USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: 9-20-12

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: Parish Cabin

B. Fire Number: OR-MAF-012257

C. State: OR

D. County: Grant

E. Region: 06

F. Forest: Malheur

G. District: Blue Mountain

H. Fire Incident Job Code: P6G66T

I. Date Fire Started: August 27, 2012

J. Date Fire Contained: September 13, 2012 at 1700

K. Suppression Cost: $6,226,000 as of Sep. 16

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 27.7
2. Fireline seeded (miles): 27.7 Dozer and hand lines to be are expected to be rehabilitated (waterbarred, brushed, berms pulled in, seeded) prior to first storm event.
3. Other (identify):

M. Watershed Number:

171200020201	Upper Bear Creek	6010 acres
171200020202	Middle Bear Creek	430 acres
170702010701	Upper Canyon Creek	40 acres

N. Total Acres Burned: NFS Acres(6480) Other Federal (0) State (0) Private (0)

O. Vegetation Types: ponderosa pine, grand fir, lodgepole pine, Douglas fir, western larch, western juniper over elk sedge, pinegrass, snowberry, arnica, Oregon grape, wheatgrass

P. Dominant Soils: Soils with ash mantle, 12-24” thick (900 acres); Soils with ash mantle, 6-12” thick (2300 acres); Soils with ash mantle 0-6" thick, moderately deep to deep (2100 acres); Soils with no ash mantle, shallow (1100 acres); meadow (100 acres)

Q. Geologic Types: Andesite & basalt (4300 acres); rhyolite & tuff (1000 acres); glacial outwash (800 acres); alluvium (400 acres)

R. Miles of Stream Channels by Category: 1 - 9.0 miles; 2 - 0.9 miles; 4 - 9.3 miles

S. Transportation System

Trails: 0 miles

Severity	None	Low	Moderate	High
Road Miles	9.8	26.1	9.6	1.5

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1270 (underburned/unburned) 3090 (low) 1790 (moderate) 335 (high)

B. Water-Repellent Soil (acres): 130

C. Soil Erosion Hazard Rating (acres):
2400 (low) 1800 (moderate) 2200 (high)

D. Erosion Potential: 1.5 tons/acre

E. Sediment Potential: 60 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3

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

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

D. Design Storm Duration, (hours): .5

E. Design Storm Magnitude, (inches): 0.6

F. Design Flow, (cubic feet / second/ square mile): 8

G. Estimated Reduction in Infiltration, (percent): 10

H. Adjusted Design Flow, (cfs per square mile): 12

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Maps are filed in O:\NFS\R06\Program\Watershed-2500\BAER\FY12\MAL

Human Life and Safety-
L1 - Potential loss of, or injury to, human life exists throughout the fire area due to hazard trees. The probability of damage from hazard trees is *possible* with the magnitude of consequence being *major* resulting in a *high* risk along high use roads.

Property (roads)-

- R1 - 1530065 Road - This 4.0 mile road is used to provide access to Bear Creek and Dark Canyon Creek for recreational, timber, and livestock management activities. There are 4 culverts located on the 1530065 road that have a *likely* probability of damage associated with being undersized for post-fire flows and/or becoming plugged. The magnitude of consequence for these culverts getting plugged or being undersized and resulting in road damage or road failure is *moderate* resulting in a *high* risk.
  - Culvert 1 is 24 inches and conveys 0.43 miles of stream in a 141 acre catchment
  - Culvert 2 is 18 inches and conveys 0.54 miles of stream in a 117 acre catchment
  - Culvert 3 is 24 inches and conveys 0.66 miles of stream in a 331 acre catchment
  - Culvert 4 is 36 inches and conveys 4.7 miles of stream in a 2,020 acre catchment

	1530065 Road			
Burn Severity	Culvert 1	Culvert 2	Culvert 3	Culvert 4
None	10%	2%	15%	28%
Low	55%	29%	40%	46%
Moderate	32%	49%	43%	22%
High	4%	20%	2%	4%

- R2 - 1530 & spurs off the 1530 road - Some of the major spurs are shown on a map. The spurs have more total mileage in moderate and severly burned areas than the 1530 road. The team expects an increase in overland runoff due to decreased forest floor, and some reduction in infiltration in high and moderate burn severity areas. In combination with reduced soil stabilization from killed roots and increased freeze/thaw loosening of soil, the team expects increased cutbank and ditch slough. This slough, in conbination with increased fall of woody material into ditches, would cause filling of ditches through the winter, plugging of some ditch relief culverts, and gullying of road surfaces. Probability of damage is *likely*. Magnitude of consequence for some culverts getting plugged and resulting in road damage is *moderate*, resulting in a *high* risk.

- R3 - 1530482 Road - INFRA shows 0.2 miles of this road open, and about 3.5 miles decomissioned. However, 930 feet of road identified in INFRA as decommissioned is in fact open on the ground. Two culverts exist on the 930 feet. These 2 culverts have a *likely* probability of damage associated with being undersized for post-fire flows or plugging. The BAER Team observed Culvert 2 overtopped within the last 5 years with rilling and gullying occuring down the road. The magnitude of consequence for these culverts getting plugged or being undersized and resulting in road damage or road failure is *moderate* resulting in a *high* risk.
  - Culvert 1 is 24 inches and conveys 1.4 miles of stream in a 450 acre catchment
  - Culvert 2 is 36 inches and conveys 0.54 miles of stream in a 1487 acre catchment

	1530482 Road	
Burn Severity	Culvert 1	Culvert 2
None	10%	35%
Low	44%	47%
Moderate	44%	13%
High	3%	5%

- R4 - 1530673 Road - This 1.8 mile road provides access across Bear Creek to collector roads used for timber, livestock, and recreational benefits. The road was a railroad grade levee that crosses Bear Creek's floodplain, which burned with moderate and high severity. The culvert has poor alignment with the creek flowing into the culvert at a 75-80 degree curve. The fire burnt lodgepole pine with high severity that was providing stream bank stability to this area where the near bank shear stresses are naturally high. The road has a *likely* probability of damage associated with post fire overland flow, erosion, and snowmelt flooding. The magnitude of consequence from associated degradation to this road is *moderate* resulting in a *high* risk.

B. Emergency Treatment Objectives:

Proposed ProtectiveTreatments

The objective of the land and protective treatments is to protect human life and safety by assessing for and removing hazard trees along high use roads.

Proposed Road Treatments

The objectives of the road treatments are to:

1. reduce the high risk for accelerated surface runoff/failure, damaging National Forest roads.
2. reduce the potential for road related erosion and accelerated sediment delivery to downstream fisheries habitat.
3. prevent out-year drainage problems

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

Land __ % Channel __ % Roads/Trails **90** % Protection/Safety **90** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Channel			
Roads/Trails	90	90	90
Protection/Safety	90	90	90

E. Cost of No-Action (Including Loss): **67,200**

F. Cost of Selected Alternative (Including Loss): **28,220**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leaders: Robert (Hersh) McNeil, Soil Scientist, Malheur NF
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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.)

Land Treatments: None proposed

Channel Treatments: None proposed

Protection/Safety Treatments:

L1 - Evaluate and Mitigate Hazard Trees – Hazard trees not identified during mop-up activites are expected to occur as trees not yet noticed as dead or dangerous are identified over the next few months. These danger trees pose a risk to human life and safety. This emergency treatment would allow reconnaisance for hazard trees along high use roads within the fire perimeter over the next several months and allow for an interim request for additional funds to mitigate identified hazard trees. Requesting 8 employee days ($2400) to assess for hazard trees and 5 days ($3500) to mitigate identified trees for a total request of $5900. If salvage logging occurs along some roads, this treatment would not be necessary there, and funds spent would be correspondingly reduced.

Roads and Trail Treatments:

- R1 - 1530065 Road - There are 4 culverts located on the 1530065 with a high risk of road damage or road failure.
  Proposed treatment is to storm proof 4 stream crossings (dip in the road & rocking) to provide overflow channels across the road. The Team is requesting $1000 per treatment for a total of $4000.

- R2 - 1530 & spurs off the 1530 Roads - Some ditch relief culverts on these roads will probably become plugged, causing gullying of the road surface.
  Proposed treatment is ditch and culvert cleaning in spring 2013. The Team is requesting $5000.

- R3 - 1530482 Road Two culverts with a high risk of road damage or road failure exist on a "decommissioned" 930 foot segement of this road.
  Proposed treatment is to storm proof 2 stream crossings by removing the culverts and reshaping stream bottoms. The Team is requesting $4600.

- R4 - 1530673 Road - This road has a culvert with poor alignment with the creek flowing into the culvert at a 75-80 degree curve. The fire burnt lodgepole pine with high severity that was providing stream bank stability to this area where the near bank shear stresses are naturally high.
  Proposed treatment is to place large wood, root wads, and boulders to provide roughness along this streambank. The Team is requesting $2000.

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.)

No monitoring requested.

Part VI – Emergency Stabilization Treatments and Source of Funds **Interim #**

			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										
none				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$0	$0		$0		$0	$0
B. Channel Treatments										
none				$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										
R1 Install Overflow Dips	each	1000	4	$4,000	$0		$0		$0	$4,000
R2 Clean Ditchs	each	5000	1	$5,000	$0		$0		$0	$5,000
R3 Pull Culverts	each	2300	2	$4,600	$0		$0		$0	$4,600
R4 Place Boulders, Wood, Rootwads	each	2000	1	$2,000	$0		$0		$0	$2,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$15,600	$0		$0		$0	$15,600
D. Protection/Safety										
P1 Assess & Fell Hazard Trees	each	5900	1	$5,900	$0		$0		$0	$5,900
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$5,900	$0		$0		$0	$5,900
E. BAER Evaluation										
				$4,751			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$0		$0		$0	$0
F. Monitoring										
none				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				$21,500	$0		**$0**		**$0**	**$21,500**
Previously approved										
Total for this request				**$21,500**						

PART VII - APPROVALS

1. **/s/ Teresa Raaf** **September 20, 2012**
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date

Appendix A: Values at Risk Assessment

Value (Life/Property/Resources)	Value At Risk	Probability of Damage or Loss	Magnitude of Consequences	Risk	Treatment	Notes
Life	Hazardous Trees on 16, 15, and 1530 roads	Possible- Fire weakened trees	Major- Potential loss of life	High	Hazardous Tree Evaluation/ Removal	Roads 16 & 15 cannot be closed.
Property	Road 1530065	Likely - Road prism erosion by overflow	Moderate - $4000 to repair	High	Four rocked dips to carry stream across road	
Property	Road 1530482	Likely - Road prism erosion by overflow	Moderate - $4600 to repair	High	Remove 2 culverts and reshape stream bottom	
Property	Roads 1530 & spurs	Likely - Gullying due to clogging of ditch relief culverts	Moderate - $5000 to repair	High	Ditch & culvert cleaning, spring 2013	
Property	Road 1530673	Likely - Stream cutting into road prism	Moderate - $1000 to repair	High	Rocks, large wood, root wads	
Property	Private land 3+ miles downsteam	Unlikely - Flooding & sedimentation	Minor - Short term, recoverable, localized	Very Low	none	