

Date of Report: 7/29/02

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: EYERLY (complex incl. Geneva 2 fire) B. Fire Number: OR-WSA-059
C. State: OR D. County: JEFFERSON
E. Region: 06 F. Forest: O1 DESCHUTES
G. District: 05 SISTERS
H. Date Fire Started: 7/9/02 I. Date Fire Controlled: UNKNOWN Contained: 7/26/02
J. Suppression Cost: \$10.7MM to date
K. Fire Suppression Damages Repaired with Suppression Funds
 1. Fireline waterbarred (miles): est. 60-80 miles
 2. Fireline seeded (miles): unknown- none to date-expect ~1/3
 3. Other (identify): berm smooth & respreading
L. Watershed Number: 170703011
M. Total Acres Burned: 23,573
 NFS Acres (17,871) Other Federal (239) State (63) Private (3828) Warm Springs Res. (1,572)
N. Vegetation Types: Ponderosa pine-juniper/bitterbrush/idaho fescue; mixed conifer, dry (Ponderosa pine, Douglas fir, white fir, manzanita, ceonothus) with incense cedar
O. Dominant Soils: Windego-Smiling sandy loams, very deep volcanic ash over colluvium & residuum; Parrego-Thorn-Rock outcrop sandy loam, v. gravelly sandy loam, moderately deep to shallow

P. Geologic Types: weathered tuffs, andesite

Q. Miles of Stream Channels by Order or Class:

Order 1st: 19.3 2nd: 9.7 5th: 1 Lake= 5 miles lakefront

*R. Transportation System

Trails: 0 miles Roads: 117.3 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 7717 (low) 7758 (moderate) 7405 (high)

B. Water-Repellent Soil (acres): 600

*C. Soil Erosion Hazard Rating (acres):

9665 (low) 6836 (moderate) 7072 (high)

D. Erosion Potential: 2, + 3 rill/gully = 5 tons/acre

E. Sediment Potential: 454 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 1-5

B. Design Chance of Success, (percent): 70

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

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.0

F. Design Flow, (cubic feet / second/ square mile): 22

G. Estimated Reduction in Infiltration, (percent): 10-20

H. Adjusted Design Flow, (cfs per square mile): 27

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Eyerly Fire burned at high intensity in the early stages of the fire event with contiguous area of several thousand acres in three major drainages- Spring, Street & Fly Creeks- experiencing high severity burn effects. Smaller portions of other drainages also had discontinuous areas of high and moderate fire severity (notably Bean Creek). The fire originated adjacent to the Metolius River and Metolius arm of Lake Billy Chinook (LBC)- high value recreational and habitat waterways. Drainageways drain directly into either LBC or the Metolius. Bull trout habitat is found in the Street Creek drainage. Lake Billy Chinook is 303d listed for algae and pH. The Perry South and Monty campgrounds (USFS) are within the fire area and at risk from increasing runoff magnitude due to extent and severity of fire effects in the drainages above.

The road system on the Sisters RD, Deschutes NF is extensive in much of the fire area including several miles of closed roads with minimal or non-existent maintenance in recent years. Several sections are planned for decommissioning. Much of the road drainage system is inadequate for anticipated increased runoff due to the fire effects, particularly in the high severity areas. Culverts and road fills are at risk to plugging, blowout and cascading effect of plugging and blowout moving down the drainageways until reaching Lake Billy Chinook or the Street Creek sections with bull trout habitat and populations.

Residential property consisting of Three Rivers subdivision and a separate area of several cabins on private property (on LBC) are within the fire area. Several homes and outbuildings burned. A major county access road runs through the fire area and is located immediately above the cabin area along LBC with threat of storm runoff concentrating on the road and funneling onto/through private property below via marginal culverts or other drain structures. Many outlets daylight onto (now) unprotected soil in drainage areas with accumulated sediments.

Inventoried populations of noxious weeds exist in portions of the fire area, most notably in areas adjacent to private property. These areas were disturbed in the fire suppression activity with seed expected to have been distributed out into Forest areas previously uninfested. High severity areas have lost seed viability and root stocks of native species and are highly susceptible to invasion by noxious weeds and other non-native invasives.

Terrestrial wildlife values include mule deer winter range, bald eagle habitat (known nesting sites), and turkey habitat.

Geneva 2 fire is approximately 1,200 acres. No treatment is recommended for watershed stabilization purposes. Weed monitoring and treatment needs are included in figures provided.

B. Emergency Treatment Objectives:

Land: provide barriers to uninterrupted overland flow and reduce soil loss in areas with little to no remaining down wood component and suitable soil abd slope conditions. Seeding is intended to provide root and rain impact stability for initial 2 years in areas where seed and root stocks were lost.

Weeds: reduce potential of weed spread with initial treatment to reduce/eliminate premature or mature seedheads; monitor populations for spread, treatment effectiveness, treatment needs

Roads: reduce/eliminate potential for failure of fills, culverts, crossings, and road template including loss of surfacing materials due to increased runoff potential and increased debris movement. Reduce risk of materials producing cascading effect with resultant road losses and effects to water quality, TES habitat, and channel stability.

Diversity/riparian Plantings: maintain rare/scarce aspen clones, larch and sugar pine to preserve the species range and viability on the Forest. Riparian shrub plantings to accelerate recovery of riparian function and habitat, increase biodiversity where root stocks lost or largely killed

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

Land 70 % Channel 60 % Roads 90 % Other 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Weeds	75	80	80
Diversity plants	60	80	90
Riparian veg.	60	80	90
Roads	80	90	90
Other			

E. Cost of No-Action (Including Loss): 1,256,000

F. Cost of Selected Alternative (Including Loss): \$1,529,633

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range	<input type="checkbox"/>
<input checked="" type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology	<input type="checkbox"/>
<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:

Seeding: certified weed-free soft white winter wheat (Madsen) and annual ryegrass (Gulf) would be aerially applied to achieve rapid application of seed to steep, suitable areas within the high severity zones (deeper soils with loose ash and soil surfaces). Application rate would be designated at 20 pls/ft². Species chosen are those that would inexpensively achieve vegetative cover in areas where root-stocks of shrubs and grasses have been killed with little expectation of short-term resprout. Species selection based on lack of availability of suitable native species, with (these) grain species shown to be effective in first 2 years, then dying out and becoming non-persistent and non-competitive with native species long-term recovery while acting as a 'nurse crop' for natives recolonizing the area.

Contour felling: select areas with suitable soils, landform, and dead tree (log) availability will be treated by felling logs across slope perpendicular to water flow. Areas are in high severity burn with little to no remaining down woody material- 1000 hour fuels (large logs) were also consumed. Log erosion barriers (LEB) are intended to increase effectiveness of sediment retention and slow overland flow in areas where simple contour felling will not provide sufficient soil contact.

Weeds: initial treatment will be achieved by goats and/or mechanical pulling with subsequent (spring) treatments by use of herbicides, mechanical or additional herbivory under NEPA documentation completed by the Sisters RD.

Channel Treatments:

Selected areas (little to no woody component remaining) intermittent tributaries to Street Creek would have channel area felling of large wood to provide channel roughness and riparian buffer area sediment catchments while natural recruitment begins.

Riparian shrub plantings are intended to accelerate recovery of riparian area and channel stability where high fire severity has severely impacted existing plant stock.

Roads and Trail Treatments:

Road treatments are intended to reduce the potential for road fill failures, rilling and gullyng particularly at drain crossings due inadequate, missing or poorly maintained culvert or other flow structures. Some previously closed roads identified in ATM plans for decommissioning would be completed by removing culverts and crossings and leaving in unpassable condition with self-maintaining long-term drainage treatments.

H. 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.)

Upland treatments: erosion control treatments will require monitoring after (and ideally during) precipitation events to determine effectiveness and need for additional treatments. Monitoring should occur for 3 years depending on recovery of vegetation and stability, with decreasing frequency in subsequent years.

Weeds: weed treatment effectiveness, spread and species invasion will need to be closely monitored. Monitoring will need to occur at appropriate times to track development stages of the various species to determine need for treatments and timing.

Additional detail may be found in the Botanical Report and forthcoming monitoring plan(s) from district specialists.

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 \$	
A. Land Treatments										
Contour felling	acres	120	250	\$30,000			\$0		\$0	\$30,000
Weed treatment(3 yrs)	acres	1073	15	\$16,095			\$0		\$0	\$16,095
Log erosion barriers	acres	375	120	\$45,000			\$0			\$45,000
Seeding	acres	16.35	2000	\$32,700			\$0		\$0	\$32,700
Diversity conifer, aspen	each	7	3000	\$21,000			\$0		\$0	\$21,000
<i>Subtotal Land Treatments</i>				\$144,795			\$0		\$0	\$144,795
B. Channel Treatments										
Shrub planting	each	2.65	5000	\$13,250			\$0		\$0	\$13,250
Channel buffer felling	acres	175	100	\$17,500			\$0		\$0	\$17,500
				\$0			\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				\$30,750			\$0		\$0	\$30,750
C. Road and Trails										
Roadbed drain. Impr.,	miles	350	25	\$8,750			\$0		\$0	\$8,750
Culvert replace., clean	each	2500	10	\$25,000			\$0		\$0	\$25,000
Armored storm dips	each	1000	14	\$14,000			\$0		\$0	\$14,000
Storm patrol	year	1200	3	\$3,600			\$0		\$0	\$3,600
<i>Subtotal Road & Trails</i>				\$51,350			\$0		\$0	\$51,350
D. Structures										
				\$0			\$0		\$0	\$0
<i>Subtotal Structures</i>				\$0			\$0		\$0	\$0
E. BAER Evaluation										
Personnel, p.d.,veh.	each	31437	1	\$31,437			\$0		\$0	\$31,437
Helicopter	hrs	800	3	\$2,400			\$0		\$0	\$2,400
Imagery	each	700	1	\$700			\$0		\$0	\$700
<i>Subtotal Evaluation</i>				\$34,537			\$0		\$0	\$34,537
G. Monitoring Cost										
Watershed treatments	year	1200	3	\$3,600						\$3,600
Weed, veg. Trtmnts	year	2867	3	\$8,601						\$8,601
<i>Subtotal Monitoring</i>				\$12,201			\$0		\$0	\$12,201
H. Totals				\$273,633			\$0		\$0	\$273,633

PART VII - APPROVALS

1. /s/ William Anthony for
Forest Supervisor (signature)

7/30/02
Date

2. _____
Regional Forester (signature)

Date