



United States
Department of
Agriculture

Forest
Service

Nez Perce National Forest

Route 2, Box 475
Grangeville, ID 83530
208 983-1950

File Code: 2520-3

Date: September 6, 2002

Route To:

Subject: Burned Area Report - Kelly Creek Fire

To: Regional Forester

Enclosed is an amended Kelly Creek Fire Burned Area Report Funding request for estimated WFSU-SULT funds. This requests funds to treat noxious weeds, clear the inlet around one culvert, expand and armor one ditch line, open and armor one culvert, and provide increased storm patrols during 2002-2003.

The primary change from initial request is the decision not to replace a culvert on County Road 1614, but to increase provision for storm patrols and culvert cleaning. The total request is reduced to \$29,430. A general agreement is in place with Idaho County to do work with federal funds. An effort will be made to get a commitment for matching funds or in-kind contribution from the County.

Please contact Pat Green, Forest Ecologist, at 208-983-1950 if you have any questions or concerns regarding this matter. She will gladly assist you.

/s/ Bruce E. Bernhardt
BRUCE E. BERNHARDT
Forest Supervisor

cc: Bruce D Sims, Jack M Carlson, Michael J Cook, Pat Green



Date of Report: Aug 31, 2002

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 DESCRIPTIONA. Fire Name: Kelly CreekB. Fire Number: ID-NPF-085C. State: IdahoD. County: IdahoE. Region: Northern (01)F. Forest: Nez PerceG. District: Salmon RiverH. Date Fire Started: August 18, 2002I. Date Fire Controlled: Estimated Sept 3, 2002J. Suppression Cost: \$1,377,000 estimated current

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 2.75 miles dozer line and 3.8 hand line
2. Fireline seeded (miles): 2.5 miles dozer line and 3.8 miles hand line to be seeded and obliterated
3. Other (identify): 3.5 acres of camp area and drop points to be rehabilitated

L. Watershed Number: 17060209-03-05, -09, -10, and -99M. Total Acres Burned: 3330

NFS Acres (3220) Other Federal () State () Private (110)

N. Vegetation Types: Annual grasses and weeds, native grasses, ponderosa pine, Douglas-fir

O. Dominant Soils: Ultic haploxerolls, with mixed volcanic as surface layers

P. Geologic Types: schist and quartzite

Q. Miles of Stream Channels by Order or Class: 8.1-1st order, 2.4- 2nd, .3- 3rd, 1.5- 4th

R. Transportation System

Trails: 3.8 miles Roads: 2.0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 2592 (74%) low 650 (20%) moderate 89 (3%) high (At least 3% was unburned within the fire perimeter)

B. Water-Repellent Soil (acres): 100 acres with moderate or high water repellency.

C. Soil Erosion Hazard Rating (acres):
28 (1%) low 1481 (44%) moderate 1822 (55%) high

D. Erosion Potential: .02-.13 tons/acre (range depends on watershed)

E. Sediment Potential: .006-.034 tons / acre delivered and routed to the mouth (range depends on watershed)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 40

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

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

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.3

F. Design Flow, (cubic feet / second/ square mile): 13.6

G. Estimated Reduction in Infiltration, (percent): 0-10

H. Adjusted Design Flow, (cfs per square mile): 13.6

Flood analysis was completed for Kelly Creek for culvert sizing.

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

1. Threats to long-term soil productivity and ecosystem integrity:

The burned area includes extensive infestations of Idaho noxious weeds including rush skeleton weed, spotted knapweed, and sulfur cinquefoil. These species result in decreased soil stability, higher erosion risk, degraded wildlife habitat, and loss of native species and community integrity. An estimated 75 percent of the burned area is habitat highly susceptible to invasion by one or more of these species. The existing infestations in the burned area are located on or adjacent to highly susceptible habitat. The burned areas provide seedbeds, and the trails, roads, firelines and fire camps provide vectors for spread. This request may be revised upward based on better information.

2. Threats to water quality, TES aquatic species, and heritage resources:

The burned area is in very steep canyons with high potential for debris torrents under both natural and burned conditions. Debris torrents have been a source of instream structural elements in past fires. Listed fish species occur in the Salmon River. Kelly Creek is not known to be fish bearing, and the culvert allows fish passage, but with some difficulty. Areas of high and moderate severity within the Kelly Creek watershed will likely increase the risk for debris torrents. The culvert at the mouth of Kelly Creek has been assessed to be probably adequate in size to pass flood flows, but could be plugged by debris. This request includes provision to remove debris from near the mouth of the culvert at Kelly Creek, increase frequency of storm patrols through 2002 and 2003, and clean and armor a ditch and culvert near the Partridge Creek Bridge to improve its performance. If the work is not implemented, the risk increases of damage that could introduce unnatural kinds and amounts of debris into the Salmon River, including asphalt and road subgrade materials. An agreement is in place through which Idaho County would implement such work if funds are supplied from federal sources. The agreement also allows the Forest Service to implement the work. There are heritage sites on the terraces at the mouth of Kelly Creek, but they are thought to be above the level of potential flood impacts. An initial reconnaissance survey of Trail 119 east of Manning Bridge did not indicate need for drainage restoration to control erosion, but a more detailed survey will be done and an amended request filed as needed.

B. Emergency Treatment Objectives:

1. Control spread of noxious weeds within the fire perimeter, and along roads, trails, and campsites that border the fire perimeter.
2. Improve likelihood of passage of flood flows and protect county road investment, by removing large debris for 20 feet upstream of the culvert at Kelly Creek, increased storm patrols to ensure culverts are functional, open culvert and deepen ditch line on road 1614 near Partridge Creek bridge.

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

Land ___ % Channel ___ % Roads 80 % Other 70 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Channel			
Roads	80	85	90
Other			
(weeds)	70	80	80

- E. Cost of No-Action (Including Loss): \$60,000 to control expanded weed populations and \$50,000 to restore highway 1614 and the culvert. Additional losses of community revenue would accrue from loss of access, since this is the only access route for fishermen and rafters up the Salmon River.
- F. Cost of Selected Alternative (Including Loss): \$56,000 includes cost of treatments, exclusive of assessment and monitoring costs.
- G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" 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 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"/> Recreation	<input type="checkbox"/> Landscape Arch	<input type="checkbox"/> GIS

Team Leader: Pat Green

Email: pgreen@fs.fed.us

Phone: 208 983-1950

FAX: 208 983-4099

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: Spot herbicide treatments of 60 acres along leading edge of current infestations, new infestations, Salmon River Road, camp sites, and lower 221 road in fall of 2002 and spring of 2003, a total of 80 acres would be treated/retreated over the two years. Weed management strategy for the Salmon River Weed Management Area is currently in place. Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is pending from National Marine Fisheries Service. An approved EA for weed control is in place.

Channel Treatments: None at this time

Roads and Trail Treatments: Remove large logs and impeding brush within 15 to 20 feet above Kelly Creek culvert to reduce likelihood of plugging with debris, using district crew. At the culvert near the Partridge Creek bridge, open and armor the culvert inlet and outlet, using a backhoe and forest engine crew. Also, deepen and armor the ditchline which conveys the unnamed draw to the culvert to reduce likelihood of storm flow running over the road. Material to armor the ditch and culvert inlet is available onsite. Increase frequency of County and Forest Service storm patrols to ensure culverts remain operational.

Structures: None at this time

H. Monitoring Narrative:

10 monitoring transects with replicated microplots will be established immediately after the fire and in the two years following the fire, in burned areas as well as controls. This follows the protocols established for the Three Bears and Pinchot fires, so that replication occurs across fires and across burn severities and pre-fire conditions. Monitoring will determine frequency and density of weeds by species present before and following the fire, and relate this to pre burn weed populations, site characteristics, and burn severity. Analysis by Chi-square statistics. This information can be used to predict risk and rates of spread in similar settings.

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										
weeds	acres	\$261	80	\$20,880			\$0		\$0	\$20,880
				\$0			\$0			
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$20,880			\$0		\$0	\$20,880
B. Channel Treatments										
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				\$0			\$0		\$0	\$0
C. Road and Trails										
Log removal	each	200.00	1	\$200			\$0		\$0	\$200
clean culvert/				\$0			\$0		\$0	\$0
improve ditch line	each	1000	1	\$1,000			\$0		\$0	\$1,000
Storm patrols	each	200	8	\$1,600			\$0		\$0	\$1,600
<i>Subtotal Road & Trails</i>				\$2,800			\$0		\$0	\$2,800
D. Structures										
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
<i>Subtotal Structures</i>				\$0			\$0		\$0	\$0
E. BAER Evaluation										
Salary	days	\$250	5	\$1,250			\$0		\$0	\$1,250
				\$0			\$0		\$0	\$0
G. Monitoring Cost	years	\$1,500	3	\$4,500			\$0		\$0	\$4,500
weeds										
H. Totals				\$29,430			\$0		\$0	\$29,430

PART VII - APPROVALS

1. /s/ Bruce E. Bernhardt
Forest Supervisor (signature)

09/06/2002
Date

2. _____
Regional Forester (signature)

Date