

Date of Report: 08/01/2013

**BURNED-AREA REPORT**  
(Reference FSH 2509.13)**PART I - TYPE OF REQUEST****A. Type of Report**

- ☒ 1. Funding request for estimated emergency stabilization funds
- ☐ 2. Accomplishment Report
- ☐ 3. No Treatment Recommendation

**B. Type of Action**

- ☒ 1. Initial Request (Best estimate of funds needed to complete eligible stabilization 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)



Figure 1 Smith Ranch Fire from the upper watershed looking across the BLM and pvt portions of the fire. There is a full sized pickup mid photo for scale.

**A. Fire Name:** Smith Ranch

**B. Fire Number:** NV-nns-101013

**C. State:** Nevada

**D. County:** Elko

**E. Region:** 04

**F. Forest:** Humboldt- Toiyabe

**G. District:** Ruby Mountain

**H. Fire Incident Job Code:** PNHRK3

**I. Date Fire Started:** 7/19/2013

**J. Date Fire Contained:** 07/24/2013 (1700)

**K. Suppression Cost:** \$ 650,000 est

**L. Fire Suppression Damages Repaired with Suppression Funds**

1. Fireline waterbarred (miles): 30

2. Fireline seeded (miles): 0

3. Other (identify): 0

**M. Watershed Number:** 1604010306 Lower Huntington Creek

**N. Total Acres Burned:**

[598] NFS Acres [534] Other Federal [0] State [1627] Private

This includes the unburned areas within the perimeter.

**O. Vegetation Types:** Sage, currant, bitterbrush, mountain mahogany, native grasses, aspen

**P. Dominant Soils:** Gravely loam, Silty loam, sandy loam, bed rock outcrop

**Q. Geologic Types:** Granite and Granitic allivium

**R. Miles of Stream Channels by Order or Class:** 10.15 Miles Intermittant; 2.1 miles perennial (whole fire area)

**S. Transportation System**

Trails: .25 miles on fs Roads: 4.3 miles on fs

**A. Burn Severity (acres): 2455.23 (low) 15.12 (moderate) 0 (high)**

**B. Water-Repellent Soil (acres): 70**

**C. Soil Erosion Hazard Rating (acres): 148 (low) 2470.35 (moderate) 0 (high)**

**D. Erosion Potential: .1 tons/acre**

**E. Sediment Potential: 64 cubic yards / square mile**

**PART IV - HYDROLOGIC DESIGN FACTORS**

<b>A. Estimated Vegetative Recovery Period, (years):</b>	<b>3</b>
<b>B. Design Chance of Success, (percent):</b>	<b>90</b>
<b>C. Equivalent Design Recurrence Interval, (years):</b>	<b>5</b>
<b>D. Design Storm Duration, (hours):</b>	<b>2.63</b>
<b>E. Design Storm Magnitude, (inches):</b>	<b>.62</b>
<b>F. Design Flow, (cubic feet / second/ square mile):</b>	<b>.35</b>
<b>G. Estimated Reduction in Infiltration, (percent):</b>	<b>10</b>
<b>H. Adjusted Design Flow, (cfs per square mile):</b>	<b>.35</b>

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

### **A. Describe Critical Values/Resources and Threats (narrative):**

The Smith Ranch fire burned through a portion of the forest that has not had weeds recorded on it in 20 years. During assessment several small weed populations were detected within the fire area (Canada thistle and Scotch Thistle). The populations were along the roads and dozer lines and the seed has the potential to have been spread throughout the fire area along the dozerlines. There were additional weed species detected in the ICP area where the fire fighters were staging and also on the neighboring land where fire equipment had been working. The additional weed species that were found adjacent to the fire area or on blm land that was burned as part of this fire include cheat grass, musk thistle, short white top and bull thistle. Several of these species have a habit of forming monocultures which if allowed to occur will lead to reduced ground cover, soil loss and loss of soil productivity. Therefore the Forest is proposing to seed with desired species along the edges of the dozer lines to prevent expansion from the dozer lines and to implement Noxious Weed Early Detection Rapid Response (EDRR).

While the fire area has a high potential for natural recovery the fence between it and the adjacent allotments was burned and is no longer functioning to keep the cattle off of the area. If the fire area is exposed to additional grazing pressure (it is home to the largest mule deer population in the state) the recover time will be longer. Additionally the potential for weeds to take hold will be elevated. Therefore the forest is proposing to repair the burned out segments of fence to protect the fire area and the intact riparian areas, both lentic and lotic, from additional grazing pressure and weed spread.

Using Exhibit 02 of interim directive 2520-2012-1 the BAER team identified the Values at Risk within and below the fire area for the US Forest Service portion of the fire.

<b>Color Scheme Legend</b>	
	<b>Risk Level</b>
	Very High
	High
	Intermediate (Where Treatments Are Recommended)

<b>Value At Risk</b>	<b>Value Life (L), Property, (P), Resources (R)</b>	<b>Probability of Damage or Loss</b>	<b>Magnitude of Consequences</b>	<b>Risk</b>	<b>Discussion</b>
Private Residences below the fire area (cottonwood area)	L	Unlikely	Moderate	Low	Near houses are on terraces. There are several miles of intact riparian area between the fire area and any homes that are visibly in the valley bottom.

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Private Residences below the fire area (cottonwood area)	P	Unlikely	Moderate	Low	Near houses are on terraces. There are several miles of intact riparian area between the fire area and any homes that are visibly in the valley bottom.
Road User Safety	L	Unlikely	Minor	Very low	Roads do not appear to be regularly traveled within the fire area based on road surface condition.
Road	P	Unlikely	Minor	Very Low	Road is showing signs of past flood events and appears to be fairly stable. The effects of the large run off event two years ago were still evident in the road.
Soil Productivity	R	Possible	Moderate	Intermediate	Soil generation in these climates takes hundreds of years to generate one inch of soil. There is minimal soil on the site to lose.
Native community with minimal invasives	R	Very likely	Moderate	Very high	This area has been classified weed free for more than 20yrs. During the BAER assessment small populations of Scotch thistle and Canada thistle were detected within the fire area. Fire apparatices did drive through and spread the seeds of several populations. The allotment fence on the down slope side of the fs land was bruned through in several locations allowing cattle to spread the weed seeds from the neighboring land unto NFS land. Additionally, the uncontrolled potential use by treaspass cattle would suppress native vegetation regeneration.
Water Quality	R	Possible	Minor	Low	Ash flows would be temporary and transient.
Lahontan Cutthroat Trout Habitat	R	Unlikely	Moderate	Low	Historic Habitat that is not listed as Priority for Restoration of populations (LCT Recovery Plan)

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Archeology	R	Unlikely	Minor	Very low	Preliminary assessments indicate that there are no sites at risk from the fire effects.

**B. Emergency Treatment Objectives (narrative):** The objective of the proposed treatments is to prevent the expansion of new weed species into the fire area, prevent the expansion of detected populations into new areas and to prevent added pressure of trespass grazing from reducing the potential of the fire area to recover as well as introducing new weed seeds.

**C. Probability of Completing Treatment Prior to Damaging Storm or Event:**

Land 90% Channel NA% Roads/Trails NA% Protection/Safety NA%

**D. Probability of Treatment Success**

	Years after Treatment		
	1	3	5
Land	90	90	90
Channel	NA	NA	NA
Roads/Trails	NA	NA	NA
Protection/Safety	NA	NA	NA

**E. Cost of No-Action (Including Loss):** weed treatments (3yrs)= \$25,000; trespass cow management (3 yrs) \$25,000 for a total of approximately \$50,000.

**F. Cost of Selected Alternative (Including Loss):** \$24,965

**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"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology
<input checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input checked="" type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS

'A' indicates adjunct members who were consulted to determine if there were values at risk warranting ordering a representative in the specialty.

**Team Leader:** Robin J Wignall

**Email:** [rjwignall@fs.fed.us](mailto:rjwignall@fs.fed.us) **Phone:** 775-778-6122 **FAX:** 775-778-6167

#### 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:

**Seeding adjacent to dozerlines:** There were approximately 4 miles of dozer line created within the fire area on NFS lands. Due to the fire dozers passing through weed infested areas before accessing the fire area and in some cases passing through the small weed areas within the fire area, the Forest is proposing to seed the areas directly adjacent to the dozerlines (70 ft on both sides) for a total of approximately 55 acres. The seeding would be accomplished by ATV mounted seed spreaders with drags attached.

The following seed mix and rate are requested:

<b>Species</b>	<b>lbs/acre</b>	<b>acres</b>	<b>total lbs needed</b>
flax ( <i>Linum lewisii</i> )	0.25	55	13.75
Snake River grass ( <i>Elymus wawawaiensis</i> ) v. Secar	4	55	220
Great basin wildrye ( <i>Leymus cinereus</i> ) v. Magnar	1	55	55
Thickspike wheatgrass ( <i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i> ) v. Schwendimar	3	55	165
Sandberg bluegrass ( <i>Poa secunda</i> ssp. <i>sandbergii</i> ) vns	0.5	55	27.5

Western yarrow ( <i>Achillea millefolium</i> var. <i>occidentalis</i> ) v. Yakima	0.08	55	4.4
	8.83	55	485.65

The above seed mix was chosen for the following reasons (taken in part from the USDA Plants Database):

***Elymus lanceolatus ssp. lanceolatus*** - well adapted to the stabilization of disturbed soils. They do not compete well with aggressive introduced grasses during the establishment period, but are very compatible with slower developing natives. It's drought tolerance combined with rhizomes, fibrous root systems, and good seedling vigor make this species ideal for reclamation in areas receiving 8 to 20 inches annual precipitation and very tolerant of fire.

***Pseudoroegneria spicata ssp. spicata*** - Bluebunch wheatgrass is very drought resistant, persistent and adapted to stabilization of disturbed soils. It is very compatible with slower developing native species, such as thickspike wheatgrass. Its drought tolerance, combined with extensive root systems and good seedling vigor, make this species ideal for reclamation in areas receiving 10 to 20 inches annual precipitation. 'Secar' competes well in areas as low as 8 inches annual rainfall. It is very fire tolerant and establishes fairly quickly for a native grass.

***Leymus cinereus*** - Basin wildrye is well adapted to stabilizing disturbed soils and has been used for disturbed area stabilization, mine reclamation and fire rehabilitation. It has a deep fibrous root system extending to depths of 200 cm (63 in) in undisturbed soils with a lateral root spread of up to 100 cm. The drought tolerance of basin wildrye, combined with fibrous root system and fair seedling vigor, make it desirable for reclamation in areas receiving 8 to 20 inches annual precipitation.

***Poa secunda* (syn. *P. sandbergii*)** - It is a pioneer species, one of the first grasses to colonize on disturbed sites. It is small in stature, early to establish, and quick to mature. It is also a "self-seeder" and often produces viable seeds within the first growing season.

***Achillea millefolium* var. *occidentalis*** - Western yarrow is highly variable and displays wide ecological amplitude to diurnal temperature, altitude, latitude, and climatic conditions. Western yarrow initiates growth in early spring and is an early successional species that readily establishes on disturbed sites, and thrives in droughty conditions. These characteristics often allow it to compete well against invasive species.

***Linum lewisii*** - All flax species are noted for their value in mixes for erosion control and beautification values. Due to the semi-evergreen nature of the species, flax can also be used as a fire suppressant species in green strip plantings. Most ecotypes do well on infertile, disturbed soils. They have excellent cold winter and drought tolerance. They are fire resistant since leaves and stems stay green with relatively high moisture content during most of the fire season. The semi-woody, fibrous root systems make this species ideal for erosion control.

The following cost breakdown is for the Smith Ranch Fire seeding:

Seed	\$4782.25		
Salaries 2 GS 11 and milage	\$2200		
		Total Request	\$6982.30



**Noxious Weed Early Detection Rapid Response (EDRR):** EDRR will focus on roads, cat lines, and staging areas, for existing noxious weed populations. EDRR will concentrate on determining if these sites are expanding and determine if extra treatments are necessary. A special emphasis will be placed on EDRR sage grouse habitat primarily leks, nesting and brooding habitat, and riparian habitats. In addition this fire burned through areas that supported cheatgrass, bulbous blue grass and medusa head populations. No effort will be made to EDRR existing areas but surveys will be conducted to determine if these sites are expanding. The data gathered from this EDRR will be used to determine if and what treatment will be needed. During the course of this EDRR survey the district will be notified of any areas that need additional actions and a summary report will be developed at the end of the summer.

The Smith Ranch Fire primarily occurred in HUC 1604010306. The BAER team detected populations of: Scotch Thistle *Onopordum acanthuim* and Canada Thistle *Cirsium arvense* within the fire area. They were made aware of populations of the following in or near ICP: Hounds Tongue - *Cynoglossum officinale*, Canada Thistle - *Cirsium arvense*, Musk Thistle - *Carduus nutans*, Hemlock - *Conium maculatum*, Hoary Cress/Short White top - *Cardaria draba*, Bull Thistle - *Cirsium vulgare*.

The following salary break down is for the Smith Ranch Fire.

Salaries two GS 4 \$135 per day x 10 days	\$2,700	
District Botanist \$350 per day x 5 days	\$1,750	
GIS specialist \$321 per day x 5 days	\$1,605	
Vehicle mileage \$ .60 per mile x 4400 miles	\$2,640	
	Total Request.	\$8,965.

**Fence Repair:** The forest proposes to repair the existing allotment boundary fence between the adjacent BLM and private property in order to fence the cattle out of the fire area. This would include replacing wooden posts and stays that were burned as well as splicing in new wire where the existing wire is too heavily damaged to be reused. **Estimated cost is \$12,000.**

Other alternatives were considered such as stringing a temporary fence along the existing fence line, this would require the eventual removal of the temporary fence once the funding to repair the original fence is secured, the estimated cost of this alternative is \$12,000. A range rider was considered, due to cattle running season long on some of the neighboring land the rider would need to be year round, estimated cost \$40,000. Replacing the fence completely, with new wire and posts, would cost approximately \$24,000.

**Channel Treatments:** none proposed

**Roads and Trail Treatments:** none proposed

**Protection/Safety Treatments:** none proposed

#### 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.)

none proposed

**Part VI – Emergency Stabilization Treatments and Source of Funds****Interim #**

			NFS Lands				Other Lands				All
		Unit	# of		Other		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER \$	\$		units	\$	Units	\$	\$
A. Land Treatments											
seeding along firelines	each	6982	1	\$6,982	\$0			\$0		\$0	\$6,982
EDRR	each	8,965	1	\$8,965	\$0			\$0		\$0	\$8,965
fence repair protect se	each	12000	1	\$12,000	\$0			\$0		\$0	\$12,000
COR w/vehicle	each	2000	0	\$0	\$0			\$0		\$0	\$0
implementation team le	each	2000	1	\$2,000	\$0			\$0		\$0	\$2,000
Insert new items above this line!				\$0	\$0			\$0		\$0	\$0
Subtotal Land Treatments				\$29,947	\$0			\$0		\$0	\$29,947
E. BAER Evaluation											
	each	2200	1	\$2,200				\$0		\$0	\$2,200
Insert new items above this line!				---	\$0			\$0		\$0	\$0
Subtotal Evaluation				---	\$0			\$0		\$0	\$2,200
F. Monitoring											
				\$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				\$29,947	\$0			\$0		\$0	\$32,147
Previously approved											
Total for this request				\$29,947							

**PART VII - APPROVALS**

1. /s/ William A Dunkelberger 8/1/2013  
Forest Supervisor (signature) Date
  
2. /s/ Marlene Finley (for) 8/13/13  
Regional Forester (signature) Date