

Date of Report: 8/5/03

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: Kelsay Complex B. Fire Number: OR-UPF-0000034
C. State: Oregon D. County: Douglas
E. Region: R6 F. Forest: F15 Umpqua
G. District: 03
H. Date Fire Started: July 27, 2003 I. Date Fire Contained: August 2, 2003
J. Suppression Cost: 2,791,000.00 (ICS-209 dated 8/5/03))
K. Fire Suppression Damages Repaired with Suppression Funds
 1. Fireline waterbarred (miles): 1.6
 2. Fireline seeded (miles): 0.0
 3. Other (identify): 0.0
L. Watershed Number: 17100301303 (Upper North Umpqua)
M. Total Acres Burned: 1,185 ac
 NFS Acres(1,185) Other Federal () State () Private ()
N. Vegetation Types: Mountain Hemlock, White Fir, Pacific Silver Fir and Douglas-fir
O. Dominant Soils: Course sandy loam to sandy loam
P. Geologic Types: Little Butte volcanic group

Q. Miles of Stream Channels by Order or Class: 1.1 miles of Class 3 and 0.5 miles of class 4

R. Transportation System

Trails: 1.7 miles Roads: 7.6 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 230 (low) 345 (moderate) 629 (high)

B. Water-Repellent Soil (acres): 737

C. Soil Erosion Hazard Rating (acres):
1204 (low) 0 (moderate) 0 (high)

D. Erosion Potential: 254 tons/acre

E. Sediment Potential: 423 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

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

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 5

F. Design Flow, (cubic feet / second/ square mile): 130

G. Estimated Reduction in Infiltration, (percent): 66

H. Adjusted Design Flow, (cfs per square mile): 180

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Kelsay Complex Fire is located about 87 miles east of Roseburg, Oregon. The cause of the fire was a lightning strike on July 27th, 2003 and was contained on August 2nd. All land allocations within the Kelsay Complex Fire boundary are Matrix. The fire boundary is completely within Douglas County, Oregon.

PUBLIC AND FOREST SERVICE HEALTH AND SAFETY –

Members of the public and federal employees that use Forest roads 6000-700 and 6000-830 will likely to experience safety concerns while driving these roads from snags and debris above the cut-slopes and road. Road 6000-700 is also has the designation as a National Scenic Byway (June 2000). Currently it is marketed by Oregon in the states' scenic byway program, and is intended for upgrad to a two lane paved road. This road project is currently in the NEPA process to authorize this upgrade. Fire has affected 1.7 miles of this scenic byway, which doubles as a snowmobile trail during the winter months.

A preventative treatment will be the replacement of two undersized culverts along the 2610 road. The catchment above one culvert is (1 mi²), which encompasses much of the burn area.

TRANSPORTATION INFRASTRUCTURE

The Umpqua National Forest has 7.6 miles of roads in the fire area and 3.1 miles of this road will be adversely affected. Ordinary winter runoff will exceed the capacity of ditches that can become loaded by wildfire-caused debris. The culverts on the 2610 road are also anticipated to be unable to manage expected increases in stream flows caused by wildfire effects.

WATER QUALITY

Warm Springs Creek is a headwater tributary to the North Umpqua River. The stream enters the North Umpqua just upstream of the Lemolo II hydropower diversion dam. Flowing from the High Cascades the burned channels are characterized by higher summer flows and lower peak flows when compared to the Western Cascades that dominate the downstream geology. Stream gradients are gentle through easily eroded ash soils within the fire boundary. These channels are weakly armored and often poorly defined.

High levels of hydrophobic soils will increase runoff with channels experiencing increased streamflows. Culverts and fords draining these areas will need to accommodate the expected elevated flows. Culvert failure will deliver sediment into the North Umpqua River and the diversion dam. Surface erosion from ash soils will likely be the primary source of sediment downstream.

NOXIOUS WEEDS

No noxious weeds were found to be growing anywhere within the fire perimeter. The closest sites are St. Johnswort (*Hypericum perforatum*) and are located at least 3 air miles away from the fire. There is potential for Spotted Knapweed (*Centaurea maculosa*) and Diffuse Knapweed (*Centaurea diffusa*) to spread within the fire. Known infestations of noxious weeds occur along the 2610 road as well as highway 138, both of which received heavy vehicle use during the fire fighting operation. In general other common invasive species such as St. Johnswort, Scotch Broom and Bull Thistle have potential to spread into the fire but it is fairly unlikely they will colonize the area considering the high altitude and heavy winter snow packs.

CRITICAL HERITAGE RESOURCES

One significant archaeological site has been identified in the burned area that is at risk due to soil and water movement and other degradation. The site, a rock cairn feature, is at risk due to dead and dying trees burned by the Kelsay Fire falling and impacting the site. To protect the site, four trees will be cut and fell away from the cairn site. Consultation with the State Historic Preservation Officer and the affected Tribes has been ongoing and will continue during treatment. An archaeological technician will monitor the site before and after treatment.

B. Emergency Treatment Objectives:

PUBLIC AND FOREST SERVICE HEALTH AND SAFETY –

Provide safe access for the public and Forest Service personnel on essential routes through the area especially in the scenic byway corridor. Provide safe access to Forest Service employees to prevent failure and maintain roads during BAER treatments and storm patrols. To reduce the need for extensive hazard tree felling the gate at the entrance of 6000-830 road will be needed.

TRANSPORTATION INFRASTRUCTURE

Reduce the loss of road surfaces from winter runoff, by preventing drainage system failure with culvert replacement, culvert cleanout, ditch cleanout, overflow dips, and storm patrols.

WATER QUALITY

Creating and improving existing drain dips will properly route water and decrease the rutting on native surface and gravel roads within the fire boundary. The paved road 2610 has two extremely undersized culverts accommodating much of the flow from the burned area. While the fill is not deep, substantial road length could be washed out due to the long ditchline diverting streamflow to another culvert down the road. The proposed road improvements will lessen the risk of sediment delivery to the North Umpqua River.

NOXIOUS WEEDS

It will be necessary to monitor the fire area over the course of the next 3 years to make sure that no new populations of Knapweed occur. It would be efficient to start this monitoring late July. Areas that will need survey include 2004 and be limited to areas within the fire perimeter: roads, dozer lines, areas of impact where material (rock, soil etc.) was added for upgrades. Noxious weed locations will be mapped with a GPS unit and information about the infestations (weed species present, size of population and estimated number of plants) will be documented.

CRITICAL HERITAGE RESOURCES:

Prevent unacceptable degradation to eligible or potentially eligible heritage sites.

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

Land 70 % Channel % Roads 70 % Other %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Channel			
Roads	75	75	75
Other			

E. Cost of No-Action (Including Loss): **\$222,000**

F. Cost of Selected Alternative (Including Loss): **\$155,000**

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

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H. Treatment Narrative:

Land Treatments:

Revegetation using local native plants can help reduce erosion, provide competition to potential invading noxious weeds (Spotted Knapweed and Diffuse Knapweed), enhance browse forage for wildlife and improve aesthetics along the affected 1.7 miles of scenic byway. It was determined not to do any revegetation to specifically compete with invasive weeds, since there are not any known noxious weeds immediately threatening the Kelsay fire landscape. In the erosion control measures for the 6000-700 rd, native plant materials listed in the following prescription are recommended. This prescription can be modified after further field reconnaissance:

On sites where no organic layer remains

Species	Type of Plant Material	Method of Outplanting	Sowing/Planting Rates	Site Prep	Notes
<i>Elymus glaucus</i>	Seed-Plugs-	Broadcast Hand Plant	25 lbs./acre 5000 plugs/acre	mulch/fertilize	Easy/cheap Good success rate
<i>Stipa occidentalis</i>	Seed-Plugs-	Broadcast Hand planting	15 lbs./acre 5000 plugs/acre	Mulch/fertilize	Never used before
<i>Lupinus lepidus</i>	Bare root	Hand planting	2000/acre	None?	Nitrogen fixer
<i>Carex inops</i>	Bare root	Hand Planting	2000/acre	None?	Good ground cover
<i>Epilobium angustifolium</i>	Seed	Hand sow	?	None?	
<i>Carex sp. #2</i>	Bare root	Hand plant	2000/acre	None?	Good ground cover

On sites where some organic layer remains

Species	Type of Plant Material	Method of Outplanting	Sowing/Planting Rates	Site Prep	Notes
<i>Vaccinium scoparium</i>	Bare root	Hand Plant	3000 plugs/acre	mulch/fertilize	Good berries for wildlife
<i>Chimaphila umbellata</i>	Bare root	Hand planting	2000 plugs/acre	Mulch/fertilize	Never used before
<i>Tsuga mertensiana</i>	Bare root	Hand planting	1000/acre	None?	
<i>Abies magnifica</i> <i>var. shastensis</i>	Bare root	Hand Planting	2000/acre	None?	Good ground cover

Channel Treatments:

None

Roads and Trail Treatments:

Affected within the fire area

Diamond Drive 6000-700 Road:

Sign repair, culvert cleanout, ditch cleanout, and hazard tree felling

Forest Road 6000-830 road:

Gate replacement. Re-establish rolling dip, armored and reform rolling dip and hazard tree felling

Affected by the fire area

Forest Road 2610:
Design and replacement of two culverts in the paved roadway.

Structures:

Gate Replacement for the 6000-830 road

Critical Heritage Resources: The appropriate protection measures or treatments, cutting of dead and dying trees, that have the potential to impact the prehistoric cairn site by falling will prevent unacceptable degradation and be applied rapidly. Treatments will be applied in consultation with the Tribes and SHPO.

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.)

Roads and Trail Treatments:

ROADS

A Road closure will be on National Forest System Roads within areas of high risk to public safety. One road closure will be done with a gate on the 6000-830 rd.

Road drainage emergency treatments on essential roads; address high diversion potential crossings with a drivable drain dips (18 dips) on the 600 830 road, inlet and outlet fill-slope armoring, ditch and culvert basin cleanout (3.1 miles); destabilized fill-slope pull-back and rebuild (9); hazard tree removal for emergency rehabilitation work and road patrols (14 miles); and emergency storm patrol of selected road segments that do not have treatment sites.

Two-person Storm Patrol teams will drive roads 2-4 times per month this winter, until snow fall prohibits travel. Three teams will perform flood emergency road maintenance during 3 storm events. These actions are targeted at the emergency road situation made necessary by wildfire effects during the first winter, and are above the ordinary road maintenance requirements on the 3.1 miles of roads located within fireline boundaries.

This request includes funding for engineering design and administration of road drainage treatments, especially those requiring contract specifications (Eng Design & Admin). Other implementation costs are built into line item treatment costs.

TRAILS

Trail treatments are the same as the proposed treatments on the 6000-700 road.

NOXIOUS WEED MONITORING (monitoring plan attached)

Areas with high risk of noxious weed invasion would be surveyed for 3 years. This includes all roads (7 miles), safety zones, drop points, pump chances, staging areas, and containment lines within the fire perimeter.

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

			NFS Lands				Other Lands			All	
		Unit Cost	# of Units	WFSU SULT \$	Other \$		# of units	Fed \$	# of Units	Non Fed \$	Total \$
Line Items	Units										
A. Land Treatments											
Cultural Hazard Trees	Trees	\$150	4	\$600			\$0		\$0	\$600	
Road Hazard Trees (3 Miles)	Trees	\$150	179	\$26,850			\$0		\$0	\$26,850	
Erosion plantings	Acres	\$1,500	10	\$15,000			\$0		\$0	\$15,000	
Subtotal Land Treatments				\$42,450			\$0		\$0	\$42,450	
B. Channel Treatments											
Subtotal Channel Treat.				\$0			\$0		\$0	\$0	
C. Road and Trails											
Road 6000-700	Miles	\$439	2	\$780			\$0		\$0	\$780	
Road 6000-830	Dips	\$150	19	\$2,850			\$0		\$0	\$2,850	
Road 2610	Miles	\$13,000	2	\$26,000			\$0		\$0	\$26,000	
Lump Sum mobilization	Proj	\$5,000	1	\$5,000			\$0		\$0	\$5,000	
Lump Sum Storm Patrol	Crew	\$2,000	1	\$2,000			\$0		\$0	\$2,000	
Subtotal Road & Trails				\$36,630			\$0		\$0	\$36,630	
D. Structures											
Gate for 6000-830 rd	Gate	\$2,500	1	\$2,500			\$0		\$0	\$2,500	
Subtotal Structures				\$2,500			\$0		\$0	\$2,500	
E. BAER Evaluation											
Evaluation Team	Day	\$1,480	5	\$7,400			\$0		\$0	\$7,400	
Subtotal Evaluation				\$7,400			\$0		\$0	\$7,400	
F. Monitoring											
Noxious Weed Survey	Miles	\$50	7	\$350			\$0		\$0	\$350	
Heritage Site Eval	Site	\$250	2	\$500			\$0		\$0	\$500	
Subtotal Monitoring				\$850			\$0		\$0	\$850	
G. Overhead		\$89,830	40%	\$35,932						\$35,932	
Totals				\$125,762			\$0		\$0	\$125,762	

PART VII - APPROVALS

1. /S/ James A. Caplan 9/19/13
Forest Supervisor (signature) Date
2. _____
Regional Forester (signature) Date