

Date of Report: 8/14/06

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST**A. Type of Report**

- ☒ 1. Funding request for estimated emergency stabilization funds
☐ 2. Accomplishment Report
☐ 3. No Treatment Recommendation

B. Type of Action

- ☒ 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 DESCRIPTIONA. Fire Name: Maxwell FireB. Fire Number: OR-OCF-0564C. State: ORD. County: Wheeler and CrookE. Region: 6F. Forest: Ochoco NFG. District: Lookout Mountain Ranger DistrictH. Fire Incident Job Code: P6C03SI. Date Fire Started: July 24, 2006J. Date Fire Contained: August 12, 2006K. Suppression Cost: \$11.2 million as of 8/12/06**L. Fire Suppression Damages Repaired with Suppression Funds**

1. Fireline waterbarred (miles): unknown. There are approximately 8 miles of handline.
2. Fireline seeded (miles): none to date, will seed approximately 10-15 miles of line this fall
3. Other (identify): Approximately 8 miles (40%) of dozer line has been rehabilitated with debris/drainage as of 8/12/06). 15 safety zones will be seeded in Fall 06.

M. Watershed Number: 1707020113 – Mountain Creek1707020403 – Bridge Creek1707030403 – Upper North Fork Crooked RiverN. Total Acres Burned: 6,965 as of 8/12/06 (48% within Bridge Creek Wilderness)

NFS Acres(6,948) Other Federal (0) State (0) Private (17)

O. Vegetation Types: Messic White Fir (35%), Dry White Fir (28%), non-forest scabs, meadows, shrub-steppe (15%), Sub-Alpine Fir (13%), Douglas Fir (8%).

P. Dominant Soils: Dominant soils are deep to very deep Andisols which have sandy loam volcanic ash over largely clayey subsoils. These soils primarily occur on the north and east slopes and in swales. On south facing slopes the dominant soils are moderately deep Vitrandic Argixerolls with less than 14 inches of ash. The non-forested scablands are largely Lithic Argixerolls.

Q. Geologic Types: Primarily made up of Picture Gorge Basalts (63%, aphyric and plagioclase porphyritic flood basalt with thin ashy sedimentary beds between the lower flows), the Clarno Formation (6%, andesitic lava flows, domes, breccia and small intrusive masses and lesser basaltic to rhyolitic rocks), and Landslide Debris (31%, unconsolidated material highly susceptible to mechanical and chemical weathering).

R. Miles of Stream Channels by Order or Class: Class I (4.9 mi), Class II (6.1 mi), Class III (2.9 mi), and Class IV (15.0 mi).

S. Transportation System

Trails: 0 miles Roads: 10.2 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 4,935 (low) 1,845 (moderate) 184 (high)

B. Water-Repellent Soil (acres): Approximately 100 acres

C. Soil Erosion Hazard Rating (acres):
2,318 (low) 3,800 (moderate) 825 (high)

D. Erosion Potential: 1.1 tons/acre

E. Sediment Potential: 407 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 7

B. Design Chance of Success, (percent): 75

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 30

E. Design Storm Magnitude, (inches): 0.375

F. Design Flow, (cubic feet / second/ square mile): 29.4

G. Estimated Reduction in Infiltration, (percent): 2.6

H. Adjusted Design Flow, (cfs per square mile): <1

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

- Human Life and Safety - potential loss or injury of human life due to post-fire environmental conditions primarily due to hazard trees along travel routes and camp sites, flooding, debris flows, and landslides.
- Property (roads, culverts, recreation sites, municipal water utilities) - potential loss or damage to property due to post fire environmental conditions primarily due to hazard trees, increased flow magnitudes, flooding, debris flows, erosion, and landslides.
- Water Quality - risk of increased sedimentation into streams due to erosion on exposed soils. Also risk of increased stream temperatures due to loss of riparian vegetation inside and outside a municipal watershed with listed and sensitive fisheries.
- Soil Productivity - potential loss in long term soil productivity (i.e. vegetative recovery) due to moderate and high burn severity on soils and potential for accelerated soil erosion due to exposed soils.
- Steelhead, Redband Trout, and Frog Habitat – loss or degradation to designated and non-designated critical Steelhead habitat/species and Sensitive Redband Trout and Frog habitat/species due to increases in sedimentation and stream temperatures.
- Cultural Resources - loss or degradation to seven cultural resource sites due to exposure from post-fire runoff and erosion.
- Sensitive and Desirable Plant Communities - potential loss or degradation to habitat and species due to post-fire conditions and spread of noxious weeds into and around the burned area and from private lands.
- Bridge Creek Wilderness – motorized travel into the Bridge Creek Wilderness due to the fire is now more readily accessible with little vegetative resistance and fewer wilderness boundary signs. The value of maintaining a non-motorized wilderness is at risk.
- City of Mitchell Municipal Watershed – risk of degraded water quality due to the fire. However, the four water sources are located at springs that didn't get burned.

B. Emergency Treatment Objectives:

The primary objective of this Burned-Area Emergency Response Report is to recommend prompt actions deemed reasonable and necessary to effectively protect, reduce or minimize significant threats to human life and property and prevent the unacceptable degradation of resources. The application of the BAER treatments would minimize on-site and downstream damages to the identified values at risk. The emergency treatments being recommended by the Ochocho National Forest/BAER Team are specifically designed to achieve the following results.

Proposed Land Treatments

The objectives of the land treatments are to:

1. protect human health and safety by removing hazards and posting educational awareness signs
2. limit and prevent the spread of noxious weeds from known sites in and around the burned area and from private lands
3. monitor potential vandalism and fulfill legal obligation to document condition change and update cultural resource site records
4. protect the non-motorized wilderness value

Proposed Road Treatments

The objective of the road treatments are to:

1. improve road drainage capacity and reduce the potential for accelerated surface runoff, erosion and sediment input to nearby streams
2. reduce road surface water velocities and water concentration
3. improve culvert capacity to reduce the potential for road failure due to increased flows
4. prevent out-year drainage problems
5. stabilize disturbed road cuts/fills where BAER activities occur

Proposed Channel Treatments

The objective of the channel treatments are to:

1. provide channel/floodplain roughness that will stabilize streambanks and catch sediment prior to the first runoff event.
2. accelerate recovery of stream shade and water quality in a high fisheries valued system
3. strategically locate existing instream large wood to reduce water velocities, increase channel roughness, catch sediment, and protect a BAER Project (concrete box culvert) downstream from plugging.
4. identify BAER treatment effectiveness and whether or not vegetative, fish, stream temperature, and sediment yield conditions are changing.

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

Land 90 % Channel 70 % Roads/Trails 70 % Protection/Safety 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	90%	90%	90%
Channel	80%	80%	80%
Roads/Trails	90%	90%	90%
Protection/Safety	90%	90%	90%

E. Cost of No-Action (Including Loss): \$1.2 million

F. Cost of Selected Alternative (Including Loss): \$447,674

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range
<input checked="" type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology
<input checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS

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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:

L1 - Removal of individual hazard trees (Fall 2006) along the following routes to protect human life and safety;

- along the portion of high use snowmobile trail within moderate and high intensity burn areas along the 2630 road (1.5 mile segment)
- along route to Pisgah Lookout (0.3 mile segment)
- along two high use dispersed recreation sites
- along access routes to the treatment sites for BAER Treatments (2.5 miles associated with L5, R2, R3, R4, R5, R6, R7).

Routes to receive hazard tree removal will be evaluated to provide the safest access at the lowest cost.

L2- Weed inventory of existing sites and new disturbed areas (in 2007) in and adjacent to the fire area and private lands. Private lands adjacent to the fire are known to be heavily infested with non-native invasive plants, including yellow starthistle, medusahead, and houndstongue. Many of these private land infestations are not being treated, and threaten to move onto disturbed and burned sites associated with the Maxwell Fire. Manual control of weeds in 2007 will minimize potential spread of weeds throughout and around the fire area. Monitoring of weeds and weed treatment areas in 2008 and 2009 will identify effectiveness of treatments.

L3- Monitor potential vandalism and fill legal obligation to document condition change and update cultural resource site records on seven sites located within the fire area (Fall 2006).

L4- Repost approximately 2 miles of wilderness boundary signs along a high motorized use area (2630 road) that had high intensity fire (Fall 2006). Signs will alert recreationist that they are entering a wilderness area and protect the non-motorized wilderness value. In addition, repost approximately 3.5 miles of wilderness boundary signs in 2007 in areas that burned with moderate intensity. This represents about 30% of the total wilderness boundary.

L5- Construct and install four Educational/Safety Awareness Information boards (Fall 2006). These boards would be located on major roads and entrance areas to the fire. Boards and signs would educate the public on the hazards that exist due to the fire and the safety precautions necessary to avoid injury and/or fatality. Locations would be on the 2630 road at Indian Prairie, Scotts Camp, Allen Creek Horse Camp, and at the 2200-550 road.

Channel Treatments:

C1- Plant riparian shrubs along 2 miles of Allen Creek and 3 miles along the East Fork Allen Creek (outside Bridge Creek Wilderness) where fire intensity was moderate or high, to protect streambanks from erosion, add floodplain roughness, and initiate shade recovery in a high valued fisheries system. Planting would also occur where the two Milk Creek Culverts are removed to establish vegetation on bare streambanks in the headwaters of a Steelhead inhabited system.

Caging/fencing groups of plants at random would minimize big game and cattle disturbance and allow shrubs time to establish and grow. Planting to occur in Spring 2007 and 2008.

- C2-** Reposition existing downed trees and logs currently in Allen and East Fork Allen Creeks to minimize the potential for floating logs and extensive channel degradation (Fall 2006) with higher magnitude flows. This treatment would be necessary to protect the integrity of the box culvert on Allen Creek (on the 2200 road approximately 0.5 miles downstream) which is a Proposed BAER Treatment.

Road Treatments:

- R1-** Replace Allen Creek culvert on the 2200 road with a concrete box culvert (Fall 2006/2007). Concrete box selected due to fill height constraints on a major road. This will reduce the potential for a culvert/road failure during post-fire high flows and protect sensitive fish species in the drainage.
- R2-** Remove two existing culverts on Milk Creek (2200-903 and 2200-750 roads) and one on Allen Creek (on 2200-550 road). Total of 3 culverts proposed to be removed. Treatment would include recontouring the stream that crosses through the road prism and installing stream grade control structures to prevent downcutting. This treatment would eliminate the chance for a culvert/road failure during post-fire high flows and protect downstream Sensitive Redband Trout and Critical Steelhead Habitat and species. (Fall 2006).
- R3-** Install a driveable armored dip over the existing culvert on Hoffman Creek on the 2200-750 road (which has about ten feet of fill over it). Armor outslope of dip. Treatment would increase flood capacity and reduce the chance for a culvert/road failure during post-fire high flows and protect Critical Steelhead Habitat downstream.
- R4-** Remove existing culvert on the 2200-505 road and install rock ford on a tributary to Elliot Creek (Fall 2006). This treatment will reduce the potential for a culvert/road failure during post-fire high flows and protect sensitive fish habitat and species.
- R5-** Remove six cross-drain culverts and construct drain dips to improve road drainage capacity on the 2200-550 road along Allen Creek. In addition, construct five new drain dips on this same road.
- R6-** Install water bars to enable roads to better handle expected increases in surface runoff (Fall 2006). Roads include the 2200-500, 2200-550, and 2200-903.
- R7-** Manage Road Surface Water (Fall 2006) within or directly downslope of moderate and high intensity burn areas. May include re-establishing the road ditch template, removing outside berms, armoring outlet, and cleaning inlets and outlets to improve road surface drainage. Would occur on the 2200-500 and 2200-550 roads along Elliot and Allen Creeks.
- R8-** Storm patrol (especially high and moderate burn intensity areas) during and immediately after storm events to repair, unplug, or aid in drainage of road drainage features.

Protection/Safety Treatments:

See **L1** and **L5** above.

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.)

Some monitoring has already been included in the above treatment proposals (weeds, archaeology, storm patrol)

M1- Effectiveness monitoring of C1 and C2 above. Monitoring would include photo points, sediment sampling, stream temperature sampling, fish population counts, and fish habitat inventory. This monitoring would occur in Fall 2006 and Spring/Summer 2007.

Part 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									
L1- Hazard Tree Removal	trees	\$65	133	\$8,645	\$0		\$0		\$0
L2- Weed Inventory (2007)	days	\$250	5	\$1,250	\$0		\$0		\$0
L2- Weed Treatment (2007)	days	\$250	5	\$1,250	\$0		\$0		\$0
L2- Weed Monitoring (08-09)	days	\$250	10	\$2,500	\$0		\$0		\$0
L3- Archaeological Survey	days	\$290	10	\$2,900	\$0		\$0		\$0
L4- Re-post Wilderness Signs	miles	\$2,000	5.5	\$11,000	\$0		\$0		\$0
L5- Install Safety Info. Boards	each	\$620	4	\$2,480	\$0		\$0		\$0
L5- Monitoring/Posting Boards	trips	\$300	10	\$3,000	\$0		\$0		\$0
Insert new items above this line!				\$0	\$0		\$0		\$0
Subtotal Land Treatments				\$33,025	\$0		\$0		\$0
B. Channel Treatments									
C1- Riparian Planting (07-08)	project	\$68,000	1	\$68,000	\$0		\$0		\$0
C2- Large Wood Re-work	project	\$45,960	1	\$45,960	\$0		\$0		\$0
Insert new items above this line!				\$0	\$0		\$0		\$0
Subtotal Channel Treat.				\$113,960	\$0		\$0		\$0
C. Road and Trails									
R1- Allen Cr Box Culvert	each	\$175,000	1	\$175,000	\$0		\$0		\$0
R2- Remove Culverts	each	\$17,100	3	\$51,300	\$0		\$0		\$0
R3- Install Armored Dip over Pipe	each	\$3,794	1	\$3,794			\$0		\$0
R4- Remove Culvert/put in Ford	each	\$3,522	1	\$3,522	\$0		\$0		\$0
R5- Construct Drain Dips	each	\$1,247	11	\$13,717			\$0		\$0
R6- Construct Water Bars	each	\$325	20	\$6,500			\$0		\$0
R7- Manage Road Water	miles	\$2,500	3	\$7,500			\$0		\$0
R8- Storm Patrol	days	\$320	20	\$6,400			\$0		\$0
Insert new items above this line!				\$0	\$0		\$0		\$0
Subtotal Road & Trails				\$267,733	\$0		\$0		\$0
D. Protection/Safety									
See L1 and L5 above				\$0	\$0		\$0		\$0
				\$0	\$0		\$0		\$0
				\$0	\$0		\$0		\$0
Insert new items above this line!				\$0	\$0		\$0		\$0
Subtotal Structures				\$0	\$0		\$0		\$0
E. BAER Evaluation									
Personnel, vehicles	each	\$8,000	1	\$8,000			\$0		\$0
Insert new items above this line!				---	\$0		\$0		\$0
Subtotal Evaluation				\$8,000	\$0		\$0		\$0
F. Monitoring									
M1- Monitor C1-C2	project	\$17,720	1	\$17,720	\$0		\$0		\$0
Insert new items above this line!				\$0	\$0		\$0		\$0
Subtotal Monitoring				\$17,720	\$0		\$0		\$0
G. Totals				\$440,438	\$0		\$0		\$0
Previously approved									

PART VII - APPROVALS

1.

Forest Supervisor (signature)

Date
2.

Regional Forester (signature)

Date