

Date of Report: 9/7/2006

**BURNED-AREA REPORT**  
(Reference FSH 2509.13)**PART I - TYPE OF REQUEST**

## A. Type of Report

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

## B. Type of Action

- ☒ 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: Sharps Ridge                      B. Fire Number: OR-UMF-000283  
C. State: OR    D. County: Grant  
E. Region: 06                                        F. Forest: Umatilla/Malheur  
G. District: North Fork John Day/Blue Mountain  
H. Date Fire Started: 8/16/2006                      I. Date Fire Contained: 9/2/2006  
J. Suppression Cost: \$5,300,000 (estimated final)  
K. Fire Suppression Damages Repaired with Suppression Funds  
    1. Fireline waterbarred (miles): 1.4 as of 9/4/06 (interior line), plans for completion in place  
    2. Fireline seeded (miles): 0, plans for completion in place  
    3. Other (identify):  
L. Watershed Number: 1707020204 (Desolation Creek); 1707020303 (Big Creek)  
M. Total Acres Burned: 5510  
    NFS Acres(5510)    Other Federal (0)    State (0)    Private ( 0 )  
N. Vegetation Types: Mixed forest and grassland  
O. Dominant Soils: volcanic residual and ash cap  
P. Geologic Types: volcanic (Picture gorge basalt), small areas of granitics

Q. Miles of Stream Channels by Order or Class:

perennial, fish-bearing = 2.4  
perennial, non fish-bearing = 8.7  
intermittent = 8.2

R. Transportation System

Trails: 9.3 miles      Roads: 9.9 miles

**PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 2436 (low, includes unburned/very low) 2139 (moderate) 936 (high)  
*NOTE: burn severity mapping used BARC (RSAC); field-checked, generally good agreement in spatial accuracy of severity class boundaries however may slightly overestimate totals in moderate and high category; some acres of high may be moderate, and acres of moderate may be low.*

B. Water-Repellent Soil (acres): 0\* (little or no fire increase due to natural repellancy volcanic ash)

C. Soil Erosion Hazard Rating (acres):  
2436 (low) 2370 (moderate) 702 (high)

D. Erosion Potential: 8 tons/acre

E. Sediment Potential:        cubic yards / square mile

**PART IV - HYDROLOGIC DESIGN FACTORS**

A. Estimated Vegetative Recovery Period, (years): 5-10\*  
> 5 years for riparian areas burned mod-high severity

B. Design Chance of Success, (percent): 60-90

C. Equivalent Design Recurrence Interval, (years): 5 and 10

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 1.3" (NOAA 5-YR-6 HR)

F. Design Flow, (cubic feet / second/ square mile): 11.7

G. Estimated Reduction in Infiltration, (percent): 5

H. Adjusted Design Flow, (cfs per square mile): 11.8

**PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency:

The Sharps Ridge fire occurred within small headwater tributaries to Desolation Creek (North Fork John Day) and Big Creek (Middle Fork John Day). Areas of moderate-steep slope (>40%) with moderate and high burn severity adjacent to streams have increased potential for surface erosion and sediment delivery. These factors pose a risk to trails and road-stream crossings within and downstream of the fire. Some riparian areas within

the fire also burned at moderate and high intensity affecting local riparian structure and function, with some potential for direct impact to downstream water quality and fisheries. Sharps Ridge is a prominent northwest-southeast oriented ridge susceptible to storm systems. Both smaller, localized convective storms and more widespread frontal systems can produce localized high intensity rain in the area. Headwater streams in the fire are important for supporting downstream water quality and fisheries values. Sensitive and listed fish species (rainbow, bulltrout, steelhead, spring chinook) occur both within and downstream of the fire area. These tributary streams and riparian ecosystems are important cold water source areas for Desolation and Big Creek, which are 303d listed for temperature. The Sharps Ridge Fire occurred at relatively high elevation, and mostly within the Vinegar Hill Scenic Area, a portion of the forest that is free from any known infestations of noxious weeds. Because the district has, for several years, been aggressively and effectively controlling noxious weeds, there are no immediate concerns for their spread into the burned area. No known heritage resource sites occur within the fire perimeter, a few adjacent to which have been monitored throughout fire suppression activity. So, as far as BAER goes, we don't have any heritage concerns that need to be addressed. We will need to do Section 106 on the BAER activities that are proposed (Jill Bassett, pers. comm).

#### B. Emergency Treatment Objectives:

- 1) Transportation System: Reduce potential for road-stream crossing failure (culvert plug and fill failure during storm event) and consequences on-site and downstream at 3 crossings on Junkens Creek, and 2 crossings on Beeman Creek.  
Reduce effects of accelerated erosion on the Beeman-Junkens ATV trail located adjacent to Beeman Creek, burn severity poses moderate-high potential for trail damage and accelerated sediment delivery to Beeman Creek and cumulative downstream effect to road-stream crossings and listed fish.
- 2) Riparian, Water Quality, and Fisheries: Accelerate riparian recovery by planting native shrubs and conifers in moderate and high severity burned segments of Beeman, Junkens, and tributary to Indian Creek. Plantings would contribute to on-site recovery of streambank stability, improve sediment retention, and provide shade to reduce stream temperatures downstream.

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

Land \_\_\_\_ % Channel 50 % Roads and Trails 80 % Other \_\_\_\_ %

#### D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	NA	NA	NA
Channel	0	60	90
Roads	80	90	90
Other			

E. Cost of No-Action (Including Loss): \$101,500 (includes trail and road-stream crossing replacement, riparian values, does not include downstream impact of storm damage to Desolation and Big Creek).

F. Cost of Selected Alternative (Including Loss):

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

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

Team Leader: Caty Clifton

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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.)

##### Channel Treatments:

###### **Junkens, Beeman, and tributary to Indian Creek riparian planting**

*Problem/Need:* sections of three streams burned at high severity, removing all overstory shading. Pre-fire shrub numbers were low along these portions of creek due to relatively heavy overstory, so there are few shrub crowns capable of re-sprouting on site. More than 3 miles of headwater creeks are left exposed to direct sunlight and to increased erosion potential.

Shrubs are quick to establish and provide interim bank stabilization, stream shade, and wildlife and fish habitat until the forest overstory regenerates, but few are present. Stinking currant (*Ribes hudsonianum*) was the most common species, but occurred only sporadically. Small patches of riparian grasses and sedges occur sporadically along all streams, and most are expected to show rapid recovery.

Shrub stands in nearby drainages can provide materials for seed and live cuttings collection. Collections made in the fall of 2006 would allow nursery-sown seed and/or rooted cuttings to be planted out in the spring of 2008. Caging at the time of planting to protect young plants from herbivory by wild and domestic ungulates is required for successful establishment and growth. Caging is also recommended to protect the new growth that will sprout from roots of any top-killed shrubs that survived the burn. Cost estimate based on Planting rate of 1 shrub/20 linear ft. of affected streambank: 3.5 mi of stream x 2 banks = 3700 shrubs

*Risk/Priority:* moderate

##### Roads and Trail Treatments:

###### **1) Road-stream crossing culvert stabilization/flood-proofing:**

**3988-070, Junkens Creek** (T.8S, R.33E, SW ¼ S 30) → 48" CMP partially blocked inlet (wood), moderate-high risk for plug and fill failure during high intensity storm, fill ht 10' at inlet, low diversion potential onto roadway, localized impact with potential for downstream accelerated debris flow in high intensity storm, and 2 downstream culverts/roads at risk.

**1007-100, Junkens Creek** (T.8S, R.32E, NE ¼ S 25) → 2 CMPs (48 and 54"), both partially blocked at inlet, wood and sediment, high plug potential in storm event, fill ht >10', low diversion potential onto roadway, unstable granitics

**1007, Junkens Creek** (T.8S, R.32E, NE ¼ S 24) → multiple small tributaries, lower gradient, 48" CMP at channel crossing with 36" CMP to west side trib, inlet clear, diversion potential for 100' on road, lower risk

**1007-100, Beeman Creek** (T.8S, R.33E, NE ¼ S 30) → 48" CMP, inlet clear, fill ht 8-10', lower risk

**1007, Beeman Creek** (T.8S, R.33E, SE ¼ S 19) → 54" CMP "winged" inlet, (currently blocked for suppression water source), fill ht 15-20', low diversion, moderate plug potential, unstable granitics

*Problem/Needs:*

Clear unembedded inlet debris, if present, and construct low armored dip in roadway at crossing(s) or remove pipe and fill and install armored low-water crossing. Cost estimate based on mobilization, 1 day per crossing, plus rock material for armoring.

*Risk/Priority:* moderate-high

**2) Junkens-Beeman ATV Trail #3015 stabilization** (waterbars, shaping, outslope, repair ruts, seed with native seed along trail margin to reduce runoff onto trail)

*Problem/Need:* portions of this trail adjoin Beeman Creek and areas of moderate-high burn severity, in area of older burn, with cumulative effects (increased runoff and erosion), increasing risk of resource damage to trail, further accelerated runoff, and sediment delivery to Junkens Creek. Cost estimate based on labor, equipment, materials (includes seed cost).

*Risk/Priority:* moderate-high

## **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.)

Implementation and effectiveness monitoring of trail and road treatments by District Recreation Technician and Forest Engineer (2 days). Monitoring to consist of field review, visual observation of practices installed to prevent erosion (waterbars, shaping, etc).

Implementation and effectiveness monitoring of riparian treatments by District forestry technician and Forest botanist (2 days). Annual field review of planting success (survival and functionality).

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

Line Items	Units	Unit Cost	NFS Lands			Other	Other Lands			All Total
			# of Units	WFSU SULT \$			# of units	Fed \$	# of Units Non Fed \$	
<b>A. Land Treatments</b>										
				\$0	\$0			\$0	\$0	\$0
				\$0	\$0			\$0	\$0	\$0
				\$0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Land Treatments</b>				\$0	\$0			\$0	\$0	\$0
<b>B. Channel Treatments</b>										
riparian plant	mi	2950	3.5	\$10,325	\$0			\$0	\$0	\$10,325
riparian cage	mi	4440	3.5	\$15,540	\$0			\$0	\$0	\$15,540
				\$0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Channel Treat.</b>				\$25,865	\$0			\$0	\$0	\$25,865
<b>C. Road and Trails</b>										
J-B ATV trail stab.	mi	802	5	\$4,010	\$0			\$0	\$0	\$4,010
Road-stream xings	xing	2000	5	\$10,000	\$0			\$0	\$0	\$10,000
				\$0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Road &amp; Trails</b>				\$14,010	\$0			\$0	\$0	\$14,010
<b>D. Structures</b>										
				\$0	\$0			\$0	\$0	\$0
				\$0	\$0			\$0	\$0	\$0
				\$0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Structures</b>				\$0	\$0			\$0	\$0	\$0
<b>E. BAER Evaluation</b>										
<b>Burn survey team</b>	team	1	8000	\$8,000	\$0			\$0	\$0	\$8,000
				\$0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Evaluation</b>				\$8,000	\$0			\$0	\$0	\$8,000
<b>F. Monitoring</b>										
<b>implement/effect.</b>	team	1	1518	\$1,518	\$0			\$0	\$0	\$1,518
<i>Insert new items above this line!</i>				\$0	\$0			\$0	\$0	\$0
<b>Subtotal Monitoring</b>				\$1,518	\$0			\$0	\$0	\$1,518
<b>G. Totals</b>				<b>\$49,393</b>	<b>\$0</b>			<b>\$0</b>	<b>\$0</b>	<b>\$49,393</b>

## PART VII - APPROVALS

1. /s/ Kevin Martin (reviewed initial)  
Forest Supervisor (signature)

9/7/06  
Date

2. \_\_\_\_\_  
Regional Forester (signature)

\_\_\_\_\_  
Date