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: **Whiskey Complex**

B. Fire Number: **ID-BOF-000424**

C. State: **Idaho**

D. County: **Boise**

E. Region: **R4-Intermountain**

F. Forest: **Boise**

G. District: **Emmett/Idaho City**

H. Fire Incident Job Code: **P4H8FS14**

I. Date Fire Started: **July 13, 2014**

J. Date Fire Contained: **July 27, 2014**

K. Suppression Cost: **$12,000,000** (estimated from ICS-209)

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles):
2. Fireline seeded (miles):
3. Other (identify):

M. Watershed Number:

Subwatershed (HUC6#)	Subwatershed (HU) Name	Total Acres	Acres in Fire Perimeter	Percent in Fire Perimeter
170501120104	Granite Creek	21,513	211	1
170501120101	Headwaters Grimes Creek	19,438	1,529	8
170501200603	Alder Creek	13,417	208	2
170501200604	Danskin Creek-SF Payette River	32,433	7,498	23

N. Total Acres Burned:
NFS - 8,863 Other Federal - none State - none Private - 583

O. Vegetation Types: Coniferous tree species are Douglas fir, Ponderosa pine (plantations), with small stands of Grand fir. Understory shrubs consist of Ninebark, redstem ceanothus, and Chokecherry. South and west aspects are sparsely vegetated with a mix of sagebrush and Bitterbrush. Understory herbaceous species include Sandberg bluegrass, bluebunch wheatgrass, and pine grass. Aspen stands occur throughout the area, primarily in small collector basins in the upper locations of drainage features. Rush skeleton weed and spotted knapweed infestations are extensive along the private land/National Forest boundary at lower elevations; spotted knapweed is very common adjacent to major roads.

P. Dominant Soils: Typic Cryoborolls, loamy skeletal mixed.

Q. Geologic Types: The fire area is dominated by Idaho Batholith granitic rocks of the Boise Basin. This formation is approximately 70-80 million years old and is composed of uplifted granodiorite. The area topography includes the v-shaped stream dissected valleys. There are several active and historic mining operations within the fire perimeter.

R. Miles of Stream Channels by Order or Class:
Perennial: 18.4 Intermittent: 10.4

S. Transportation System (miles)
Roads: 29.7 Trails: 0.0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres):
Very Low/Unburned 985 (10%) Low 3,870 (41%) Moderate 3,925 (42%) High 666 (7%)

B. Water-Repellent Soil (acres): 1,650

C. Soil Erosion Hazard Rating (acres):
482 - low 4,304 - moderate 4,659 - high

D. Erosion Potential: 20 tons/acre (averaged at 10% exceedance probability over year 1 and year 2; range is 18.1 to 23.2 tons/acre)

E. Sediment Potential: 7,750 cubic yards/square mile (ERMiT estimates for erosion potential in tons per acre were converted to cubic yards per square mile.)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period (years): 2-4

B. Design Chance of Success (percent): 85

C. Equivalent Design Recurrence Interval (years): 2

D. Design Storm Duration (hours): 3.8

E. Design Storm Magnitude (inches): 1.44

F. Design Flow (cubic feet/second/square mile): see table below

G. Estimated Reduction in Infiltration (percent): 14

H. Adjusted Design Flow (cfs per square mile): see table below

Pre- and Post-fire Peak Flow (CFS) with Percent Increase (2 year, 3.8 hour storm event)

Basin	Pre-fire	Post-fire	% Increase
Horn Creek	11.5	49.1	327%
Reservoir Creek	13.7	51.5	276%
Calderwood Creek	1.2	8.9	642%

PART V - SUMMARY OF ANALYSIS

Background: The Whiskey Complex consists of the Wash Fire and the Grimes Fire which were ignited by lightning on July 13th and burned approximately 9,450 acres in Boise county, just south-east of Garden Valley, Idaho. The land within the fire perimeter is managed by both the Emmett Ranger District and the Idaho City Ranger District of the Boise National Forest as well as private property primarily along the northern fire perimeter. Elevations within the burned area range from 3,100 feet on the South Fork Payette River to about 7,000 feet at on the highest portions of the Grimes Fire. The Wash Fire area includes several tributaries flowing north to the South Fork Payette River, as well as small portions of headwater areas of streams flowing toward Grimes Creek. The Grimes Fire is located on slopes directly above Grimes Creek and drains to Grimes Creek which flows downstream to Mores Creek and eventually the Lucky Peak Reservoir on the Boise River.

A. Describe Critical Values/Resources and Threats (narrative):
(formatted to incorporate “Critical Values” from ID 2520-2013-1, effective June 6, 2013)

1. Human Life and Safety (HLS)
   A. High risk to Forest Service Employees and Forest visitors on travel routes within and adjacent to the fire perimeter. High intensity precipitation events in the S.F. Payette River drainage have triggered floods and debris flows in the recent past. The occurrence of these climate-driven events can increase in frequency and intensity with average precipitation over burned areas. The burned area increases the potential for falling trees/snags, rolling rocks and other debris. These conditions result in possible threats to human life and safety with major consequences. The threats exist primarily along FR 382, FR 690, FR 652, FR 610, and FR 395 that are located immediately downslope of flood source areas and hillslopes mapped with high and moderate soil burn severity (SBS). (Response Actions 02, 03, and 04)

2. Property:
   A. High risk to road and infrastructure with considerable damage expected from accelerated erosion and increased potential for flooding and debris flows. The highest

risk is associated with stream crossings at 5 locations and 15 miles of road prism located downslope of source areas mapped at high and moderate SBS. Travel routes having the greatest concern are: FR 382 (S.F. Payette River); FR 382AA (Sweet Creek); and FR 652 (Wash/Horn Creek). (Response Actions 02 and 03)

B. Intermediate, low, and very low risks exist for the remainder of travel routes within or adjacent to the burned area where their locations have an unlikely susceptibility to erosion or damage from flooding. These routes are either not directly impacted from upslope soil burn severity or are in upland locations not likely threatened from flooding. These routes will be evaluated as needed. (Response Action 03)

2. Natural Resources
   A. Very high risk to native plant diversity and long term soil productivity from the threat of non-native and invasive plant species. Noxious weed populations (spotted knapweed and rush skeletonweed) known to date are found along the existing roads, dispersed recreation sites, mining claims, and ICP. Disturbance associated with fire suppression activities, including back-firing operations, increase the burned area's susceptibility for expansion of undesirable plant species. (Response Action 01)
   B. High risk to soil productivity and hydrologic function in areas mapped as high and moderate SBS. The loss of overstory vegetation, effective ground cover, and surface organic matter leaves the soil resource susceptible to erosive forces for 2 to 5 years. The probability for accelerated erosion is very likely increasing the potential for mass erosion, hillslope sedimentation, and mud/debris flows. The threat of accelerated erosion and increased sediment delivery is wide-spread across the burned area which increases the risk for expansion of non-native and invasive plant species. However, the risk is greater in channels downslope of high and moderate SBS areas, from road surface erosion, and where there is potential for increased runoff to overtop the roads at culvert locations. Additional consequences include further loss of riparian vegetation with degradation of fish habitat and reduced stream shading could increase stream temperatures. (Response Actions 01, 02, and 03)

3. Cultural and Heritage Resources
   A. Intermediate to low risk to cultural and historic sites. No Response Actions are recommended.

B. Emergency Treatment Objectives:
- Reduce threats to personal injury and/or human life of visitors using select NFS roads.
- Protect or minimize damage to NFS investments and key travel routes within and adjacent to the burned area.
- Minimize an expected increase in spread of non-native and invasive plant species within and adjacent to the area where soils/vegetation was disturbed as a result of suppression activities.
- Warn users of Forest roads of hazards present in the burned area.

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

Land - NA Channel - NA Roads/Trails - 80% Protection/Safety - 80%

D. Probability of Treatment Success

Treatment	Years after Treatment		
	1	3	5
Land	80	0	0
Channel	NA	NA	NA
Roads/Trails	80	85	90
Protection/Safety	70	60	50

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

F. Cost of Selected Alternative (Including Loss): See VAR

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Terry Hardy

Email: thardy@fs.fed.us Phone: 208-373-4235 FAX: 208-373-4111

H. Treatment Narrative:

Several response actions (RA) were considered to achieve safety and emergency stabilization objectives. The following were considered feasible and effective minimizing or reducing the threats that put NFS Critical BAER Values at risk.

Land Treatments:

RA-01 Early Detection and Rapid Response of Non-Native and Invasive Plant Species
Purpose: The overall intent is to minimize the potential for establishment of new noxious weed infestations, to decrease the unacceptable post-fire risks to native or naturalized communities and long term soil productivity. This will be achieved by reducing the potential for establishment of new noxious weed infestations in highly susceptible burned areas, minimizing spread of existing infestations, and minimizing increases in density of existing infestations.
Locations: Monitor NFS lands for locations of known weed populations that were disturbed during fire suppression efforts and implementation of authorized BAER treatments. If weed spread occurs, treat as necessary. Fire suppression activities monitored include perimeter and internal roads, handlines/dozerlines, helibase (Garden Valley RS), helispots, drop points, heliwater spots, spike camps, dip sites, and staging areas. Private lands may be treated under Challenge Cost Share Agreement with local CWA.
Specifications: Conduct two surveys (spring and mid-summer) of the focus areas within the first year of the fire utilizing ground and vehicle reconnaissance. Two separate surveys are needed to detect the variety of weed species that may emerge in this ecosystem based on

weed biology. If spread of noxious weeds is identified, plan and design treatment. Select herbicide, application rate, and application timing based on specific weed being treated, and access to the location of the infestation. Consider sensitive plant habitats when selecting herbicide(s).

Channel Treatments: none recommended

Road and Trail Treatments:

RA-02 Culvert Replacements

Purpose: Decrease unacceptable risks to human life and safety, road/road infrastructure, and water quality. Roads within the Whiskey Complex Fire contain isolated drainage structures that cross intermittent and perennial streams located in watersheds that have high to moderate SBS. These streams now have the potential for increased runoff and debris flows. Increased flows to the existing crossings may plug culverts or exceed their maximum flow capacity. In certain cases, inadequately sized culverts pose an unacceptable risk to the road infrastructure (property) and other critical values (human life and safety; impacts to water quality from increased erosion primarily from road fill slopes).

Locations: The following table lists culverts identified to be replaced. Associated travel routes are designated as Maintenance Level 2 or above.

Location	Existing Size	Replacement Size
FR #382 Sta. 3.95 (mile) Int. Drainage	18" x 36'	24" x 46'
FR #382 Sta. 5.18 (mile) Calderwood Creek	18" x 36'	30" x 46'
FR #382AA Sta. 0.03 (mile) Sweet Creek	36" x 30'	42" x 40'
FR #652 Sta. 0.20 (mile) Int. Drainage	24" x 42'	36" x 42'
FR #652 Sta. 0.27 (mile) Int. Drainage	24" x 65'	36" x 65'

Specifications: Forest Service personnel will monitor and direct the work. The design and specifications written will be site-specific for each culvert installation. Contract specifications shall conform to FP03-Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects and Forest Service Supplements. Where appropriate, the replacement stream crossing design complies with the Forest Service San Dimas criteria for Aquatic Organism Passage at Road–Stream Crossings. Replacement of culverts shall include setting up traffic control, excavating and removing the existing culvert off of Forest Service lands, hauling away any excess excavated material to an approved waste site, reconstructing the stream channel with stream simulation material, and reconstructing the road prism.

Protection/Safety Treatments:

RA-03 Storm Patrols

Purpose: Evaluate the condition of roads and bridges (Property) to identify and implement repairs needed to maintain and/or repair damage to road surfaces and flow conveyance structures (culverts, bridges) across roads. The early detection of storm-caused road damage and rapid repair is needed: 1) to reduce threats to human life and safety for those traveling the routes; and 2) to maintain integrity of NFS roads and minimize greater monetary loss that could be incurred should minor impacts to roads go untreated.

Locations: Patrols focus on roads and stream crossings that receive the most traffic, are of more value to the transportation system, and/or have high-risk structures prone to storm damage. Not listed in any order of preference these roads include: FR 382, FR 690, FR 652, FR 610, and FR 395.

Specifications: Immediately upon receiving heavy rain or during significant spring snowmelt the FS will send out patrols to identify road hazard conditions – obstructions such as rocks, sediment, washouts, and plugged culverts, so the problems can be corrected before they

worsen or jeopardize forest road users. The storm patrollers shall have access to at least a backhoe and dump truck that can be used when a drainage culvert is plugged or soon to be plugged, and to perform emergency maintenance of road drainage structures where needed. When appropriate, FS personnel will utilize heavy equipment to mechanically remove any obstructions from the roads and culvert inlets and catch basins. All excess material and debris removed from the drainage system shall be placed outside of the bank-full stream channel where it cannot re-enter the stream.

RA-04 Safety Signs

Purpose: The overall purpose of this treatment is to reduce risks to human life and safety by warning motorists of existing threats while traveling the authorized roads within and adjacent to the burned area. Warning signs will advise travelers of increased threats from falling trees and limbs, rolling rocks, and flash floods due to moderate and high SBS.

Locations: At major access points to burned area on NFS lands:

FR 382 at junction with FR 615
FR 648 at fire perimeter
FR 382 at junction with FR 397

Specifications: "Entering Burned Area" warning signs along the roads shall measure, at a minimum, 4 feet by 4 feet and consist of 0.08" aluminum, sheeted in high intensity orange with black letters. The "ENTERING BURNED AREA" lettering shall be a minimum of 5 inches in height and all remaining lettering shall be a minimum of 3.5 inches in height. Traffic Warning Signs shall conform to the M.U.T.C.D. standards and shall be installed per Federal Highway Safety Standards.

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											
RA-01 NNIS	acres	10	600	$6,000	$0			$0		$0	$6,000
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Land Treatments				$6,000	$0			$0		$0	$6,000
B. Channel Treatments											
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Channel Treatments				$0	$0			$0		$0	$0
C. Road and Trails											
RA-02 Culvert Replacement	each	4,850	5	$24,250	$0			$0		$0	$24,250
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Road and Trails				$24,250	$0			$0		$0	$24,250
D. Protection/Safety											
RA-03 Storm Patrol	day	1,600	6	$9,600	$0			$0		$0	$9,600
RA-04 Safety Signs	each	450	3	$1,350	$0			$0		$0	$1,350
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Protection/Safety				$10,950	$0			$0		$0	$10,950
E. BAER Evaluation											
Initial Assessment	Report	$5,000	1	---	$0			$0		$0	$0
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				---	$0			$0		$0	$0
F. Monitoring											
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Monitoring				$0	$0			$0		$0	$0
G. Totals				$41,200	$0			**$0**		**$0**	**$41,200**
Previously approved											
Total for this request				**$41,200**							

PART VII - APPROVALS

1. /s/ Cecilia R. Seesholtz — 08/28/2014
   Forest Supervisor (signature) — Date

2. /s/ Nora B. Rasure — 9/4/2014
   Regional Forester (signature) — Date