

**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)

**PART II - BURNED-AREA DESCRIPTION**

- A. Fire Name: **Little Valley** G. District: **Carson**  
B. Fire Number: **NV-NWS-30641**  
C. State: **Nevada** H. Fire Incident Job Code:  
D. County: **Washoe** I. Date Fire Started: **10/14/2016**  
E. Region: **Intermountain - 04** J. Date Fire Contained:  
F. Forest: **17 - Humboldt-Toiyabe** K. Suppression Cost: **\$7,200,000**  
L. Fire Suppression Damages Repaired with Suppression Funds  
1. Fireline waterbarred (miles): **2 miles handline on NFS land.**  
2. Fireline seeded (miles): **0**  
3. Other (identify): **N/A**

## M. Watershed

Number:

HUC 6 Watershed Name	HUC 6 Watershed Number	Total HUC6 Acres	HUC6 Acres in Fire Perimeter	Acres of Unburned	Acres of Low Severity	Acres of Moderate Severity	Acres of High Severity
Washoe Lake	160501020302	28,655	904	343	74	445	42
Franktown Creek-Frontal Washoe Lake	160501020301	25,290	1,388	281	100	775	232
<b>TOTAL</b>			<b>2,292</b>	<b>624</b>	<b>174</b>	<b>1,220</b>	<b>274</b>

- N. Total Acres Burned: **2,291**  
NFS: (357) Other Federal (0) State (924) Private (1010)

- O. Vegetation Types: **Mixed brush (bitterbrush, sage, manzanita), conifer (Jeffrey pine, white fir), and aspen.**

- P. Dominant Soils: **Granitic**

- Q. Geologic Types: **Granite**

R. Miles of Stream by Class: Perennial: (4.13) Intermittent: (1.25)

S. Transportation System: Trails: 0 miles Roads: 2.2 miles

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

A. Burn Severity (acres): 174 (low) 1,220 (moderate) 274 (high) 624 (unburned)  
On NFS lands: 8 (low) 176 (moderate) 106 (high) 67 (unburned)

B. Water-Repellent Soil (NFS acres): 42

C. Soil Erosion Hazard Rating (NFS acres): 0 (low) 142 (moderate) 215 (high)

D. Erosion Potential: 0.56 to 2.38 tons/ acre (for moderate burn severity).

E. Sediment Potential: 112 to 476 cubic yards/ square mile.

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

A. Estimated Vegetative Recovery Period (years): 3-10

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

C. Equivalent Design Recurrence Interval (years): 10

D. Design Storm Duration (hours): 1

E. Design Storm Magnitude (inches): 0.75

F. Design Flow (cubic feet / second/ square mile): 1.3

G. Estimated Reduction in Infiltration (percent): 20

H. Adjusted Design Flow (cfs per square mile): 2.5

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

**Background:** The Little Valley fire started in early morning on Oct 14 and quickly burned to almost it's maximum extent of 2291 acrea. Wind gusts at the time were up to 80 mi/hr. In addition to burning on NV State and National Forest lands, the fire burned across private lands and destroyed 23 homes in the Franktown Rd area. A major rainstorm came through the area beginning on Oct 14, producing 3 to 5 inches of precipitation over three days.

A. Describe Critical Values/Resources and Threats:

A Forest Service BAER team conducted an assessment of the fire on Oct. 23 and Oct. 26. Critical values at risk include road infrastructure and native plant diversity.

Very high risk to road infrastructure due to an increased threat of damage from accelerated runoff and sediment deposition. The road through the fire is FDR#41503. This road runs through NF, State and private lands. It is closed to the public, but is used by the private landowner, as well as FS and State employees. The fire removed vegetation in the watershed above the road/stream crossing resulting in accerlerated erosion and sediment transport during the subsequent rainstorm. The road crossing at the bottom, near the FS boundary, was washed out, preventing access to most of the road. An emergency repair was done on this crossing to allow fire crews to access the fire, but no drainage structure was put it. Runoff and sediment transport from any storms will damage the road.

High risk to native plant diversity due to the threat from the spread of noxious weeds and invasive

plant species. Noxious and non-native invasive species often either have rhizomatous root structures, or produce abundant seed coupled with high germination rates enabling seedlings to establish rapidly following fire. The presence of weeds may prevent establishment of desirable perennial grasses and can change natural fire regimes. Prevention and treatment of weeds prior to populations becoming established and expanded is a key point in restoring desired native vegetation within the burn area and reducing long-term cost of containment, control, and eradication.

The primary non-native invasive species of concern in the Little Valley fire is cheatgrass. Prior to the fire, cheatgrass occurred intermittently within the brush areas, drier conifer sites and along roadsides. Cheatgrass also occurs both north and south of the non-burned areas, also in a patchy distribution. We do not know the total extent of cheatgrass in the area prior to the fire. Based on the Rangeland ecological site descriptions, these upland brush communities are susceptible to cheatgrass invasion as ecological condition declines. Fire severity mapping indicates portions of National Forest System lands burned at a high intensity leaving these sites vulnerable to future infestations of invasive and noxious weeds. Early Detection and Rapid Response (EDRR) will be important to monitor, map, and treat future cheatgrass and other invasive weed populations that could become established within the burned areas.

B. Emergency Treatment Objectives:

Protect or minimize damage to the key travel route within the fire boundary. Construct an armored low water crossing on FDR#41503 to protect the road from damage from accelerated runoff and sediment transport resulting from the fire. This treatment will also maintain access to the road and lands above the crossing.

Control expected invasion of noxious weeds within and adjacent to the area where soils/vegetation was disturbed as a result of suppression activities.

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

Land: **70%** Channel: **N/A** Roads/Trails: **60%** Protection/Safety: **N/A**

D. Probability of Treatment Success

	Years after treatment		
	1	3	5
Land	70	80	90
Channel	N/A	N/A	N/A
Roads/Trails	80	80	80
Protection/ Safety	N/A	N/A	N/A

E. Cost of No-Action (Including Loss): **\$38,121 (\$19,635 for post-invasion weed treatment and \$18,486 for road crossing reconstruction).**

F. Cost of Selected Alternative (Including Loss): **\$20,737**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: John McCann  
Email: [johnwmccann@fs.fed.us](mailto:johnwmccann@fs.fed.us)  
Phone: 775-355-5339

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:

Conduct periodic monitoring in through the spring of 2017 using EDRR assessment of noxious and invasive species within the burned area. Use appropriate treatments to remove weeds.

Channel Treatments:

None proposed.

Roads and Trail Treatments:

Construct a low-water crossing by excavating existing material and using rock to raise road bed to elevation of alluvium just above the crossing to prevent the creation of a head cut. Armor the downstream end with boulders and cobble to prevent erosion and protect the crossing from accelerated runoff and sediment transport.

Based on current elevation of recently deposit alluvium, there is a potential capture the road on the north side of the low water crossing. To prevent road capture, the excavated crossing material and additional spoils from a nearby settling pond will be used to create low berms to ensure surface flows traverse the constructed rock step structure.

Survey for cultural resources prior to construction.

The cost estimate for road treatment using Forest Service crews is included below:

Low Water Crossing Cost Estimate							
Materials							
	Length	Depth	Width	CY	ton	\$/ ton	Cost
4" Road Base	70	2	15	78	140	\$20	\$2,800
Boulder Dam 4' diameter	70	4	10	104	187	\$20	\$3,733
Boulder Dam 3' diameter	70	4	10	104	187	\$20	\$3,733
Materials Total:							\$10,266
Equipment and Labor							
	Monthly Rental	\$/ mile	\$/ month	\$/ day	Days	Miles	Cost
Excavator	\$6,000.00						\$600
Dozer		\$96.26	\$780.00	\$26.00	3	15	\$1,522
Dump Truck		\$1.48	\$378.00	\$12.60	3	100	\$186
Dump Truck		\$1.48	\$378.00	\$12.60	3	100	\$186
Loader		\$21.00	\$533.00	\$17.77	3	30	\$683
Service truck		\$0.33	\$235.00	\$7.83	3	150	\$73
3 operators				\$330.00	3		\$2,970
Cultural resources							\$2,000
Equipment and Labor Cost Total:							\$8,220
Total Cost:							\$18,486

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.)

Monitoring for weed spread and treatment effectiveness is innate to the EDRR process. Effectiveness of the crossing will be monitored by occasional site visits (at least once after spring 2017 runoff). A visual assessment and photos will be sufficient to determine if the crossing structure requires additional maintenance.

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

			NFS Lands				Other Lands			All
		Unit	# of		Other			# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER \$	\$		\$	units	\$	\$
<b>A. Land Treatments</b>										
EDRR	1	2,250	1	\$2,250	\$0		\$0		\$0	\$2,250
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				<b>\$2,250</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$2,250</b>
<b>B. Channel Treatments</b>										
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>C. Road and Trails</b>										
low-water crossing	1	18,486	1	\$18,486	\$0		\$0		\$0	\$18,486
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road &amp; Trails</i>				<b>\$18,486</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$18,486</b>
<b>D. Protection/Safety</b>										
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Structures</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>E. BAER Evaluation</b>										
Initial assessment	report	8,000	1	\$8000			\$0		\$0	\$8000
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				---	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>F. Monitoring</b>										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				<b>\$0</b>	<b>\$0</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>G. Totals</b>				\$20,736	\$0		<b>\$0</b>		<b>\$0</b>	<b>\$28,736</b>
Previously approved										
Total for this request				<b>\$20,736</b>						

#### PART VII - APPROVALS

1.           /s/William A. Dunkelberger

Forest Supervisor (signature)

October 28, 2016

Date

2.

/s/ Mike Dudley (for)

Regional Forester (signature)

November 2, 2016

Date