

Date of Report: October 24, 2005

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: Black Canyon Face

B. Fire Number: P1B25D (R1-ID-CWF-0000314)

C. State: Idaho

D. County: Clearwater

E. Region: Northern (1)

F. Forest: Clearwater NF

G. District: North Fork (03)

H. Date Fire Started: 8/1/2005

I. Date Fire Contained: 10/17/2005

J. Suppression Cost: \$2,600,000

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 2
2. Fireline seeded (miles): 2
3. Other (identify): NA

L. Watershed Number: 170603070104

M. Total Acres Burned:

NFS Acres(**1950**) Other Federal (**0**) State (**0**) Private (**0**)

N. Vegetation Types: Mixed coniferous forest vegetation including western redcedar, grand fir, Douglas-fir, western larch, lodgepole pine, etc.

O. Dominant Soils: Shallow, rocky, loams to sandy loams with inclusion of finer textured Mazama volcanic ash on gentler slopes, draws, and benches. Rock outcrops are common across the burn area.

P. Geologic Types: Border Zone micaceous schists/gneisses and Idaho Batholith granitics

Q. Miles of Stream Channels by Order or Class¹:

Order 1: 4.5 miles

Order 2: 1.9 miles

R. Transportation System

Trails: 0.5 miles Roads: 0.5 miles

¹ Estimated from blue-line streams shown on USGS map of area.

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Unburned or very low:	<u>1176 acres (60%)</u>
Low:	<u>492 acres (25%)</u>
Moderate:	<u>171 acres (9%)</u>
High:	<u>112 acres (6%)</u>

B. Water-Repellent Soil (percent): 198 acres (10.2%)

C. Soil Erosion Hazard Rating¹ (percent):

Low:	<u>195 acres (10%)</u>
Moderate:	<u>488 acres (25%)</u>
High:	<u>1267 acres (65%)</u>

D. Erosion Potential: 43.6 tons/acre

E. Sediment Potential: 27,000 cubic yards / square mile²

¹ Soil erosion hazard was estimated from the landtypes present within the burn perimeter. The landtypes have high to very high mass wasting potentials as well as sediment delivery efficiencies. Parent material erosion potentials are high to very high except in the limited areas with an intact Mazama volcanic ash layer.

² Results are from Disturbed WEPP. Modeled high severity fire in the uplands and riparian; 20-45% slope; 20-45% ground cover; 0-30% rock; Fenn modified climate. This is a worse case analysis. Most of the fire will have no increase in erosion or sediment.

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):

Unburned to very low severity areas:	0-3 years
Low severity	1-5 years
Moderate severity	1-15 years
High severity	3-20 years

B. Design Chance of Success, (percent): 80%

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

D. Design Storm Duration, (hours): ¼ hours

E. Design Storm Magnitude, (inches): 0.53 inches

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

G. Estimated Reduction in Infiltration, (percent): 25%

H. Adjusted Design Flow, (cfs per square mile): 110 cfs¹

¹ For design storm analysis, we used a 15 minute, 25 year storm that occurred in Sleeping Child Creek in 2001. This storm produced a 110 cfs runoff in a 1.8 mi² burned watershed (Site 14), which was greater than a 500 year runoff event. This watershed was selected for the design storm because the runoff was water only (not debris) and the watershed was small (Less than 2 Mi²), where impacts are most likely. It is possible, that the Black Canyon Fire could receive a similar storm with similar watershed response where burn intensities are high, however there are no facilities that could be threatened. Storm runoff should be adjusted downward in watersheds where burn intensity is less than high. Road drainage in watersheds less than 2 Mi² should be designed to handle these flows. In watersheds 5 to 20 mi², the design storm should be approximately 23 cfs (Parrett and Others, Fire Hydrology, 7/2003).

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Threat to Federal Property and aquatic ecosystem integrity:

The fire burned in a variable mosaic pattern on steep breakland slopes above the North Fork Clearwater River. Numerous falling trees reached the river, but a review team including a hydrologist, fisheries biologist, engineer, and others concluded the trees do not pose an immediate hazard to a downstream bridge near the Kelly Work Center or other structures.

Concern was also expressed regarding the possibility of a log jam forming on the river and potentially damaging FS Road 250. The BAER team hydrologist and fisheries biologist felt the expected streamflows should be able to adequately transport the woody materials downstream without causing serious problems outside the existing channel. They will monitor the stream in 2006 as part of their normal program of work.

Spotted knapweed is a common invasive plant species along FS Road 250 as well as other roads and trails in and near the fire perimeter. Roads and trails used during the suppression effort contain spotted knapweed and there is a high probability that knapweed seeds may be introduced within the burn perimeter resulting in invasion into a previously weed-free location. Suppression rehabilitation included seeding firelines with a mix of native grass species. The Resource Advisor indicated that roads and trails used during the suppression effort with known weed locations will be treated with herbicides in spring 2006 to limit weed invasion.

Spotted knapweed is an aggressive invasive weed species known to produce alleopathic compounds harmful to other plants. Due to the nature of the steep terrain limiting herbicide treatment options, the ecologist felt that introduction of approved bio-control agents would be the best option to reduce knapweed invasion into the burned area.

B. Emergency Treatment Objectives:

The emergency treatment objectives are to prevent impairment of ecosystem function from the invasion of spotted knapweed into the burned area which had been weed-free prior to the wildfire.

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

The proposed treatment involves follow-up monitoring of the effectiveness of suppression rehab weed treatments, as well as release of bio-control insects in spring 2006 to prevent weed invasion into the burn area. Consequently, the treatments are not tied directly to watershed impacting sedimentation/erosion type storms

that many BAER treatments must be in place prior to their occurrence. However, we believe there's an 80% probability that the bio-control insect releases and the suppression rehab weed treatment will be effective during the first year, increasing to 100% by year 5 when the bio-control insects will have expanded well beyond their release points.

Land 80 % Channel % Roads % Other %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Weed Treatments	80%	90%	100%
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss): The usual cost/benefit analysis was not conducted for the proposed treatments since it is very difficult to place a monetary value on the invasion of a burned area and the associated loss of ecosystem composition, structure, and function caused by a noxious weed, spotted knapweed. The potential cost would be the invasion of hundreds of acres of knapweed displacing the native plant communities.

F. Cost of Selected Alternative (Including Loss): The monetary cost of the produced treatments is minimal IF action is taken immediately next spring to release the bio-control insects and conduct follow-up monitoring on the suppression weed treatments. If weed invasion is observed, further, immediate treatments (rapid detection, early response techniques) must be implemented.

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

Team Leaders: Jim Mital and Dick Jones

Email: jmital@fs.fed.us, rmjones@fs.fed.us

Phone: Dick Jones (208-476-8274), Jim Mital (208-476-8348)

FAX: 208-476-8329

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:

Five releases of bio-control insects (likely *Larinus minutus*) will be conducted within the burn perimeter.

Proposed release sites are:

- 1) Off Road 250 where the fire crossed to the west side of the river
- 2) Helispot #1 northwest of Moose Mountain
- 3) Helispot #2 above Comet Creek
- 4) At the end of Road 729, which is where helispot #3 was located
- 5) Helispot #4 above Comet Creek

Channel Treatments: None

Roads and Trail Treatments: None

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.)

Spotted Knapweed Monitoring (\$1500)-Previous spotted knapweed locations along Roads 250 and 729 will be monitored in spring/summer 2006 where they intersect with the burn perimeter. Suppression rehab weed treatments will be monitored for effectiveness and firelines and trails will be monitored for encroachment of knapweed into areas of moderate to high burn severity. Helispot location will be monitored for knapweed establishment into burned areas. If such monitoring identifies the invasion of knapweed (or other weeds) into previously weed-free areas, appropriate treatment measures will be identified and an interim 2500-8 report will be submitted for weed treatment funding.

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									
Bio-control releases	Ea	300	5	\$1,500	\$0		\$0	\$0	\$1,500
				\$0	\$0		\$0	\$0	\$0
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Land Treatments</i>				\$1,500	\$0		\$0	\$0	\$1,500
B. Channel Treatments									
				\$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
<i>Subtotal Channel Treat.</i>				\$0	\$0		\$0	\$0	\$0
C. Road and Trails									
				\$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
<i>Subtotal Road & Trails</i>				\$0	\$0		\$0	\$0	\$0
D. Structures									
				\$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
<i>Subtotal Structures</i>				\$0	\$0		\$0	\$0	\$0
E. BAER Evaluation									
Salaries & Travel	Ea	4000	1	\$4,000	\$0		\$0	\$0	\$4,000
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Evaluation</i>				\$4,000	\$0		\$0	\$0	\$4,000
F. Monitoring									
Weed Monitoring	Ea	1500	1	\$1,500	\$0		\$0	\$0	\$1,500
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Monitoring</i>				\$1,500	\$0		\$0	\$0	\$1,500
G. Totals				\$7,000	\$0		\$0	\$0	\$7,000

PART VII - APPROVALS

1. _____
Forest Supervisor (signature)

Date

2. _____
Regional Forester (signature)

Date