USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: 10/09/14

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 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: Bear Trap

B. Fire Number:

C. State: NV

D. County: Nye

E. Region: Intermountain

F. Forest: Humboldt-Toiyabe

G. District: Ely

H. Fire Incident Job Code: P4H8G9

I. Date Fire Started: July 15, 2014

J. Date Fire Contained: TBD

K. Suppression Cost: $2,042,868 (as of 8/1/14)

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles):
2. Fireline seeded (miles): 8-10
3. Other (identify): 8-10 miles of cat line was ripped, seeded and brushed. One mile of hand line was rehabbed but not seeded.

M. Watershed Number: 160600140101, 160600140102, 150100110806

N. Total Acres Burned: 10,616 (8574 acres within wilderness)
NFS Acres(X) Other Federal ( ) State ( ) Private ( )

O. Vegetation Types: Grass/shrub, P-J, Mixed conifer

P. Dominant Soils: Pookaloo, Cavehill, Rock Outcrop, Scholfield Wash, Palinor, Urmafot, Bricone, Piar, Wardbay, Adobe, Zarark

Q. Geologic Types: Dolomite, Limestone, Shale, Alluvium

R. Miles of Stream Channels by Order or Class:

S. Transportation System

Trails: 0 miles Roads: 3.5 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 6366 (low) 3593(moderate) 121 (high) 536 unburned

B. Water-Repellent Soil (acres): 2200

C. Soil Erosion Hazard Rating (acres):
1602 (low) 4246 (moderate) 5308 (high)

D. Erosion Potential: 4.1 tons/acre

E. Sediment Potential: 11413 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

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 Critical Values/Resources and Threats:
8574 acres were within wilderness.

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.

Probability of Damage or Loss: The following descriptions provide a framework to estimate the relative probability that damage or loss would occur within 1 to 3 years (depending on the resource):

- Very likely. Nearly certain occurrence (90% - 100%)

- Likely. Likely occurrence (50% - 89%)
- Possible. Possible occurrence (10% - 49%)
- Unlikely. Unlikely occurrence (0% - 9%)

Magnitude of Consequences:

- Major. Loss of life or injury to humans; substantial property damage; irreversible damage to critical natural or cultural resources.
- Moderate. Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects.
- Minor. Property damage is limited in economic value and/or to[o] few investments; damage to critical natural or cultural resources resulting in minimal, recoverable or localized effects.

Probability of Damage or Loss	**Magnitude of Consequences**		
	Major	Moderate	Minor
	RISK		
Very Likely	**Very High**	**Very High**	**Low**
Likely	**Very High**	**High**	**Low**
Possible	**High**	**Intermediate**	**Low**
Unlikely	**Intermediate**	**Low**	**Very Low**

In this document the following color scheme is used in the table to identify levels of risk.

Color Scheme Legend	
Color	**Risk Level**
	Very High
	High
	Intermediate (Where Treatments Are Recommended)

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Native Plant Community	R	Likely	Moderate	High	The district is concerned about additional weeds establishing in the fire area and pre-existing populations expanding within the fire area. The Base camp for the fire was in a patch of knap weed which is not currently in the fire area. They requested that the BAER team consider seeding portions of the fire area to provide seed bank for desired species to become established. The BAER team assessed for risk of weed population expansion on preexisting species and for the introduction of new species to the fire area. They Determined that the likelihood of success on any seeding would be limited due to the soil erosion rates observed within the fire area-it is likely that the seed would be washed off. Additionally Knutson et al 2014 indicates that seedings done at this elevation and precipitation zone in NV are not as successful as desired

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Road (both FS and County)	L	**FS RD:**Very Likely **County RD:**Likely	**FS RD:** Major **County RD:** Major	**FS RD:** Very High **County RD:**Very High	The forest road in Scoffield canyon is right in the drainage bottom and crosses the main flow channel multiple times. The Road has historically captured flows along the valley bottom and been rutted. During the fire the suppression staff dozed the road leaving berms along both edges of the road. This has caused additional rutting and degredation of the road surface due to captured flows not being able to escape the road. Flood flows from the fire are are traveling across the County Road that is located approximately 4 miles downslope of the fire area. There was mud and debris deposits in the road that the country road crew has been having to remove. These flows were approximately 4-6 inches of fine grained material. The Scoffield Road could potentially wash out while someone is recreating along its length. There are also several very narrow fs road pieces with drop offs where a vehicle could roll off the road and severely injure the occupants of the vehicle. The county road has been experiencing flooding due to the fire. These flows have been large enough to trap vehicles along the road while the water is high in the low water crossings. Additionally vehicles could become stuck in the muck that is being deposited in the roads. The potential for a fatal accident due to the flooding exists.

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Road (both FS and County)	P	**FS RD:**Very Likely **County RD:** Likely	**FS RD:** Major **County RD:** Major	**FS RD:** Very High **County Rd:**Very High	The Scoffield road was already in rough shape but could become completely inpassable even in the previously passable locations. The county road could experience washing out at the low water crossings as they are not armored. The berm on the outside edge of the road is catching the flood debris and holding it in the road instead of letting it flow past the road.
Down Stream Private Property	L	Possible	Moderate	Intermediate	While it is possible that the private properties to the East of the fire on the north end of the fire area could be impacted by flood flows, that portion of the fire experienced lower burn severities than the rest of the fire and is also not as large in terms of burned source area. Additionally the private property closest to the fire area are hay fields where the occupancy time and frequency by humans is limited. The home where there is a higher likelihood of human occupancy at any given time is an additional mile plus downstream from the hay field which has to date not received flood flows based on aerial reconnaissance. Based on the observed flood effects coming off of the fire no actions are being proposed to mitigate this.
Downstream Private Properties	P	Possible	Moderate	Intermediate	The risk is that the hay fields could be covered in sediment deposits. In terms of cost benefit removing the sediment or replanting the field would be cheaper than any preventative measure we could propose on the forest.

Value At Risk	Value Life (L), Property, (P), Resources (R)	Probability of Damage or Loss	Magnitude of Consequences	Risk	Discussion
Hydrologic functioning	R	Possible	Moderate	Intermediate	The riparian areas are fairly intact. However the road in the bottom of Scoffield is acting as part of the drainage network and eroding. The channel is larger cobles and more stable than the stream channel in Hampton.
Soil Productivity	R	Likely	Moderate	High	Even low slope short length slopes are showing signs of rilling in this shallow soiled rocky fire area. There is a high likelihood that more soil loss will occur until such time as vegetation is re-established in the fire area.
Archeologic resources	R	Likely	Moderate	High	Due to the soil loss and flood flows it is highly likely that some or all of the archeological resources in the fire area would be impacted.

B. Emergency Treatment Objectives:

Mitigate to the extent possible, threats to personal injury or human life of forest visitors and Forest Service employees while traveling roads on NFS lands within or downstream of the burned area.

Monitor and treat invasive plants that are a threat to naturalized ecosystems by minimizing the expansion of existing populations within the burned area and control the expected invasion of noxious weeds within and adjacent to the area where soils/vegetation was disturbed as a result of fire suppression activities

Assist cooperators with the interpretation of the assessment findings to identify potential post-fire impacts to the residences, domestic water supplies, public utilities.

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

Land **80** % Channel **N/A** % Roads/Trails N/A % Protection/Safety 50 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	90	90	90

Channel			
Roads/Trails			
Protection/Safety	90	70	60
Initially visiors will heed the warning signs. Complacency is expeced after the initial year unless there is a significant event.			

E. Cost of No-Action (Including Loss):

The cost of allowing a new weed species to become established or existing weed populations to expand undetected into the fire area is approximatly 150$/acre/yr for treatment of the population. If the whole fire area is populated by weeds the cost is in the neighbor hood of $1,592400 per year. However the highest likelyhood of establishment of new weed populations is adjacent to the few roads that approach and/or enter the fire and the trails that are located within the fire. Using a 100ft buffer on each side of the 3.5 miles of roads, the total would be approximately 85 acres or $12750/year.

F. Cost of Selected Alternative (Including Loss): **$11,890**

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology [X] Soils [A] Geology [ ] Range [X] Recreation
[ ] Forestry [**A**] Wildlife [ ] Fire Mgmt. [ ] Engineering [X] Wilderness
[ ] Contracting [ ] Ecology [**A**] Botany [A] Archaeology [ ]
[A] Fisheries [ ] Research [ ] Landscape Arch [X] GIS

A= Adjunct consultation

Team Leader: Jim Hurja

Email: jhurja@fs.fed.us Phone: 702-515-5407 FAX: 702-515-5447

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:

Noxious Weed Early Detection Rapid Response (EDRR) to protect BAER values Soil Productivity, Native Plant Community, and Hydrologic Function: EDRR will concentrate on determining if the weed sites are expanding and determine if extra treatments are necessary. No effort will be made to EDRR existing weed infestation 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 work would be completed by multiple trips to the fire area totaling 10 days of time, but totaling up to 10 visits to determine phenology and monitor effectiveness of treatments applied by others. It is a good two hour drive to the fire area which results in a long day conducting EDRR at that location. The mileage includes the atvs for the crew to access the area, if roads are still washed out, as well as the mileage to travel to the site

from the office (250 miles round trip).

Line Item	Unit Cost	Total
Salaries two GS 5	$135 per day x 2 x 10 days	$2,700
District plant specialist	$350 per day x 2 days	$700
GIS/FACTS specialist	$320 per day x 3 days	$960
Vehicle mileage	$ .60 per mile x 2,500 miles	$1500
Implementation team leader	$400 per day x 5 day	$2,000
	Total Cost	**$7,860**

Channel Treatments:

Roads and Trail Treatments:

Protection/Safety Treatments:

Road and Trail Warning Signs

General Description: This treatment will design and install burned area warning signs to caution forest visitors recreating within and adjacent to the burned area. It is consistent with the language provided in the BAER Treatments Catalog. The treatment is a component of the overall travel control devices for the burned area (USDA Forest Service-EM7100-15, 2005). The warning signs will identify the types of hazards to watch for at the recreation site. This treatment will place hazard warning signs at the following locations:

Locations (Suitable Sites)**:**

1. Along county road below the fire area.
2. At access points leading into the fire area.
3. At all trail heads that could lead into the fire area.

Design/Construction Specifications: The travel management strategy identifies the type of signing necessary. Use may be discouraged at certain times of the year when the risk is higher. Purchase and install signs at each of the identified locations consistent with Forest Recreation Standards at these locations.

Purpose of Treatment: Inform users of the dangers associated with entering/recreating within a burned area as well as inform them of objects and closures to help ensure that users are able to access the correct routes in a safe manner. The probability of motorist accessing routes or hitting objects not marked within the roadway is about 95% or nearly certain will occur. The loss is difficult to estimate since this a safety issue. One could conclude damages to a vehicle would occur but the risk of someone getting injured if their vehicle strikes something or gets stranded on a route unknown to them is increased when involved in a vehicle accident or when loss in this particular environment. If the treatments are implemented the probability of someone damaging their vehicle is greatly reduced if they are able to see the obstacles within the roadway and know what roads they are operating on. This would give an estimated success rate of around 90% since the treatments are highly understood by all common drivers. The BAER Assessment Team considered this treatment to be the minimum necessary to achieve a reduction in risk to the human lives and safety of Forest visitors and Forest Service employees. Since the fire is up in the wilderness, motorists may be unaware that the roads accessing these areas are in the path of the floodwaters generated in the canyons.

Line Item	Unit Cost	Total
Installation Salaries: 2 GS-5's	$135/day X 5 days X 2	$1,350
Implementation leader	$320/day X 2 day	$640
Road Signs	6 @ $150 ea	$900
4x4x8 Posts and hardware	6 @ $40 each	$240
Vehicle mileage	$.60/mi X 2000 miles	$1,200
	Total Cost	**$4,330**

Treatment Effectiveness Monitoring: A Forest Service employee will inspect the signs for visibility, damage, or loss and replace as needed.

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.)

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										
EDRR	mi	2250	3.5	$7,875	$0		$0		$0	$7,875
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$7,875	$0		$0		$0	$7,875
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. Protection/Safety										
Warning signs	ea	725	6	$4,350	$0		$0		$0	$4,350
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$4,350	$0		$0		$0	$4,350
E. BAER Evaluation										
assessment	report	$7,500	1	---	$7,500		$0		$0	$7,500
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$7,500		$0		$0	$7,500
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				$12,225	$7,500		**$0**		**$0**	**$19,725**
Previously approved										
Total for this request				**$12,225**						

PART VII - APPROVALS

1. */s/William Dunkelberger* 10/9/14
Forest Supervisor (signature) Date

2. /s/ Chris Iverson (for) 10/17/14
Regional Forester (signature) Date