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

Date of Report: 08/05/13

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: Fairfield Fire

B. Fire Number: WYSHF-000259 (Job Code: P2HR3U)

C. State: Wyoming

D. County: Fremont County

E. Region: 02

F. Forest: Shoshone National Forest

G. District: Washakie

H. Date Fire Started: July 22, 2013

I. Date Fire Contained: July 28, 2013

J. Suppression Cost: $3,000,000

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 2.5 (road)
2. Fireline seeded (miles): 0
3. Other (identify): safety zone

L. Watershed Number: 100800030207

M. Total Acres Burned: 1335
NFS Acres (931) Other Federal (251) State (131) Private (22)

N. Vegetation Types: Limber pine (*Pinus flexilis*), big sagebrush (*Artemesia tridentata*), lodgepole pine (*Pinus contorta*), and aspen (*Populus tremuloides*)

O. Dominant Soils: Soils timber are typic cryalfs, and soils in grasslands are are typic cryolls. The northwest bounds are well drained stony loams (granite parent material) on mountain slopes with the surface area covered with 50% cobbles, stones, and boulders, and slopes from 10-40%. The remaining area has well

drained loam or channery loam soils (sandstone, limestone or dolomite parent materials) on 10-60% slopes.

P. Geologic Types: Granitics, Sedimentary (limestones and sandstones), Qam (alluvium)

Q. Miles of Stream Channels by Order or Class: Intermittent (2.0 mi.), Ephemeral (2.3 mi.), Perennial (0.0 mi.)

R. Transportation System

Trails: 1.2 miles (Trail MT02) Roads: 1.5 miles (NFSR 351)

PART III - WATERSHED CONDITION

A. Burn Severity (acres): Forest Service: 855, BLM: 177, Private: 17, State: 61 (**low**); Forest Service: 46, BLM: 38, Private: 0, State: 27 (**moderate**); none (**high**); Forest Service: 17, BLM: 33, Private: 4, State: 40 (**unburned**)

B. Water-Repellent Soil (acres): 110

C. Soil Erosion Hazard Rating (acres): Slight: 52, Moderate: 479, Severe: 215, Very Severe: 106 (low); Slight: 4, Moderate: 33, Severe: 6, Very Severe: 1 (moderate); None (high); Slight: 3, Moderate: 13, Severe: 1, Very Severe 0 (unburned)

D. Erosion Potential: 8 tons/acre

E. Sediment Potential: 24 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

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

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1.15

F. Design Flow, (cubic feet / second/ square mile): 4.36

G. Estimated Reduction in Infiltration, (percent): 11

H. Adjusted Design Flow, (cfs per square mile): 15

PART V - SUMMARY OF ANALYSIS

The fire started on July 22nd as a result of lightening, and was contained on July 28th at 1335 acres (i.e., 6% of the watershed) but not before expanding onto adjacent Bureau of Land Management and State Park lands.
The fire occurred on predominantly south facing slopes within the Lower Middle Popo Agie River (HUC: 100800030207). Soils are typically described as well drained gravelly/sandy loams with granite parent materials in the northern part of the fire and limestone and sandstone in the central and southern bounds. In

many areas, the soil surface is covered with at least 50% embedded cobbles or boulders, and slopes range from 10 to 60%. The canyon slopes are intersected by intermittent and ephemeral channels.

A. Describe Watershed Emergency:

Threats to Life and Property
The watershed is part of the municipal water supply for the City of Lander. On Forest Service lands, the fire abuts a paved road with several drainage relief structures, vehicle and trail bridges, one culvert to pass the intermittent flows of Fairfield Creek, and a USFS Ranger Station. One road and trail are within the bounds of the fire: NFSR 351 and trail No. MT02.

Due to the topographic influences and location of unburned areas within the fire perimeter, the effects to all except the water supply are not expected to be significant.

Threats to Water Quality, Fisheries, and Aquatics
The adjacent Middle Popo Agie River is part of the municipal water supply for the town of Lander, and the fire is within 10 miles of the surface water intake. At the closest points, the fire perimeter is still between 300 and 700 feet from the River, and significant effects from the fire are not expected. However, there is potential for watershed degredation and associated long-term increases in erosion that are expected to result from cheatgrass invasion.

Threats to Long-term Soil Productivity and Ecosystem Integrity
The treatment of cheatgrass in Sinks Canyon has been a priority for both the Forest Service and the Popo Agie Weed Management Area group as well as that of other localized areas of known weed infestations (i.e., leafy spurge). Other concerns pertain to suppression related activities which may have brought in seed of numerous species, both invasive and noxious. Weed infestation presents a significant threat to ecosystem integrity and long-term soil productivity.

Results of cheatgrass infestation are expected to impact winter range. Without treatment, cheatgrass will out compete the native grasses resulting in the loss of critical winter forage.

B. Emergency Treatment Objectives:

Mitigate effects of the fire on the spread of noxious and invasive weeds, particularly cheatgrass and leafy spurge as well as the long-term watershed effects by promoting native species revegetation.

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

Land **90** % Channel **n/a** % Roads **n/a** % Other **n/a** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	35%	40%	60%
Channel	-	-	-
Roads	-	-	-
Other	-	-	-

E. Cost of No-Action (Including Loss): **$769,750**

F. Cost of Selected Alternative (Including Loss): **$240,000**

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	[x] Soils	[ ] Geology	[x] Range	[ ]
[ ] Forestry	[ ] Wildlife	[ ] Fire Mgmt.	[ ] Engineering	[ ]
[ ] Contracting	X] Ecology	[**X**] Botany	[ ] Archaeology	[ ]
[ ] Fisheries	[ ] Research	[ ] Landscape Arch	[x] 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: Fall or spring aerial seeding over 360 acres. The pure live seed per square foot (pls/sq.ft.) should be between 30 and 60.

Seed Mix:
Sagebrush sites - Open Areas
2 lbs/ac Idaho fescue (Winchester)
5 lbs/ac Bluebunch wheat grass (Secar)
11 lbs/ac Cereal Rye (VNS)
1/4 lbs/ac Mountain Big Sage
2 lbs/ac Bitterbrush

Noxious weed treatment the first growing season over 200 acres to treat potential populations of leafy spurge and musk thistle. Treatment will be ground applied using horse pack units in late June of 2014..

On adjacent BLM lands, the Lander BLM office is planning to aerial apply herbicide to control cheatgrass on 200 acres and then follow with a aerial seeding operation.

Channel Treatments: n/a

Roads and Trail Treatments: n/a

Structures: n/a

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.)

Implementation monitoring will occur as the above treatments (weed spot treatment and wetland puncheon replacement) are being conducted. Effectiveness monitoring will occur during the first year after implementation. If treatment effectivness issues arise, more detailed assessment will be conducted to determine if modifications or additional work are needed.

Weed detection will follow standard Shoshone National Forest monitoring protocols associated with that

type of work.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

*Aerial seeding cost is based on an end-product contract (includes seed, aviation, etc.)

			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										
Aerial Seeding	acres	150	360	$54,000	$0		$0		$0	$54,000
Noxious weed control	acres	100	200	$20,000	$0		$0		$0	$20,000
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$74,000	$0		$0		$0	$74,000
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$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										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$0	$0		$0		$0	$0
D. Structures										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$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										
Team	Persons	1	3500	$0	$3,500		$0		$0	$3,500
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$0	$3,500		$0		$0	$3,500
F. Monitoring										
Team				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				**$74,000**	**$3,500**		**$0**		**$0**	**$77,500**

PART VII - APPROVALS

1. */s/ Joseph G. Alexander* — 08/13/2013
   Forest Supervisor (signature) — Date

2. _____ — _____
   Regional Forester (signature) — Date