	90	90	80

E. Cost of No-Action (Including Loss): $500,000
The costs of no action includes the failure trails from major erosion, where access in needed for the public and the FS. The cost of repairing trails, stream crossing on trails, and replacing lost tread would most likely exceed the cost of the selected alternative. The value of protecting the ecological intergrity and soil productivity of the burned area from noxious weed infestation likely exceeds the cost of weed treatment and monitoring.

F. Cost of Selected Alternative (Including Loss): $50,180
In accordance with the revised Forest Service manual, the risk matrix below, Exhibit 2 of Interim Directive No.: 2520-2010-1, was used to evaluate the Risk Level for each value identified during the Sheep fire BAER assessment. Only treatments that had a risk of Intermediate or above are recommended for BAER authorized treatments.

Probability of Damage or Loss	Magnitude of Consequences		
	Major	Moderate	Minor
	RISK		
Very Likely	Very High **trails**	Very High **weeds**	Low
Likely	Very High **fisheries**	High	Low
Possible	High	Intermediate **soil productivity**	Low
Unlikely	Intermediate	Low	Very Low

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	[x] Soils	[x] Range	[x]Weeds
[ ] Forestry	[ ] Wildlife	[ ] Fire Mgmt.	[x] Engineering
[ ] Contracting	[ ] Ecology	[x] Botany	[x] Archaeology
[x] Fisheries	[ ] Research	[ ] Air Quality	[x] GIS

Team Leader:
Email: Marci Nielsen-Gerhardt Phone: 208-926-4360 FAX:

Forest Contact
Email: clfarr@fs.fed.us Phone: 208-983-4045 FAX: 208-983-4099

H. Treatment Narrative:

Land Treatments:
Areas infested with noxious weeds will be monitored within the burn perimeter to reduce the probability of spread into uninfested burned areas. BAER funding is only available for the first year of the treatments (2013). If subsequent monitoring identifies weed populations that need treatment, it will be planned, and funds requested in an interim request.

Channel Treatments: No channel treatment prescribed at this time.

Roads and Trail Treatments:
Trail work will treat the segments of the trail system within the burned area that are at high risk of damage from elevated post-fire runoff and erosion. Treatments will consist of replacement of burned drainage structures, installation of new drainage structures for additional drainage in anticipation of greater runoff and erosion, cleaning of existing intact drainage structures, and spot stabilization/outsloping of eroding trail segments, especially on steep slopes and near streams. Visitor warning signs will also be posted at trailheads.

Protection/Safety Treatments:
To provide for worker safety during implementation of trail drainage improvements, hazard trees along the trails mentioned above will be removed. Roads have generally been snagged as part of suppression efforts.

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.)

Monitoring of trail treatments will occur during and after implementation in 2012-13 to ensure that treatment objectives are met and if the treatments were effective.

In 2013 the spotted knapweed along the 468 will be monitored in the burned area, and it will be noted if knapweed is spreading off of the road into the burn area. This will then be treated by the Forest.

VI – Emergency Stabilization Treatments and Source of Funds

			NFS Lands				Other Lands				All
		Unit	# of		Other		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$		units	$	Units	$	$
A. Land Treatments											
Weed assessment and treatment	day	400.00	3	$1,200							
Subtotal Land Treatments				**$1,200**				$0		$0	$0
B. Channel Treatments											
C. Road and Trails											
Porcupine Trails											
Hazard Tree Removal	mile	800	16.8	$13,400							
Spot Trmt, Slumps, Fill Holes	mile	120	16.8	$2,010							
Additional Clean Drainage Structures	each	30	140	$4,200							
Replace Damaged Drainage Structure	each	115	58	$6,670							
Install Additional Drainage Structures	each	115	140	$16,100							
Fill slope repair	mile	1,300	2.6	$3,380							
Subtotal Road Treatments				**$45,760**				$0		$0	$0
D. Protection/Safety											
Post Fire Warning Signs	each	1	3220	$3,220							
Subtotal Protection/Safety				**$3,220**	$0			$0		$0	$0
E. BAER Evaluation											
Assessment											
Subtotal Evaluation				**$0**	$7,350			$0		$0	$0
F. Monitoring											
Subtotal Monitoring				**$0**	$0			$0		$0	$0
G. Totals				**$50,180**							
Previously approved											
Total for this request				**$50,180**	$7,350			$0		$0	$0

PART VII - APPROVALS

1. */s/ Rick Brazell* 10/ 23/2012
Nez Perce-Clearwater NF Forest Supervisor Date

2. 10/ /2012
Region 1 Regional Forester