

## BURNED-AREA REPORT

(Reference FSH 2509.13)

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

☒ 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)

**O. Vegetation Types:** The most common plant communities include western juniper (*Juniperus occidentalis*), mountain big sagebrush (*Artemisia tridentata* var. *vaseyana*) with a variety of bunchgrasses including bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), and Thurber's needlegrass (*Stipa thurberianum*). On ridgetops of shallow, lithosol "scabland" areas, plant communities are primarily rigid sage (*Artemisia rigida*), low sage, (*A. arbuscula*) and Sandberg's bluegrass (*Poa secunda*) with a variety of forbs including "wild parsley" or "biscuitroot" (*Lomatium* spp.) species. On a few areas with deeper soils such as in drainages and more northerly slopes, communities include ponderosa pine (*Pinus ponderosa*), antelope bitterbrush (*Purshia tridentata*) and Idaho fescue. Riparian communities most commonly include white alder (*Alnus rhombifolia*) and willow (*Salix* spp.) species, along with sedges (*Carex* spp.). The non-native, invasive annual grass known as medusahead (*Taeniatherum caput-medusae*) is dominant in some areas, especially along road shoulders and other areas with a history of disturbance, and in areas with shallow, fine-textured soils.

**P. Dominant Soils:** Surface soils have sandy loam and loam textures as a result of Cascade volcanos and vents to the west. Airfall ash overlies older clayey residual soils in many locations. Soils are classified as Aridic Haploxerolls (Agency Series), Aridic Argixerolls (Madras Series), Vertic Paleixerolls (Simas Series), Lithic Argixerolls (Ruckles) and Lithic Haploxerolls (Lickskillet Series). An approximate acreage breakdown for this fire is as follows:

Map Unit Symbol	Field Symbol	Acres in Burn	Map Unit Classification	Physiographic Position	Range Site
3B	610, 612	682	Agency-Madras Complex; 0-8% Slopes	Upland Flats And Ridges	Loamy 10-12pz
81F	606	105	Lickskillet-Rock Outcrop Complex; 45-80 % slope	Steep Escarpments	South 9-12pz
118D	573	83	Simas-Ruckles Complex; 15-40 % Slopes	Sideslopes	Droughty North 9-12pz
120F	572	393	Simas-Ruckles Complex; 40-80% N Slopes	North Aspect Drainway Slopes	Droughty North 9-12pz
121F	570	185	Simas-Ruckles Complex; 40-80% S Slopes	S Aspect Drainway Slopes	Droughty South 9-12pz
	total	1,448			

**Q. Geologic Types:** Tertiary Olivine Basalt (Pliocene and Miocene in age) cap the plateau table's, roughly 1/3 of the burn area. Tertiary Sedimentary and Tuff units (Pliocene and Miocene in age) composed of semi-consolidated to well-consolidated mostly lacustrine tuffaceous sandstone, siltstone, mudstone, air-fall and water-deposited vitric ash, palagonitic tuff and tuff breccia, covering the majority of the burn area draws and canyons (roughly 2/3 of burn area). These materials are highly erosive. They interfinger with the Tertiary olivine basalt. Capping the terrain are recent ash falls from the Cascades and Mt. Mazama, mixing with the soils.

**R. Miles of Stream Channels by Order or Class:** 1.6 miles of Class 1 (Whychus Cr)  
4.1 miles of Class 4 unnamed

**S. Transportation System**

**Trails:** 1.3 miles      **Roads:** 2.5 miles

**PART III - WATERSHED CONDITION**

- A. Burn Severity (acres):** 1,298 (low)      150 (moderate)      0 (high)
- B. Water-Repellent Soil (acres):** 0
- C. Soil Erosion Hazard Rating (acres):** 682 (low)      83 (moderate)      683 (high)
- D. Erosion Potential:** 4 tons/acre
- E. Sediment Potential:** 350 cubic yards / square mile

**PART IV - HYDROLOGIC DESIGN FACTORS**

- A. Estimated Vegetative Recovery Period, (years):** 5
- B. Design Chance of Success, (percent):** 90
- C. Equivalent Design Recurrence Interval, (years):** 25
- D. Design Storm Duration, (hours):** 0.5
- E. Design Storm Magnitude, (inches):** 0.67 - 0.77
- F. Design Flow, (cubic feet / second/ square mile):** 81 - 94
- G. Estimated Reduction in Infiltration, (percent):** 5
- H. Adjusted Design Flow, (cfs per square mile):** 86 - 99

## **PART V - SUMMARY OF ANALYSIS**

**A. Describe Critical Values/Resources and Threats (narrative):** Critical values/resources at risk and the subsequent threat to those are described below. The identified values correspond with those to be considered in Exhibit 01, Interim Directive. The risks have been assigned based on Exhibit 02, Interim Directive.

- Native Vegetation, including Sensitive Plant Species – There is a likely probability of loss or degradation to sensitive and desirable plant habitat and species due to post-fire conditions and spread of invasive species into and around the burned area and from both National Grassland and private lands. The magnitude of consequence is major with an overall risk of very high. **Treatment Recommended.**
- Cultural Resources – There is likely probability for loss or degradation to one cultural resource site due to exposure from post-fire vegetation mortality. The site includes a wall of pictographs and the threat is from vandalism and looting of artifacts. The magnitude of consequence is moderate with an overall risk assessment of high. **Treatment Recommended.**
- Federally Threatened Bull Trout and Mid-Columbia Columbia River Steelhead Trout and their respective Designated Critical Habitat – Bull trout, *Salvelinus confluentus* and Mid-Columbia River steelhead trout, *Oncorhynchus mykiss*, are known to occur in Whychus Creek within the fire perimeter. There is a possible probability of direct effects to these species and their habitats due to a possible probability of increases in sedimentation and due to post-fire runoff, erosion and sediment delivery from burned over adjacent side slope that are steep. The magnitude of this damage would be moderate with an overall risk level of intermediate. **No treatments recommended.**

Sensitive species such as the Columbia spotted frog, *Rana luteiventris*, and redband trout, *Oncorhynchus mykiss* ssp, also exist within Whychus Cr and have the same probability, magnitude of consequence and risk as above.

- Soil Productivity – There is a possible probability of accelerated soil erosion due to exposed soils on steep side slopes adjacent to Whychus Cr. The magnitude of consequence is moderate and the overall risk is intermediate. **No treatments recommended.**
- Water Quality – There is a possible probability of degraded water quality (temperature and sedimentation) in Whychus Creek due to high intensity fire in isolated pockets along the creek. The threat is from increased sedimentation due to erosion on exposed soils and loss of stream shading vegetation adjacent to Whychus Cr. The magnitude of consequence is minor resulting in a low risk. **No treatments recommended.**

**B. Emergency Treatment Objectives (narrative):** We are recommending treatments within the following areas with the following objectives.

Preventing Spread of Non-Native Invasive Plants - Seeding approximately 100 acres along the perimeter of the fire will be performed with the objective of more quickly establishing

vegetative cover to reduce the risk for spread of non-native, invasive annual grass (primarily Medusahead) into the perimeter of the fire. Medusahead exists adjacent to the fire area.

Cultural Resource Protection – The one site that is exposed due to post-fire vegetation mortality and consumption will be planted and screened to prevent vandalism and looting of artifacts.

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

**Land 95% Channel --% Roads/Trails --% Protection/Safety --%**

**D. Probability of Treatment Success**

	Years after Treatment		
	1	3	5
<b>Land</b>	60	90	90
<b>Channel</b>	--	--	--
<b>Roads/Trails</b>	--	--	--
<b>Protection/Safety</b>	--	--	--

**E. Cost of No-Action (Including Loss):** 500,000

**F. Cost of Selected Alternative (Including Loss):** 150,000

**G. Skills Represented on Burned-Area Survey Team:**

☒ Hydrology   ☒ Soils   ☒ Geology   ☐ Range  
☐ Forestry   ☐ Wildlife   ☐ Fire Mgmt.   ☐ Engineering  
☐ Contracting   ☐ Ecology   ☒ Botany   ☒ Archaeology  
☒ Fisheries   ☐ Research   ☐ Landscape Arch   ☒ GIS

**Team Leader:** Rob Tanner

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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:**

**Cultural Resource Protection:** One cultural site has been exposed due to the fire and needs planting of native vegetation in order to prevent vandalism and looting of artifacts. The planting at this site will screen a wall of pictographs. The cost outline in Part VI includes the cost of materials and personnel needed to perform the treatment.

**Preventing Spread of Non-Native Invasive Plants:** Seeding would occur along the outer 200 feet of the fire perimeter to more quickly establish vegetative cover and competition for medusahead, and thereby act as a “buffer” to reduce the potential for medusahead spread into the burn area. This would be done over approximately 100 acres with ATV and hand seeders.

Species	Lbs/Ac
Sherman big bluegrass - cultivar ( <i>Poa ampla</i> )	4 lb
Native Sandberg's bluegrass ( <i>Poa secunda</i> )	3 lb
Native bottlebrush squirreltail ( <i>Elymus elymoides</i> )	2 lb
Native Idaho fescue ( <i>Festuca idahoensis</i> )	2 lb
Native prairie junegrass ( <i>Koeleria macrantha</i> )	2 lb
Native bluebunch wheatgrass ( <i>Pseudoroegneria spicata</i> )	1 lb
Native yarrow forb ( <i>Achillea millefolium</i> )	0.25 lb
Native Lewis flax ( <i>Linum perene</i> )	0.75 lb
<b>Total</b>	<b>15 lb</b>

The nearby Geneva and Geneva II fires of the last two decades resulted in similar concerns for recovery of native vegetation. These areas were seeded with native and non-native vegetation following suppression activities. Monitoring has determined these seeding activities were largely successful (personal observation by Mark Lesko, botanist).

Treatment	Number Units	Estimated Cost/Unit	Amount
Seed	1500 lb	\$13	\$19,500
Labor	25 person days	\$250/day	\$6,250
Weed monitoring	1 day	\$350/day	\$350
<b>Estimated Total Cost</b>			<b>\$26,100</b>

**Channel Treatments:** None

**Roads and Trail Treatments:** None

**Protection/Safety Treatments:** None

**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.)

**Attachments**

- Alder Springs Fire Perimeter Map
- Alder Springs Fire Invasives Map
- We flew the fire and hand mapped intensity/severity.

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

Interim #

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands		All
			# of Units	BAER \$		# of units	Fed \$	Non Fed \$
<b>A. Land Treatments</b>								
Cultural Screening	1	1,650		\$1,650	\$0		\$0	\$0
Seeding for Invasive Prevention				\$26,100	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				<b>\$27,750</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>B. Channel Treatments</b>								
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>C. Road and Trails</b>								
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0
<i>Subtotal Road &amp; Trails</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>D. Protection/Safety</b>								
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
				\$0	\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0
<i>Subtotal Structures</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>E. BAER Evaluation</b>								
Personnel				\$2,760			\$0	\$0
Helicopter				\$1,014				
<i>Insert new items above this line!</i>				---	\$0		\$0	\$0
<i>Subtotal Evaluation</i>				<b>\$3,864</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>F. Monitoring</b>								
				\$0	\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0
<i>Subtotal Monitoring</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>G. Totals</b>				<b>\$27,750</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
Previously approved								

**PART VII - APPROVALS**

1. Kathleen Klein  
Forest Supervisor (signature) 10/11/2011  
Date
2. Nora B. Rasure (for):  
Regional Forester (signature) 10/11/2011  
Date