USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: September 25, 2002

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[**X**] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[**X**] 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: Tiller Complex

B. Fire Number: OR-UPF-069

C. State: Oregon

D. County: Douglas

E. Region: 06

F. Forest: Umpqua

G. District: Tiller

H. Date Fire Started: July 12, 2002

I. Date Fire Contained: September 9, 2002

J. Suppression Cost: $ 57.8 million

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 165 (50% complete) Dozer 25 miles, Handline 140 miles
2. Fireline seeded (miles): unknown
3. Other (identify): Road ditchline cleanout, waterbarring and snag falling fireline roads

L. Watershed Numbers: Upper South Umpqua 1710030201, Jackson Creek 1710030202
Middle South Umpqua 1710030203, Upper Cow Creek 1710030206

M. Total Acres Burned: 68,850
NFS Acres(68,850) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: hemlock, Douglas-fir, white fir, mountain hemlock, Shasta red fir, Pacific silver fir

O. Dominant Soils: Loams to Silty Loams

P. Geologic Types: Little Butte volcanic Group

Q. Miles of Stream Channels by Order or Class:

Class I – 43 Class II – 18 Class III – 109 Class IV – 219

R. Transportation System

Trails: 23 miles Roads: 332 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 57,343 (82% low) 8,529 (12% moderate) 3,915 (6% high)

B. Water-Repellent Soil (acres): 117

C. Soil Erosion Hazard Rating (acres):
16,884 (low) 48,394 (moderate) 3,790 (high)

D. Erosion Potential: 4 tons/acre

E. Sediment Potential: 235 tons / 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): 24

E. Design Storm Magnitude, (inches): 5.5

F. Design Flow, (cubic feet / second/ square mile): 140

G. Estimated Reduction in Infiltration, (percent): 3%

H. Adjusted Design Flow, (cfs per square mile): 144

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Tiller Complex burned 68,850 acres of the Umpqua National Forest, a larger area than the toal acres burned on the Umpqua National Forest since records have been kept. It was started by lightning on July 12, 2002. The fire complex was contained on September 9, 2002 but is not controlled now. The fires began as multiple starts across several watersheds, eventually joining into major burned areas on both sides of the South Umpqua River. The Tiller fires are in the headwaters of the river, approximately 50 miles southeast of Roseburg and 50 miles north of Medford Oregon. Burned areas include Late Successional Reserves in Boulder, Quartz and Dumont Creeks and portions of the Rogue Umpqua Divide Wilderness near Fish and Buckeye Lakes. Areas of Forest Plan Roadless Area allocations also burned. All of the Tiller Complex is in

Douglas County. Firelines border portions of private land in Ash Valley, Andrieff Meadows, and the Emerson Ranch.

PUBLIC HEALTH AND SAFETY – Domestic and irrigation water downstream at theTiller Ranger Station and individual water systems may be affected. The public and federal employees are at risk while driving Forest roads, especially 2826, 2719, 2741, 27, 2814, and 2781. Private homes in Ash Valley rely on roads through the fire as alternate exits. Public safety is now threatened by falling trees and rolling wood and rock. Snags and trees are burned and ready to fall from wind, rain and snow. Burned wood and rock debris is rolling downhill onto roads from high and moderate burned areas, where the forest floor is now bare. During the winter, road failures create driving hazards and isolate the public and employees working in the woods.

TRANSPORTATION INFRASTRUCTURE – The Umpqua National Forest has many miles of expensive roads in the fire area. The high and moderate burned areas have already delivered soil, rock and burned woody debris to drainage ditches, culvert inlets and road surfaces. Even ordinary winter runoff will exceed the capacity of ditches and culverts that become blocked by wildfire-caused debris. Water that is diverted from stream channels can cause massive landslides and debris flows. The cost of repairing crossing-fills and driving surfaces would be high. Downstream water quality losses cannot be replaced.

NOXIOUS WEEDS – Infestations of several species of noxious weeds are scattered along road systems and disturbed areas within the fire perimeter. Recovery of timber and native plant communities are threatened with displacement by weeds in burned and newly disturbed areas. Fire suppression activities are likely to have spread noxious weed seed.

CRITICAL HERITAGE RESOURCES **-** Twenty significant archaeological sites are located within areas identified as moderate to intense burn. Sites in low risk areas will not be investigated or treated. The threatened archaeological sites, 15-02-185, 35DO140, 35DO144, 35DO601, 15-02-237, 15-02-236, 35DO207, 35DO208, 15-02-235, 15-02-250, 15-02-251, 15-02-242, 15-02-312, 15-02-310, 35DO619, 35DO209, 35DO208, 35DO339, 35DO340, and 35DO598, have been identified as eligible or potentially eligible for the National Register of Historic Places. The sites are identified as being at risk due to soil and water movement and other degradation. Evaluation of emergency conditions that threaten these known heritage resources will document the immediate threat to each site. Treatment will be completed during investigation or shortly thereafter. Consultation with the State Historic Preservation Officer and the affected Tribes has been ongoing and will be continue during treatment.

B. Emergency Treatment Objectives:

PUBLIC HEALTH AND SAFETY – Provide safe access for the public on essential routes to and from homes, recreation areas, and contractually required locations. Provide safe access to Forest Service employees to prevent damage and maintain roads while implementing BAER treatments and during storm patrols.

NOXIOUS WEEDS - The objective is to slow the spread of noxious weeds, prevent new noxious weeds from becoming established and treat new infestations while control is easiest and most economical. Treatment is targeted at areas burned by wildfire, where bare ground conditions favor establishment of noxious weeds.

TRANSPORTATION INFRASTRUCTURE – Reduce the loss of road crossings and fills from winter runoff, by preventing drainage system failure with culvert cleanout, ditch cleanout, overflow structures and storm patrols. Protect investment in Forest road system. The cost to prevent the loss of crossing fills, driving surfaces, and downstream water quality is much less than the cost of repairing roads.

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 **n/a** % Roads **70** % Other ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	80
Channel	n/a	n/a	n/a
Roads	70	80	90
Other			

E. Cost of No-Action (Including Loss): $ 2.2 million

F. Cost of Selected Alternative (Including Loss): $ 1.1 million

G. Skills Represented on Burned-Area Survey Team:

[**X**] Hydrology [**X**] Soils [**X**] Geology [ ] Range [ ]
[ ] Forestry [ ] Wildlife [ ] Fire Mgmt. [**X**] Engineering [ ]
[ ] Contracting [ ] Ecology [**X**] Botany [**X**] Archaeology [ ]
[ ] Fisheries [ ] Research [ ] Landscape Arch [ ] 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:

Noxious Weed Treatments: Burned areas (53 acres) adjacent to existing noxious weed sites would be seeded or planted to grass plugs this fall to restrict movement of weeds. Around existing infestations of selected noxious weeds that have a high potential for spread from the roadside and are likely to impede recovery of native and desired plant communities, reseeding and/or planting is proposed. See attached Noxious Weed Treatment, Prevention, & Monitoring Plan.

Grass seeding Prescriptions:

For sunny and partly sunny areas (0-40 % canopy closure) mix and apply the following:

SPECIES	COMMON NAME	LB PER ACRE
Elymus glaucus	blue wild-rye	10

plus one more species chosen from below, based on which is most appropriate for the elevation, aspect, and habitat:

Festuca idahoensis	Idaho fescue	2.5
Koeleria cristata		2
Poa scabrella		3
Stipa lemmonii		5
Danthonia californica		5
Lotus crassifolius	big deer vetch	5

For partly shady and shady areas (40-100 % canopy closure) mix and apply the following:

SPECIES	COMMON NAME	LB PER ACRE
Elymus glaucus	blue wild-rye	10
Festuca californica	California fescue	2
Lotus crassifolius	big deer vetch	5

Noxious weed seeding will also provide surface erosion control once the seed is established.

Critical Heritage Resources: Heritage site, identified at risk, are located within areas of moderate to intense burn. Sites in low risk areas or identified as low risk after further investigation found to be low risk will not be further evaluated. Evaluation of emergency conditions that threaten known significant heritage resources will document the immediate threat to the site, including the potential for damage from storm runoff, erosion, and debris from a burned area. Burn severity, vulnerability, and risk will be considered when determining the extent and level of risk to known significant heritage resources. The emergency evaluation will proceed rapidly and may include photography, revision of existing site record forms and maps, and establishing monitoring reference points. Appropriate protection measures or treatments will be designed to prevent unacceptable degradation and be applied rapidly. Investigations and treatments will be applied in consultation with the Tribes and SHPO.

Channel Treatments: none

Roads and Trail Treatments: Road treatments are (1) closures on roads to protect public until snagging is complete and roads are safe, (2) snag falling and clearing on 37 miles of road in High and Moderate Severity burned area (11% of roads in fire) for the safety of the public and employees implementing BAER treatments, (3) ditch and culvert protection (clean inlets and ditches of wildfire debris, protect crossings with grade sags and T-risers), and (4) winter storm patrols in lieu of treatment for unforeseen plugging of road drainage with wildfire debris. Main access roads through the fire and roads that must have winter maintenance must be safe and open all winter. There are no trail treatments proposed.

The roads planned for active treatment are not able to be closed and are primary access for administative and public use. The BAER implementation team will install temporary closures on 10 roads, complete hazard tree removal on 37 miles of road (estimated at 20 trees/mile), install grade sags/T-risers or pull back unstable fills at approximately 34 sites, and clean ditches and culvert inlets on 146 miles of road. Two-person Storm Patrol teams will drive roads 2-4 times per month this winter, and three teams will perform flood emergency road maintenance during 3 storm events. These measures are targeted at the emergency road measures made necessary by wildfire effects during the first winter, and are above the ordinary road maintenance requirements on the 332 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.

Structures: 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.)

Noxious Weed Monitoring: - Areas with high risk of noxious weed invasion would be surveyed for 3 years. This includes roads (323 miles), safety zones, drop points, pump chances, staging areas, and containment lines.

Noxious Weed Treatment Monitoring - Effectiveness monitoring would be done in areas planted to native species to restrict spread of noxious weeds. See attached Noxious Weed Treatment, Prevention, & Monitoring Plan.

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

			NFS Lands				Other Lands			All
		Unit	# of	WFSU	Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT $	$	units	$	Units	$	$
A. Land Treatments										
native seed (hand)	acre	400	50	$20,000	$0		$0		$0	$20,000
native grass plugs	acre	940	3	$2,820	$0		$0		$0	$2,820
native seed collection	acre	50	53	$2,650	$0		$0		$0	$2,650
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$25,470	$0		$0		$0	$25,470
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Road Drainage & Temp Clos	miles	1624	146	$237,104	$0		$0		$0	$237,104
Eng Design & Admin	team day	2087	40	$83,480	$0		$0		$0	$83,480
Snags Along Roads	miles	2904	37	$107,448	$0		$0		$0	$107,448
Emerg Road Patrol	team day	1254	58	$72,732	$0		$0		$0	$72,732
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$500,764	$0		$0		$0	$500,764
D. Structures										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$0	$0		$0		$0	$0
E. BAER										
Evaluation Team	day	502	64	$32,128	$0		$0		$0	$32,128
Heritage Site Eval	site	1000	20	$20,000	$0		$0		$0	$20,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$52,128	$0		$0		$0	$52,128
F. Monitoring										
nox. weed survey	miles	24	323	$7,752	$0		$0		$0	$7,752
native seed monitor	acres	33	53	$1,749	$0		$0		$0	$1,749
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$9,501	$0		$0		$0	$9,501
G. Totals				**$587,863**	**$0**		**$0**		**$0**	**$587,863**

PART VII - APPROVALS

1. /S/ James A. Caplan — September 25, 2002
   Forest Supervisor (signature) — Date

2. _____ _____
   Regional Forester (signature) — Date