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

Edited J Bruggink Sept. 23, 2003 Date of Report: Sept 5, 2003

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: North Fork Lick Complex B. Fire Number: 45823 (North Fork Lick Complex)
45827 (Sapp Complex-FCRNR Fires)

C. State: Idaho D. County: Valley and Idaho

E. Region: 04 F. Forest: Payette

G. District: Krassel

	H. Date Fire Started:	I. Date Fire Contained:
North Fork Lick Complex		
	30 July 2003 (North Fork Lick)	Unknown (until snow)
	07 Aug (Marble)	Unknown (until snow)
Sapp Complex and FCRNR Fires		
	09 Aug (Sapp)	Unknown (until snow)
	20 Aug (Richarson)	Unknown (until snow)
	05 Aug (Red Top)	Unknown (until snow)
	26 July (Bear)	Unknown (until snow)

J. Suppression Cost:
$6,200,000 to date for North Fork Lick Complex (includes North Fork Lick Fire and Marble Fire)
$2,000,000 to date for Sapp Complex and FCRNR Fires (included Sapp, Richardson, Red Top, and Bear Fires).

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles):

North Fork Lick Fire: 0.8 miles hand line
Marble Fire: 0.4 miles hand line

2. Fireline seeded:

Marble Fire: Harrowed and seeded 5 acres at Big Creek Spike (Marble)

3. Other (identify):

L. Watershed Number: 1706020812 (North Fork Lick Fire), 1706020615 and 1706020614 (Marble Fire), 1706020706 (Sapp and Richardsone Fires) , 1706020713 (Red Top Fire). and 1706020614 (Bear Fire)

M. Total Acres Burned:

North Fork Lick Complex	
North Fork Lick Fire	2534 acres
Marble Fire	6080 acres
Sapp Complex and FCRNR Fires	
Sapp Fire (south)	4428 acres
Richardson Fire	1787 acres
Red Top	891 acres
Bear Fire	457 acres

Total NFS acres: 16,177 acres; Other Federal (0); State (0); Private (0)

N. Vegetation Types: Grand fir, subalpine fir, Douglas fir, lodgepole pine, ponderosa pine

O. Dominant Soils: Dystrochrepts, Vitrands, Andic Cryochrepts, Haploxerolls, Xerochrepts

P. Geologic Types: Decomposed Batholith granitics

Q. Miles of Stream Channels by Order or Class: not calculated

R. Transportation System - Trails:

North Fork Lick Complex	
North Fork Lick Fire	0.0 miles
Marble Fire	4.0 miles
Sapp Complex and FCRNR Fires	
Sapp Fire (south)	0.0 miles
Richardson Fire	3.1 miles
Red Top	0.8 miles
Bear Fire	1.4 miles

PART III - WATERSHED CONDITION

A. Burn Severity (**percent**):

North Fork Lick Complex

North Fork Lick Fire	High (20%), Moderate (35%), Low (45%)
Marble Fire	High (25%), Moderate (40%), Low (35%)

Sapp Complex and FCRNR Fires

Sapp Fire (south)	High (20%), Moderate (30%), Low (50%)
Richardson Fire	High (50%), Moderate (25%), Low (25%)
Red Top	High (5%), Moderate (20%), Low (75%)
Bear Fire	High (15%), Moderate (35%), Low (50%)

B. Water-Repellent Soil (**percent**): Unknown

C. Soil Erosion Hazard Rating (**percent**):

North Fork Lick Complex

North Fork Lick Fire	High (30%), Moderate (50%), Low (20%)
Marble Fire	High (35%), Moderate (45%), Low (20%)

Sapp Complex and FCRNR Fires

Sapp Fire (south)	High (60%), Moderate (10%), Low (30%)
Richardson Fire	High (75%), Moderate (20%), Low (5%)
Red Top	High (5%), Moderate (30%), Low (65%)
Bear Fire	High (40%), Moderate (40%), Low (20%)

D. Erosion Potential: 37.5 tons/mi^2 (year 1) and 8.3 tons/mi^2 (year 2)

E. Sediment Potential: 600 tons (1^{st} year)

PART IV - HYDROLOGIC DESIGN FACTORS for Slims fire

A. Estimated Vegetative Recovery Period, (years): 5 years for understory and 30 for overstory

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

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

D. Design Storm Duration, (hours): 6 hours

E. Design Storm Magnitude, (inches): 1.4 inches

F. Design Flow, (cubic feet / second/ square mile): 27.5 cfsm

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

H. Adjusted Design Flow, (cfs per square mile): 64.4 cfsm

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Threat to life and private property:

No private residences or facilities threatened. Only 10 percent of the Magpie Creek drainage burned (mostly low and moderate severity) above the Magpie Creek Campsite. Some potential exists for high water flows and debris torrents in stream channels that may impact trail traffic and other dispersed campsites along Main Salmon River. Hazard trees could pose a risk to human and pack stock safety along all trails.

Threat to federal property:

There is a potential loss of trail tread or drainage structures due to increased runoff or sloughing. This risk is highest on the Main Big Creek Trail (4.0miles) on the Marble Fire, the Campbell Ferry Trail (3.1 miles) on the Richardson Fire, and the West Monumental Creek Trail (1.4 miles) on the Bear Lake fire due to high burn severity and highly erodible soils. Risk is lowest on the Red Top (0.8) due to moderate gradient and low to moderate inherent erosion hazard. There are no trails within the fire perimeter on the Sapp Fire and North Fork Lick Fire.

Threat of water quality deterioration:

North Fork Lick Fire burned primarily in North Fork Lick Creek and Split Creek drainages, tributaries to the Secesh River. Marble Fire burned primarily in Little Marble Creek and Big Creek a tributary to the Middle Fork Salmon River. The Bear Fire burned within the Monumental Creek drainage. Catherine Lake, a usually pristine lake, was dark brown from recent mudflow from the Bear Fire. Monumental Creek, Big Creek, and the Secesh River are all designated as critical spawning and rearing habitat for steelhead, spring Chinook salmon, and Bull Trout. The terrain is dominated by very steep unstable slopes and numerous high gradient channels susceptible to debris torrents.

Sapp and Richardson Fire burned in first and second order tributaries directly above and along the Main Salmon River, and wholly within the Frank Church Wilderness Area. Tributaries are steep, transport-dominated streams with depositional features at their mouths. Debris torrents are not uncommon in unburned settings and are likely to increase with burning. Overland flow and sediment transport were evident from a one-inch rainfall.

Red Top Fire burned on top of the Chamberlain Basin plateau. Little risk to water quality exists, except along the trail.

Threats to ecosystem integrity (Noxious Weeds):

The expansion of invasive non-native plants into fire-disturbed areas from nearby source areas poses a significant threat to the integrity of roadless plant communities and ecosystem processes.

Most of the burned area is highly susceptible to weed invasion from rush skeleton weed, spotted knapweed, and Canada thistle. These weeds are well established near trails and homesteads. Invasion or expansion of noxious weeds is likely to alter soil stability, nutrient cycling, wildlife habitat, and fire regimes, with consequences for long-term ecological diversity and stability. The tables listed below are the known inventoried and mapped weed populations within or along travel ways leading directly to each fire.

North Fork Lick Fire:

SITE ID	HUC5NAME	LOCATION	Acres	SPECIES
434126211a	Lower Secesh	ZENA CREEK	1.6	spotted knapweed
434126211b	Lower Secesh	ZENA CREEK	<1	spotted knapweed
434126210a	Lower Secesh	ZENA CREEK	<1	rush skeletonweed
434126210b	Lower Secesh	SESECH TRL HD	<1	spotted knapweed
434126208	Lower Secesh	HORSE CAMP	<1	spotted knapweed

Marble Fire:

SITE ID	HUC5NAME	LOCATION	Acres	SPECIES
434126030	Beaver-Gold	RAMEY CRK	<1	spotted knapweed
434126031	Beaver-Gold	WHISKEY CREEK	<1	Canada thistle
434126032	Beaver-Gold	COPPER CAMP	<1	Canada thistle
434126033a	Upper Big Creek	BC TRL 01	<1	spotted knapweed
434126033b	Upper Big Creek	BC TRL 02	<1	rush skeletonweed
434126035b	Upper Big Creek	Big Creek	<1	spotted knapweed
434126035a	Upper Big Creek	Big Creek	<1	spotted knapweed
434126034a	Upper Big Creek	BIG CRK AIRSTRIP	<1	Canada thistle
434126034b	Upper Big Creek	BIG CRK AIRSTRIP	<1	Canada thistle

Sapp/Richardson Fires:

SITE ID	HUC5NAME	LOCATION	Acres	SPECIES
434126040	Fivemile-Rhett	CAMPBELLS FERRY	8.6	spotted knapweed
434126041	Fivemile-Rhett	CAMPBELLS FERRY	1	spotted knapweed
434126042	Fivemile-Rhett	CAMPBELLS FERRY	<1	spotted knapweed
434126043	Fivemile-Rhett	CAMPBELLS RANCH	<1	spotted knapweed
434126044	Fivemile-Rhett	CAMPBELLS RANCH	<1	spotted knapweed
434126045	Fivemile-Rhett	CAMPBELLS FERRY	3	spotted knapweed
434126046	Fivemile-Rhett	CAMPBELLS FERRY	3	rush skeletonweed
434126047	Fivemile-Rhett	CAMPBELLS FERRY	3	spotted knapweed
434126048	Fivemile-Rhett	CAMPBELLS FERRY	1	spotted knapweed
434126049	Fivemile-Rhett	CAMPBELLS FERRY	1	spotted knapweed

Red Top Fire:

SITE ID	HUC5NAME	LOCATION	Acres	SPECIES
434126306a	Chamberlain Cr	L. Red Top Meadows 2	1.8	Canada thistle
434126306b	Chamberlain Cr	U..Red Top Meadows 2	<1	Canada thistle
434126307a	Chamberlain Cr	L. Red Top Meadows	<1	Canada thistle
434126307b	Chamberlain Cr	U. Red Top Meadows 3	<1	Canada thistle
434126308	Chamberlain Cr	Chamberlain Cr	<1	Canada thistle
434126303	Chamberlain Cr	Hoztel	<1	spotted knapweed
434126303	Chamberlain Cr	Flossie Lake Tr 1	<1	Canada thistle
434126304	Chamberlain Cr	Flossie Lake Tr 2	<1	Canada thistle

Bear Fire:

SITE ID	HUC5NAME	LOCATION	Acres	SPECIES
434126036	Monumental Cr	MURDER CABIN	<1	Canada thistle
434126038	Monumental Cr	SAGE FLTS	<1	Canada thistle
434126039	Monumental Cr	Monumental Ranch	1	Canada thistle

Threats to heritage resources:

Three fires contained one historic cabin each. The Catherine Lake Historic Cabin is located within the Bear Fire. The Hand Historic Cabin is located within the Red Top Fire. And the Beaver Creek Historic Cabin is located with the Marble Fire. Historic sites are at risk following a wildfire from erosion and sedimentation as indicated by Catherine Lake, which was dark brown from a recent mudflow. The Beaver Creek Cabin has been reported as receiving substantial damage from the fire.

Threats to threatened and endangered plants and animals:

All fires: No emergency exists. Aquatic habitats are in good condition and fish populations are well distributed. No emergency exists for threatened or endangered wildlife species. The severity and burn mosaic of the fire may result in short term displacement of some species, and benefit others that require early seral or snag habitat. The fire severity and extent are well within natural ranges, and large areas of similar unburned habitat occur nearby.

B. Emergency Treatment Objectives:

Trails

Provide clear and safe passage to emergency treatment sites (noxious weeds) for both crews and stock support. Remove imminent safety hazards. Reestablish proper drainage and water management structures to prevent further loss to the Wilderness and roadless area transportation infrastructure. Stabilize trail tread to prevent erosional loss and to minimize water quality impacts.

Ecosystem integrity (Noxious Weeds):

Maintain ecosystem integrity by treating selected sites where burned susceptible habitats have been invaded by rush skeleton weed, spotted knapweed, and Canada thistle as well as the nearby infestations serving as source areas to the invasions. By reducing the amount of weed seed in the area, and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants.

Monitor known noxious weed sites and transportation corridors leading to the fire areas. Monitor trails, fire lines and susceptible burned areas for one year to prevent the expansion of rush skeleton weed, spotted knapweed, and Canada thistle.

Heritage Resources

Inventory and monitor to assess if a threat to the Catherine Lake Cabin, Hand Cabin, and Beaver Creek Cabin historic sites exist. Determine if initial assumptions regarding the stability and vegetative recovery within the site area is correct.

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

Land **80**%; Channel ___ %; Roads **80**%; Other **80** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Weeds	80	90	95
Channel			
Trails	80	90	95
Other			

E. Cost of No-Action (Including Loss): $198,000.00 includes replacement of trail segments, and broad scale weed treatments.

F. Cost of Selected Alternative (Including Loss): $61,770.00

G. Skills Represented on Burned-Area Survey Team:

[**x**] Hydrology	[**x**] Soils	[] Geology	[**x**] Wilderness, Trails
[ ] Forestry	[] Wildlife	[] Fire Mgmt.	[] Engineering
[ ] Contracting	[**x**] Ecology	[**x**] Botany	[**x**]Archaeology
[ ] Fisheries	[ ] Research	[ ] Landscape Arch	[**x**] GIS

Team Leader: David Kennell
Email: Dave Kennell@fs.fed.us Phone: 208 634-0793 FAX: 208 634-0477

Team members: Patty Stieger and Clem Pope-trails, weeds; Dave Kennell-hydrology, soils; Alma Hanson-botany; Sandy Kollenberg-GIS support; Larry Kingsbury-archaeology consultation

H. Treatment Narrative:

Land Treatments:

Weed Treatments

Objective

The purpose of this treatment is to maintain ecosystem integrity by treating selected sites where burned susceptible habitats have been invaded by rush skeleton weed, spotted knapweed, and Canada thistle as well as the nearby infestations serving as source areas to the invasions. By reducing the amount of weed seed in the area, and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants.

Methods

North Fork Lick: Treat five sites on approximately 3.6 acres of existing inventoried and mapped source weed populations that are adjacent to the burned fire area near the Zena Creek and Sesech trailhead. Treatment will be conducted in the spring of 2004 to prevent the expansion of rush skeletonweed and spotted knapweed. Treatment will involve hand pulling and grubbing since there is no current NEPA document or BA for chemical herbicide treatment within the South Fork Salmon River (SFSR). The Forest is currently trying to award a contract EIS to address chemical treament within the SFSR.

Marble: Treat nine sites on approximately 4.5 acres of existing inventoried and mapped source weed populations that are adjacent or within the burned fire area. Treatment will be conducted in the spring of 2004 to prevent the expansion of rush skeletonweed, spotted knapweed, and Canada thistle. Effects of herbicide treatments at the proposed rates and locations are addressed in USDA Weed EIS (1999) for the Frank Church and USDA Weed EA (1988). Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is approved by NOAA Fisheries for upland sites.

Sapp/Richardson: Treat ten sites on approximately 22.1 acres of existing inventoried and mapped source weed populations that are adjacent or within the burned fire area. Treatment will be conducted in the spring of 2004 to prevent the expansion of rush skeletonweed, spotted knapweed, and Canada thistle. Effects of herbicide treatments at the proposed rates and locations are addressed in USDA Weed EIS (1999) for the Frank Church and USDA Weed EA (1988). Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is approved by NOAA Fisheries for upland sites.

Red Top: Treat eight sites on approximately 5.6 acres of existing inventoried and mapped source weed populations that are adjacent or within the burned fire area. Treatment will be conducted in the spring of 2004 to prevent the expansion Canada thistle. Effects of herbicide treatments at the proposed rates and locations are addressed in USDA Weed EIS (1999) for the Frank Church and USDA Weed EA (1988). Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is approved by NOAA Fisheries for upland sites.

Bear: Treat 3 sites on approximately 2.0 acres of existing inventoried and mapped source weed populations that are adjacent or within the burned fire area. Treatment will be conducted in the spring of 2004 to prevent the expansion of Canada thistle. Effects of herbicide treatments at the proposed rates and locations are addressed in USDA Weed EIS (1999) for the Frank Church and USDA Weed EA (1988). Concurrence with a BA for noxious weed control has been received from Fish and Wildlife Service and is approved by NOAA Fisheries for upland sites.

Note: Sites inventoried as less than one acre were calculated as one half acre for cost calculations since the majority of cost for treatment to roadless and Wilderness sites involve logistical and transportation cost (jet boat, pack horses, and overnight per diem)

Benefit: $100,000. The cost benefit of controlling invasive plants immediately after the fire can be evaluated by estimating control cost if invasions were left untreated for two years. With the high likelihood that infestations would spread into the adjacent burned areas at the lower elevations in the moderate to high intensity burns.

Trail Treatments:

Objectives

Provide clear and safe passage to emergency treatment sites (noxious weeds) for both crews and stock support. Remove imminent safety hazards. Reestablish proper drainage and water management structures to prevent further loss to the Wilderness and roadless area transportation infrastructure. Stabilize trail tread to prevent erosional loss and to minimize water quality impacts.

Method

a. Provide clear and safe passage for crews and stock along trails to the BAER treatment sites. Clear trails impacted by fire of trees and rocks, repair drainage, and reconstruct tread where needed to access emergency treatment sites.
b. Reduce imminent hazards such as felling burnt snags; removing hazardous downfall and rocks, and filling holes, along trails that receive high administrative and public use.
c. Replace and install water diversions structures to accommodate runoff and reduce potential for trail washouts prior to the spring runoff.
d. Remove debris slides where potential exist to washout more trail.
e. Monitoring effectiveness of the treatments by site visits after each damage-producing storm events and during the first snowmelt runoff season.

Miles of Trail for each Fire:

North Fork Lick: 0 miles
Marble: 4.0 miles
Sapp: 0 miles
Richardson: 3.1 miles
Red Top: 0.8 miles
Bear: 1.4 miles

Benefits: Protection of the trail infrastructure of approximate average value of $10,000 per mile x 9.3 miles = $93,000. Minimize threats to human safety; prevent resource & facility degradation while providing for availability of reasonable passable trail access (where feasible) to serve as access for noxious weed treatment and administrative needs as well as public access.

I. **Monitoring Narrative:**

Noxious Weeds

Inventory susceptible lands within and adjacent to each of the six fires for noxious weeds. Inventory will be conducted during early spring of 2004. Inventories of areas adjacent to the fire and along corridors trail and road corridors that pass through infested sites to burned areas will help identify new treatment areas and contain infestations.

Monitor for noxious weed invasion and the effectiveness of treatments. Monitoring would be done periodically to assess BAER weed treatments and recovery of the burned sites. It would evaluate the success or failure of treatment, recommend adjustments to treatment or re-treatment, and report the findings to management. Monitoring will be done in late summer of 2004.

Heritage Resources

Monitoring: Cultural and heritage resources may be subject to sedimentation and erosion. A monitoring program is recommended to assess whether recommended treatments are effective and whether initial suggestions regarding the stability and vegetative recovery within significant site areas is correct. Monitoring will consist of having a qualified archaeologist visit the Catherine Lake Cabin, Hand Cabin, and Beaver Creek Cabin historic sites and complete a Payette Cultural Resource Monitoring Form. Costs is for transportation, field and office work.

Benefit: $15,000. The benefit to monitoring for protection of Heritage Resources would eliminate the cost of data recovery at the project sites.

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										
Weed treatments North Fork	acres	300	8.1	$2,430	$0		$0		$0	$2,430
Weed treatments Sapp	acres	300	29.7	$8,910						$8,910
(35 known sites)					$0					
Insert new items above this line!										
Subtotal Land Treatments				$11,340	$0		$0		$0	$11,340
B. Channel Treatments										
				$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										
Trail drainage work North Fork	miles	3800	4	$15,200						$15,200
Trail drainage work Sapp	miles	3800	5.3	$20,140						$20,140
Subtotal Road & Trails				$35,340	$0		$0		$0	$35,340
D. Structures										
				$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										
Survey Team Salary North Fork	days	500	2.5	$1,250	$0		$0		$0	$1,250
Flight North Fork	hour	285	1	$285	$0		$0		$0	$285
Survey Team Salary Sapp	days	500	2.5	$1,250						$1,250
Flight North Sapp	hour	285	1	$285						$285
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$3,070	$0		$0		$0	$3,070
F. Inventory & Monitoring										
Noxious Weeds North Fork	days	300	12	$3,600	$0		$0		$0	$3,600
Hertitage Resources North Fork	days	300	4	$1,200	$0		$0		$0	$1,200
Noxious Weeds Sapp	days	300	12	$3,600						$3,600
Hertitage Resources Sapp	days	300	2	$600						$600
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$9,000	$0		$0		$0	$9,000
G. Totals				**$58,750**	**$0**		**$0**		**$0**	**$58,750**

PART VII - APPROVALS

1. /s/ Cliff Steele for Mark J. Madrid — 9/18/2003
   Forest Supervisor (signature) — Date

2. /s/ William P. LeVere for — 9/26/03
   Regional Forester (signature) — Date