

Date of Report: **3/12/2004****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: TogoB. Fire Number: WA-COF-003C. State: WAD. County: FerryE. Region: 06F. Forest: ColvilleG. District: Republic & Three RiversH. Date Fire Started: 08/06/2003I. Date Fire Controlled: Fire contained on 08/27/2003

Estimated date of control unknown at this time

J. Suppression Cost: \$8,400,000 (as of 09/01/2003)

## K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 45.09  
2. Fireline seeded (miles): 45.09  
3. Other (identify): Road blading, road re-obliteration (obliterated roads that were used as dozer lines), road fill stabilization (areas where logs and debris within the road fill were burned or removed by fire crews), fence repair.

L. Watershed Number: 1702000204 and 1702000205M. Total Acres Burned: 5,285 (as of 08/28/2003)

NFS Acres(100%) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: Shrub, Dry mixed forest, Sub-alpine forest mix, Lodgepole pine, Western larch (fuel model 10, 5, 8)O. Dominant Soils: Togo, Nevine, Growden, and Ozerine loams

P. Geologic Types: Moderately fractured marble/gneiss throughout the area

Q. Miles of Stream Channels by Order or Class:

Class II - 1.8 miles

Class III - 1.9 miles

Class IV-15.8 miles

R. Transportation System

Trails:0 miles

Roads:23.48 miles

### **PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 2991 (low) 135(moderate) 2159 (high)

B. Water-Repellent Soil (acres): None encountered

C. Soil Erosion Hazard Rating (acres):  
2900 (low) 1200 (moderate) 1200 (high)

D. Erosion Potential: 4.3 tons/acre on fire overall  
(10.1 tons per acre in higher intensity areas, 1.0 tons per acre in low intensity or unburned areas)

E. Sediment Potential: 3000 cubic yards / square mile

### **PART IV - HYDROLOGIC DESIGN FACTORS**

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

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

C. Equivalent Design Recurrence Interval, (years): 100

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.8

F. Design Flow, (cubic feet / second/ square mile): 12.6

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

H. Adjusted Design Flow, (cfs per square mile): 13.8

### **PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency:

Specific wildfire damages identified by the BAER Team include: increased potential for existing noxious weed populations to expand, affecting recovery of desirable vegetation and long-term site productivity; and increased potential for soil movement and erosion, impacting roads and private property downstream of the fire

perimeter. Several areas within the Togo Fire have a history of unstable slopes and mass-wasting events have occurred here in the past. The potential for this type of event and/or debris torrents to occur in the future is high. Portions of 2 grazing allotments (Lone Ranch and Little Boulder) and 2 Lynx Analysis Units have been impacted by the fire. Noxious weeds in the area include Orange and Yellow Hawkweeds, Musk Thistle, Hound's Tongue, St. John's Wort, Diffuse Knapweed, and Dalmation Toadflax.

**B. Emergency Treatment Objectives:**

- To prevent impairment of ecosystem structure and function and maintain site productivity, especially within habitat for threatened (Canada Lynx) and sensitive species (Redband Trout);
- To control water, sediment and debris movement in a manner that protects investments in existing roads and private property downstream of the fire area;
- To control or prevent the spread of noxious weeds in additional areas; and to provide for employee and public safety.

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

Land 90 % Channel 90% Roads 90 % Other    %

**D. Probability of Treatment Success:**

	Years after Treatment		
	1	3	5
Land	95%	99%	99%
Channel	95%	99%	99%
Roads	99%	99%	99%
Other			

Following treatments (in year 2), the sediment yield in the high intensity burn areas would be expected to fall to about 3 tons per acre, with a 64% chance of sediment delivery. In year 3, the sediment yield is expected to fall to 2 tons per acre with a chance of sediment delivery of about 40%.

**E. Cost of No-Action (Including Loss):\_ 1,129,000 (includes BAER Survey costs)**

**F. Cost of Selected Alternative (Including Loss):\_ \$341,915 (includes BAER Survey costs)**

**G. Skills Represented on Burned-Area Survey Team:**

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input checked="" type="checkbox"/> Geology	<input type="checkbox"/> Range	<input type="checkbox"/>
<input checked="" type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input type="checkbox"/> Botany	<input type="checkbox"/> Archaeology	<input type="checkbox"/>
<input checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> 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:

**1. Noxious Weed Prevention:** Two strategies are prescribed to address the spread of noxious weeds into burned areas. The first strategy involves direct treatment of existing noxious weeds populations with both herbicides and biological controls to control their re-establishment and spread. The second strategy is to prevent the movement of livestock (a primary vector of hound's tongue and other weeds) through construction of a temporary fence and cattle guard. Because most of the primary range within the Lone Ranch allotment is located outside of the burned area, fencing a small portion of the allotment was considered to be more practical (and politically easier to fully implement) than taking administrative action to close the allotment until the burned area recovered. Costs for these activities are outlined below:

#### Noxious Weed Treatment - Year 1:

Roadside Weed Spraying	92 acres X \$70 per acre =	\$6,440
4-Wheeler and Backpack Spraying	21 acres X \$100 per acre =	\$2,100
Biological Controls	500 acres X \$5 per acre =	<u>\$2,500</u>
Total for Year 1		\$11,040

#### Noxious Weed Treatment - Year 2:

Same biological control as in Year 1 plus 50% of the herbicide treatment = \$6,770

#### Noxious Weed Treatment - Year 3:

Same biological control as in Year 1 plus 50% of the herbicide treatment = \$6,770

Fence construction	2.5 miles X \$4500 per mile =	\$11,250
Cattle Guard purchase and installation	2 X \$2500 each =	\$ 5,000
Fence Maintenance (Years 2 and 3)	2.5 Miles X \$ 200 per mile =	\$ 500

Estimated cost to control and/or eliminate weed populations after 3-5 years, if allowed to expand (no treatment alternative) plus the value of lost grazing productivity is \$339,000.

*Project Status as of March, 2004 – First year noxious weed treatments were accomplished in the fall of 2003. Year 2 follow-up treatments are scheduled for the spring of 2004.*

**2. Erosion Barriers (Contour Log Felling and Biolog Placement):** Treatments to stabilize slopes and prevent downslope movement of water and/or debris are required to minimize the potential for mass wasting and stream channel damage. Several of the intensively burned areas within the Togo Fire were clearcut harvested in the 1980's and do not have available material for contour felling of existing trees. In these areas, the placement of biologs has been prescribed. Costs for these activities are outlined below:

Contour Log Felling	100 acres X \$450 per acre =	\$45,000
Biolog Placement	17 acres X \$1.350 per acre =	\$22,950

*Project Status as of March, 2004 – Crews were released at the end of October 2003 due to snow conditions in the project area. 85% of the bio-log placement was accomplished, and 60% of the log terrace construction was completed. The project area will be reviewed in the spring of 2004 as soon as conditions permit to determine if additional work is required.*

**3. Seeding:** Intensively burned headwalls within the North Fork Lone Ranch Creek are prescribed for aerial seeding with the Colville National Forest erosion control seed mix (seed mix detailed below) to 1) to control/minimize surface erosion, and 2) to enhance long-term site productivity through root establishment and biomass accumulation.

Seeding 52 Acres X \$65 per acre = \$3,380

**Colville National Forest Erosion Control Seed Mix**

Hard Fescue	4 lbs/acre
Sheep Fescue	2 lbs/acre
Streambank Wheatgrass	4 lbs/acre
Intermediate Wheatgrass	7 lbs/acre
Winter Wheat	10 lbs/acre

Estimated cost of lost site productivity without treatment is \$100,000. Estimated loss of site productivity is treatment succeeds as planned is \$40,000

*Project Status as of March, 2004 – 90% of the desired seeding was accomplished before snow conditions made further work impossible. The project area will be reviewed in the spring of 2004 as soon as conditions permit to determine if additional work is required.*

**4. Roadside Hazard Tree Removal:** Within the Togo Fire perimeter are 23 miles of system roads. Experience in past fires has shown us that many fire killed trees along these roads will come down over the next few months creating a road maintenance problem and a safety hazard for both Forest employees and the public. Hazard tree removal is prescribed to reduce the potential for damage or injury.

Hazard Tree Removal 23 Miles of road X \$750 per mile = \$17250

*Project Status as of March, 2004 – This work is 100% accomplished.*

Channel Treatments:

**1. Debris Dams:** During past timber harvests within two branches of North Fork Lone Ranch Creek, large woody debris was removed from the stream channel. These stream reaches now have a reduced sediment storage capacity. The BAER Team has prescribed in-channel debris dams (constructed of logs and/or biologs) to improve the available storage capacity and help slow down the downstream movement of expected sediment loads.

Debris Dam Construction 45 Debris Dams X \$700 each = \$31,500

*Project Status as of March, 2004 – This work is 100% accomplished.*

Roads and Trail Treatments:

**1. Culvert Replacement:** A total of six culverts (5 within the North Fork Lone Ranch Drainage) have been identified as being undersized with respect to the increased flows expected following the Togo Fire. Replacement of these culverts with larger culverts has been prescribed by the BAER Team to reduce the potential for culvert failure, which would cause damage to County and Forest Service roads and private property (including houses).

Culvert replacement 6 culverts X 17,000 each = \$102,000

Estimated cost to repair/replace roads and repair private development if failure occurs due to inadequate drainage is \$690,000

*Project Status as of March, 2004 – Agreements have been drafted and are currently being reviewed to allow Ferry County to do the work on 2 culverts this summer when fish spawning is completed.. Forest Service road crews are scheduled to do the remaining work this spring.*

Structures: No structure replacement is required

Other.

**1. Implementation coordinator:** Implementation of BAER treatments is expected to be accomplished through contracting or in-house crews. Estimated project costs do not include the necessary coordination and record keeping to insure work is completed in a timely manner and appropriate records are maintained. Training of in-house crews and orientation of contract crews will also be required. To accomplish these tasks, the BAER Team recommends funding for an Implementation Coordinator. The Republic Ranger district Soil and Water Technician has been identified as an ideal candidate for this task.

Implementation Coordinator	30 days X \$250 per day =	\$3,000
Vehicle for coordinator	1 month X \$550 per month =	\$ 550

*Project Status as of March, 2004 – This work is 100% accomplished.*

## **2. Contract Preparation and Administration**

Contract Preparation	6 days X \$250 per day =	\$1500
Contract Administration	5 days X \$250 per day =	\$1250

*Project Status as of March, 2004 – This work is 100% accomplished.*

## **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.)

**1. Establish photopoints and vegetative transects:** Establish 10 photopoints and 3 vegetative transects (see locations below) within the main fire area (including areas seeded within the N. Fork Lone Ranch Creek) to assess effectiveness of seeding and other erosion control treatments. Photopoint and transect locations will be documented with GPS or other methods. Transects will be 100 feet in length. Annually re-take photos and read transect (document vegetation/bare ground/litter at 3 foot increments). Assess and document annual changes. In conjunction with this monitoring (at no additional cost), the burned area's general vegetative recovery (including readiness to resume livestock grazing) will be assessed. Estimated annual cost = \$2,500. (3 people X 3 days, plus vehicle)

Vegetative transect locations: 2 within the seeded area (North Fork Lone Ranch Creek) and 1 in the heavily burned area of Independence Creek

Photo point locations: 6 within the North Fork Lone Ranch Creek, 2 within Manley Creek, and 2 within Independent Creek drainages.

*Project Status as of March, 2004 – Photopoints and transects have been established and initial (pre-treatment) photos and data collection have been taken.*

## **2. Determine effectiveness of noxious weed treatments and assess re-treatment needs, if any:**

At each herbicide spraying location and site of biological control release we will document each noxious weed population size and location on Washington Pesticide Application Record - AGR 4226 (Rev 4/99). Maintain records as required and compare each year's treatment needs to those of the previous year. Document differences in size of area and/or number of weeds treated. Annual monitoring cost included as part of treatment costs. Estimated annual cost = \$2,750. (2 people X 5 days, plus vehicle)

*Project Status as of March, 2004 – Year 1 work is completed.*

## **3. Assess stream channel condition and stability**

Visual assessment and documentation of stream channel condition, especially following significant rainfall events. Emphasis will be placed on monitoring conditions along the North Fork Lone Ranch Creek, Independent Creek, and Manley Creek. Estimated annual cost = \$2,750. (2 people X 5 days, plus vehicle)

*Project Status as of March, 2004 – Year 1 work is completed*

## **4. Determine effectiveness of road condition**

Annual visual inspection of road surface conditions by Forest Engineering group. Document results as part of road maintenance records. Estimated annual cost = \$550 (1 person X 2 days, plus vehicle).

*Project Status as of March, 2004 – Year 1 work is completed*

**DOCUMENTATION AND RECORD KEEPING** - Maintain copies of monitoring results in appropriate program files (range, noxious weeds, trails, etc.) as well as within BAER files.

## 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											
Roadside Spray YR 1	Acres	70	92	\$6,440				\$0		\$0	\$6,440
Roadside Spray YR 2	Acres	70	46	\$3,220				\$0			\$3,220
Roadside Spray YR 3	Acres	70	46	\$3,220				\$0		\$0	\$3,220
Other Spray YR1	Acres	100	21	\$2,100				\$0		\$0	\$2,100
Other Spray YR2	Acres	100	10.5	\$1,050							\$1,050
Other Spray YR3	Acres	100	10.5	\$1,050							\$1,050
Bio Control YR 1	Acres	5	500	\$2,500							\$2,500
Bio Control YR 2	Acres	5	500	\$2,500							\$2,500
Bio Control YR 3	Acres	5	500	\$2,500							\$2,500
Fence construction	Miles	4500	2.5	\$11,250							\$11,250
Cattleguards	Each	2500	2	\$5,000							\$5,000
Fence Mtnc Yr 2 & 3	Miles	200	2.5	\$500							\$500
Contour Log felling	Acres	100	450	\$45,000							\$45,000
Biolog Placement	Acres	17	1350	\$22,950							\$22,950
Aerial Seeding	Acres	52	65	\$3,380							\$3,380
Hazard Tree removal	Miles	23	750	\$17,250							\$17,250
Subtotal Land Treatments				\$129,910				\$0		\$0	\$129,910
B. Channel Treatments											
Debris Dams	Each	45	700	\$31,500				\$0		\$0	\$31,500
Subtotal Channel Treat.				\$31,500				\$0		\$0	\$31,500
C. Road and Trails											
Culvert Replacement	Each	6	17000	\$102,000				\$0		\$0	\$102,000
				\$0				\$0		\$0	\$0
Subtotal Road & Trails				\$102,000				\$0		\$0	\$102,000
D. Structures											
none				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
Subtotal Structures				\$0				\$0		\$0	\$0
E. BAER Evaluation				\$12,055							\$12,055
F. Implementation				\$0				\$0		\$0	\$0
Implementation Coordinator	Days	30	250	\$7,500				\$0		\$0	\$7,500
Coordinator Vehicle	Month	1	550	\$550				\$0		\$0	\$550
Contract Preparation	Days	6	250	\$1,500				\$0		\$0	\$1,500
Contract Administration	Days	5	250	\$1,250				\$0		\$0	\$1,250
Subtotal Implementation				\$6,300				\$0		\$0	\$6,300
G. Monitoring Cost				\$0				\$0		\$0	\$0
Year 1 monitoring				\$8,550							\$8,550
Year 2 monitoring				\$8,550							\$8,550
Year 3 monitoring				\$8,550							\$8,550
Subtotal Monitoring				\$25,650				\$0		\$0	\$25,650
H. Totals				311,915				\$0		\$0	311,915



## **PART VII - APPROVALS**

1. /s/ Rick Brazell  
Forest Supervisor (signature)

9-3-2003  
Date

2. Regional Forester (signature)

Date \_\_\_\_\_