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

Edited j.bruggink 8/5/2003 Date of Report: July 28, 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: East Table

B. Fire Number: WY-BTF-014

C. State: WY

D. County: Lincoln

E. Region: 4

F. Forest: Bridger-Teton

G. Districts: Grey's River & Jackson

H. Date Fire Started: July 12, 2003

I. Date Fire Contained: July 22, 2003

J. Suppression Cost:$4,500,000 (est)

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles):12.1
2. Fireline seeded (miles):1.4
3. Other (identify): Bryan Flat ICP: harrow, seed, fertilize

L. Watershed Number: 170401030108 Snake River – Bailey Creek

M. Total Acres Burned: 3595
NFS Acres(3595) Other Federal (0) State (0) Private (0)

N. Vegetation Types: Lower elevation forested: lodgepole pine, Douglas fir; Upper elevation forested: subalpine fir and Engelmann Spruce; Lower south-facing slopes: mountain big sagebrush/mountain snowberry and aspen communities; Riparian and stream channels: tall forb, wet meadow communities.

O. Dominant Soils: loamy-skeletal, mixed Typic Cryochrepts; smectitic Argic & loamy-skeletal, mixed Pachic Cryoborolls; clayey-skeltal, mixed Argic Cryoborolls; loamy-skeletal, mixed Typic Cryoboralfs; loamy-skeletal, mixed Lithic Cryorthents

P. Geologic Types: Quaternary Landslide deposits – Includes mudflows and glacial debris; Aspen Shale and Bear River formations – shale, mudstone, sandstone, siltstone; Quaternary Alluvium – Valley and stream deposits of unconsolidated silt, sand, and gravel; Sandstones, shales, and limestones of the Wells, Amsden, Madison Limestone, and Nugget Sandstone formations

Q. Miles of Stream Channels by Order or Class: (From NHD 1:24,000)
Level 3: 6,806 meters Level 4: 17,080 meters Level 5: 1,826 meters

R. Transportation System

Trails: 6.4 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 720 (unburned) 2,148 (low) 364 (moderate) 363 (high)

B. Water-Repellent Soil (acres): 280 acres

C. Soil Erosion Hazard Rating (acres):
538 (low) 449 (moderate) 2,619 (high)

D. Erosion Potential: 6.20 tons/acre on average over 30 yr. with 67% probability of occurrence (Disturbed WEPP)

E. Sediment Potential: 3.64 tons/acre on average over 30 yr. with 67% probability of occurrence (Disturbed WEPP)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3-5

B. Design Chance of Success, (percent): N/A

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

D. Design Storm Duration, (hours): ___

E. Design Storm Magnitude, (inches):

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

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

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

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Threat to Human Life: Numerous hazard trees exist along major system trails. The trails are used extensively by grazing permittees to access livestock allotments, by two river-floating permittees to access their camps,by recreationists to camp and fish at Bailey Lake, by hunters to access camping and hunting areas, by hikers, and by Forest Service employees to administer these activities. These popular trails are accessible from multiple starting locations, both on land and on the Snake River, and cannot be effectively treated through administrative closure.

Threat to Water Quality/Fisheries: Runoff from burned areas that experienced moderate to high severity fire, and particularly those areas that drain onto trails, is expected to cause accelerated erosion and sedimentation in Bailey Creek, West Bailey Creek, and the Snake River. These channels all support Snake River Fine Spotted Cutthroat Trout, which is currently a Forest Service sensitive species and a U. S. Fish and Wildlife Service petitioned fish species. Lower Bailey Creek contains spawning redds which are critical to recruitment of young trout into the Snake River. The trails within the fire perimeter that occur within 100 feet of streams or have channel crossings are of greatest concern. The silt and clay nature of the surface soils and the proximity of water courses may adversely impact water quality and habitat for spawning Snake River Fine Spotted Cutthroat Trout, a Forest Service Sensitive species. Approximately 3 miles of trail are directly related to the watershed emergency.

Threat to Ecological Integrity: Several species of noxious weeds existed within the burn area prior to the fire. Species in order of abundance include houndstongue (Cynoglossum officinale), musk thistle (Carduus nutans), Canada thistle (*Circium arvense*), bull thistle (Circium vulgare), spotted knapweed (Centaurea maculosa), and sulfer cinguefoil (*Potentilla recta*). It is expected that these species will both expand in pre-existing areas and invade previously uninhabited sites within the burn, particularly near those areas where firefighting crew activities were concentrated, e.g. along trails, spike camps, heli-spots, and gear drop sites.

B. Emergency Treatment Objectives:

Treatments are being proposed to prevent adverse impacts to human life, water quality/fisheries and ecosystem integrity. Specifically treatments have been designed to prevent or minimize the following:

- injuries to forest users from falling snags in the Bailey Creek drainage and along the Snake River,
- sedimentation into spawning and migration habitat for Snake River Fine Spotted Cutthroat Trout, and
- new or expanded noxious weed infestations within the burned area.

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

Land **80** % Roads **80** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Roads	80	90	100

E. Cost of No-Action (Including Loss): $ 329,300
Costs of no-action are based on the following:
1) Possible injuries resulting from falling snags, assuming ineffective administrative closure (est $50,000)
2) The high probability (67%) that sediment will reach the channel, thus affecting at least some fish. Assuming complete habitat loss @ $100,000 per river mile, with approximately 4.5 miles of Bailey Creek and 2 miles of the Snake River, and assuming a 25% loss of fish and habitat. (est $162,500)
3) The costs to mitigate new and expanded populations of noxious weeds (est $25,000)
4) Repair or replacement of 2.76 miles of system trails @ $10,000 per mile (est $27,600)
5) Inherent loss of resources due to the fire is based on loss of soil productivity on the most severly burned areas @ $15,000, recreation/grazing permittee losses @ $30,000, and other recreational losses @ $10,000 (est $ 55,000).
6) Cost of BAER Assessment Team (est $9,200)

F. Cost of Selected Alternative (Including Loss): $ 89,548
Costs include inherent loss (see above) and BAER assessment and treatments ($34,548)

G. Skills Represented on Burned-Area Survey Team:
[**X**] Hydrology - Wes Smith [**X**] Soils – Eric Winthers [ ] Geology [**X**] Range – Benton Smith
[ ] Forestry [**X**] Wildlife – Fred Fouse [ ] Fire Mgmt. [ ] Engineering
[ ] Contracting [**X**] Ecology – Jim Ozenberger [ ] Botany [**X**] Archaeology – Jaime Shoen
[**X**] Fisheries – Dave Fogel [ ] Research [ ] Landscape Arch [ ] GIS

Team Leader: Sherry Hazelhurst

Email: shazelhurst@fs.fed.us Phone:801-625-5755 FAX: 801-625-5756

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:
The most effective prescription for disturbed areas with pre-existing noxious weeds is to treat them during the first through third growing seasons following disturbance, as was demonstrated in the nearby reconstruction project of the Snake River Canyon Highway. In areas with pre-existing seed banks of noxious weeds, a bloom of first year rosettes is expected during the following growing season. It is important to treat these blooms to prevent significant increases in noxious weeds. The following areas with pre-existing weeds will be treated with herbicide the first three years, using Forest funds:

1. Bryan Flat ICP
2. Road leading to the Bryan Flat ICP
3. Dog Heli-Base
4. West Table Heli-base
5. McCain Guard Station and Forest Service Road No. 10124
6. Access road through the Canyon Club/River Bend Ranch and National Forest leading to the Elbow Spike
7. Bailey Creek Trail

During herbicide application at these locations, adjacent areas will be monitored for new infestations.

Herbicide treatments for Canada thistle are not practical due to the low, long-term success with herbicides, and wide-spread distribution and occurrence of Canada thistle in wetlands. Biological control is considered a viable long term solution. The site at heli-spot H10 offers a suitable insectory to establish Canada thistle stem-boring weevil (*Ceutorhynchus litura)*. From this site, the agent would be expected to expand within the fire area. Estimated cost for the introduction of *Ceutorhynchus litura* would be $750 in FY 2004 which would include salary and logistical support. This would be a one time treatment.

Noxious Weed Treatments

	FY 2004	**FY 2005**	**FY 2006**
Monitoring	$1,000	$1,000	$1,000
Bio-control	$ 750		
Total	**$1,750**	**$1,000**	**$1,000**

Roads and Trail Treatments:

Adding trail drainage will prevent excessive sedimentation and streambank erosion, thereby protecting spawning habitat and riparian vegetation. Construction of additional waterbars is needed on some trail segments to avoid detrimental impact to the stream's aquatic habitat.

Burned, dead trees pose hazards to Forest Service employees and visitors who frequently use the trails for various purposes. The hazard trees must be removed in order for the trails to be used safely.

An inventory of waterbar needs and hazard trees along these trails indicates the specific needs on each trail as listed below.

Waterbar Needs

Trail Name	**Miles**	**Description of Needs**	**Cost Estimate**
Trail Creek	2.5	Install 30 waterbars	$ 4,800
Bailey Creek	4.5	Install 45 waterbars	$ 7,200
West Bailey Creek	1.0	Install 20 waterbars	$ 3,200
Totals			**$15,200**

Hazard Tree Removal Needs

Trail Name	**Miles**	**Description of Needs**	**Cost Estimate**
Trail Creek	2.5	Remove 100 hazard trees	$3,000
Bailey Creek	4.5	Remove 100 hazard trees	$3,000
West Bailey Creek	1.0	Remove 30 hazard trees	$ 900
Totals			**$6,900**

The sheep allotments affected by fire, including Bailey Creek – Bear Willow, will be closed to grazing for at least two years. Grazing permittees will still be able to access unburned allotments from the Grey's River trailhead.

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.)

BAER Treatment Effectiveness Monitoring:

1) Trail treatments: Were the installations of waterbars effective in reducing sediment delivery to nearby streams?
    a. Conduct field visit and observe trail condition and look for signs of erosion.
    b. Cost:
        i. Fieldwork $500 (year 1-3)
        ii. Analysis and report $500 (year1-3)

2) Non-treatment areas in moderate to high severity areas: Were the natural catchment areas in Lake Gulch effective in reducing sediment transport to the Snake River?
    a. Place erosion bridges on steep slopes above Lake Gulch and in catchment areas to measure amounts of erosion and deposition.
    b. Observe the condition of the catchment areas and slopes through retaking photo points established as part of the initial field assessment.
    c. Observe the condition of the channel from the confluence of the Snake River up to the lower Lake Gulch pond through re-taking photo points established as part of the initial field assessment.
    d. Cost:
        i. erosions bridge materials $300 (year 1),
        ii. fieldwork $500 (years 1-3),
        iii. analysis and report $500 (year 1-3)

3) Noxious Weed Treatments: Were initial treatments effective in suppressing the weeds? Were new sites resulting from fire and/or suppression activities discovered?
    a. Evaluate areas adjacent to known weed infestations for indications of spread.
    b. Evaluate trails, heli-spots, spike camps, and drop sites used during suppression for noxious weeds.
    c. Cost: field monitoring & reporting: $1,000 (year 1-3)

The first cumulative monitoring report will be prepared and submitted to the Regional BAER Coordinator by September 30, 2004, along with any requests for further treatment or monitoring found to be needed.

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										
Noxious Weeds	ac	75	43.3	$0			$0		$0	$0
				$0			$0			
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Land Treatments				$0			$0		$0	$0
B. Channel Treatments										
							$0		$0	$0
							$0		$0	$0
Subtotal Channel Treat.				$0			$0		$0	$0
C. Road and Trails										
Waterbars	ea	95	160	$15,200			$0		$0	$15,200
Hazard Tree Removal	ea	30	230	$6,900			$0		$0	$6,900
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Road & Trails				$22,100			$0		$0	$22,100
D. Structures										
							$0		$0	$0
							$0		$0	$0
				$0			$0		$0	$0
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
Assessment	team	1	9200	$9,200			$0		$0	$9,200
				$0			$0		$0	$0
F. Monitoring										
Trail Treatments	1 yr	1000	1	$1,000			$0		$0	$1,000
Untreated Sites	1 yr	1300	1	$1,300			$0		$0	$1,300
Noxious Weeds	1 yr	1000	1	$1,000			$0		$0	$1,000
Subtotal Monitoring				$3,300			$0		$0	$3,300
G. Totals				**$34,600**			**$0**		**$0**	**$31,300**

PART VII - APPROVALS

1. /s/Carole 'Kniffy' Hamilton — 07/28/2003
   Forest Supervisor (signature) — Date

2. /s/ William P. LeVere for — 08/05/2003
   Regional Forester (signature) — Date