

Date of Report: 10/02/2013

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)

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name:** Weiser Complex (Raft Fire only) **B. Fire Number:** ID-PAF-013080
C. State: ID **D. County:** Washington
E. Region: 04- Intermountain **F. Forest:** 12-Payette (PAF)
G. District: Weiser **H. Fire Incident Job Code:** P4HX3P
I. Date Fire Started: 8/29/13 **J. Date Fire Contained:** 9/14/13
K. Suppression Cost: \$ \$7.6 million (est. at containment, ICS-209)
L. Fire Suppression Damages Repaired with Suppression Funds
 1. **Fireline waterbarred (miles):** 11 miles dozer, 3.6 handline
 2. **Fireline seeded (miles):** none to date
 3. **Other (identify):** Approximately 1 mile trail used as dozer line and restored to two-wheel motorized width; duff and organic litter pulled onto firelines
M. Watershed Number: 5th code: Rock Creek-Snake River 1705020103

Subwatershed number (6 th code)	Subwatershed Name	Percent burned
170502010305	Sturgill Creek	67%
170502010306	Raft Creek-Snake River	33%
Note: Only approximately 475 acres (about 2% of fire acreage) of the Cottonwood Creek-		

Snake River subwatershed (approx. 16 acres PAF) and 1220 acres (6% of fire acreage) in the Jackson Gulch-Snake River subwatershed (0 acres PAF) burned. There is no threat to life or property posed by these burned areas; therefore, no treatment is proposed.

N. Total Acres Burned

[3950] NFS Acres [6680] Other Federal [1335] State [8365] Private

- O. Vegetation Types:** Douglas-fir/ninebark; Douglas-fir/snowberry; Ponderosa pine/Bluebunch wheat grass; Mountain Big Sagebrush; Bluebunch wheatgrass/ Idaho Fescue
- P. Dominant Soils:** Deep fine loamy, deep sandy and fine skeletal, shallow fine loamy (mostly lithic argixerols and typic argixerols)
- Q. Geologic Types:** Dominant: Metamorphic (greenstone volcanoclastic, phyllite and chert), Other: Igneous (Imnaha Basalt of the Columbia River Basalt Group)
- R. Miles of Stream Channels by Order or Class:** Perennial: 17.4 Intermittent: 40.4; mostly 1st and 2nd order tributaries on steep slopes
- S. Transportation System** *(includes only miles of road and trail within the Sturgill Creek subwatershed, where the BAER treatments are proposed):*

Trails: 4.7 miles

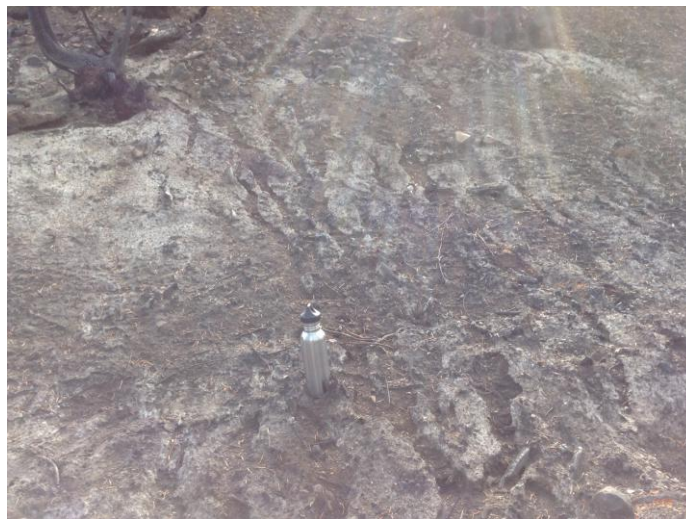
Roads: 10.5 miles

PART III - WATERSHED CONDITION

(includes only acres within the Sturgill Creek subwatershed, where the BAER treatments are proposed)

A. Burn Severity (acres): NFS Lands = 4110 acres

2105 acres/51% (**low**) 1600 acres/39% (**moderate**) 405 acres/10% (**high**) (see photos below)



- B. Water-Repellent Soil (acres):** 405 (*included all high severity*)
- C. Soil Erosion Hazard Rating** (*excludes private inholding within this subwatershed*): 1 (**low**)
1305 (**moderate**) 2790 (**high**)
- D. Erosion Potential:** 25 tons/acre
- E. Sediment Potential:** 1-25 tons/acre

PART IV - HYDROLOGIC DESIGN FACTORS

- A. Estimated Vegetative Recovery Period, (years):** 2- 5
- B. Design Chance of Success, (percent):** 80%
- C. Equivalent Design Recurrence Interval, (years):** 100
- D. Design Storm Duration, (hours):** 24
- E. Design Storm Magnitude, (inches):** 4.2
- F. Design Flow, (cubic feet / second/ square mile):** 46.2
- G. Estimated Reduction in Infiltration, (percent):** 50
- H. Adjusted Design Flow, (cfs per square mile):** 69.4

Note: Design Storm based on 100-year design open-bottom culvert or bridge.

PART V - SUMMARY OF ANALYSIS

Background: On August 29, 2013, lightning caused two fires in the canyon breaks along the Snake River on the east side of Brownlee Reservoir. The Hells Canyon 1 Fire and the Raft Fire were later combined into the Weiser Complex when the Type 2 Incident Management Team took control of suppression efforts. Land ownership in the Complex includes: NFS lands, BLM lands, State lands, private land and property. Only the Raft fire contained NFS land. Upon agreement with other federal (BLM) and State agencies, this BAER Report only addresses threats and treatments located on NFS lands inclusive to the Sturgill Creek subwatershed, a direct tributary to the Snake River and Brownlee Reservoir. One 80-acre inholding (the Benton Creek Ranch) and Idaho Power's Wildlife Conservation Ranch, all located immediately downstream of the NFS boundary, were also assessed to determine potential threats to life, safety, and property.

- A. Describe Critical Values/Resources and Threats):**

<u>Value Life, Property, and Safety</u>
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Threats to Ranches, Private Residences, and Irrigation and Hydropower Diversions.

The Weiser Complex (Raft Fire) directly affected two ranches in the Sturgill Creek subwatershed.

1. Benton Creek Ranch (High Risk): The Benton Creek Ranch (80 acres) is located on an alluvial fan at the mouth of Benton Creek at the confluence with Sturgill Creek. This private property is accessed from Forest Road #011 (Sturgill Creek Road). The ranch is used as a summer residence and includes one trailer, one wall tent, and several out buildings, all located on the Benton Creek alluvial fan. No structures were lost during the fire.

The Benton Creek watershed contains moderately to strongly dissected Mountain Slope Lands and oversteepened Canyon Lands, mostly with *high* inherent erosion hazard ratings. Approximately 25 percent of the subwatershed burned with *moderate* to *high* severity. Risks from pre-fire and post fire response to Benton Creek Ranch is **HIGH**, due to the location on the alluvial fan. **The private landowner and resident have been notified about the risk and have vacated the property for the winter. BAER Treatment on NFS lands involves closing the road to the public until reevaluation in late spring of 2014; a gate was installed to implement this closure in late September 2013.**

2. Idaho Power's Sturgill Wildlife Conservation Area Ranch (Moderate Risk): This ranch was recently purchased by Idaho Power as part of the wildlife and fisheries mitigation for the Hells Canyon Hydropower license. The property is open to the public but closed to motorized travel off roads and livestock grazing. A residence, two major barns, and several out buildings were destroyed by the fire. The historic ranch buildings are situated along Garden Gulch and Haystack Gulch; neither contain NFS lands. Mud flows following rains on 9/13 (0.60 inches) resulted in burial of some of the road prism where Sturgill Creek Road crosses Haystack Gulch (see photos below). It is expected that, until effective vegetation cover returns to the drainages above, similar events could cause damage to the road, which in this location is under Idaho Power ownership and maintenance responsibility. **The closure of Sturgill Creek Road by gate at the top of the Sturgill Creek subwatershed on NFS lands (Bear Saddle) will ensure public safety until reevaluation in spring of 2014.**



3. Idaho Power's Sturgill Wildlife Conservation Area Irrigation and Hydropower Diversion (Moderate Risk): There is a concrete diversion and inlet box to a 6 inch pipe penstock located in Sturgill Creek near the Forest boundary on NFS lands. **Indirect BAER Treatment associated with upstream BAER Road Treatments includes: culvert removal, culvert upsizing, and landslide infrastructure repair, which will help mitigate adverse effects to the water diversion.**

<u>Value-Native or Naturalized Plant Communities</u>

Threats to Ecosystem Integrity from Noxious Weeds and Livestock Grazing

(High Risk)

1. The expansion of invasive non-native plants into fire-disturbed areas from nearby source areas poses a significant threat to the integrity of the native plant communities and ecosystem processes. This threat is greatest along the roads in or adjacent to burned areas where rush skeletonweed, Scotch thistle, spotted knapweed, Canada thistle, and houndstongue currently exists. The threat of noxious weed expansion is also great within the burned area in the Benton Creek drainage. This drainage contains a high concentration of rush skeletonweed. The invasion or expansion of noxious weeds is likely to alter soil stability, nutrient cycling, wildlife habitat and fire regimes with consequences for long-term ecological diversity and stability.
2. Continued livestock grazing would have an immediate adverse effect on range condition both short-term and long-term. Cattle that were pushed out of the fire area immediately returned. Research has shown that bluebunch wheat grass and Idaho fescue should receive rest post-fire. Continued grazing this fall and next season would also contribute to noxious weed expansion into the burned area. Cattle have been removed for the season and should be excused for at least one full season. Vegetation needs to recover and help prevent the spread of noxious weeds and new weed infestations.

<u>Value- Life and Property</u>
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Threat to Life and the Forest Road #011 Infrastructure

The fires burned several critical road infrastructure water management and erosion control components. It is crucial that these structures be stabilized, removed, replaced or repaired to allow safe public and administrative travel along the road, and to prevent future costly damages to the road system, such as total loss of the road prism as a result of a culvert failure or landslide. A storm on September 13, 2013, produced 0.6 inches of rainfall in a 24-hour period, resulting in mudflows and plugged culverts in numerous places along the road. The following is a short summary of the damage and associated critical values and specific threats:

1. Undersized Culverts on Perennial Streams:

Risk is High.

Three undersized culverts were identified on perennial streams. These include a 36" CMP on main Sturgill Creek, with 18% moderate- to high-severity burning not far above the pipe; a 48" CMP on Middle Fork Sturgill Creek, near a timber lag wall that also burned and is discussed below, with 15% of the drainage area experiencing moderate- to high-severity burning; a 24" CMP, nicknamed "Mudflow Culvert," with 39% of the drainage area burned at high or moderate severity. Photos below show culvert inlets after cleaning following the 9/13, 0.60 precipitation event. Arrows point at inlets.

The threat associated with undersized culverts is loss of access to Forest and private inholdings, as well as increased sediment loads associated with pipe "blowouts". The threat associated with undersized culverts on perennial streams is obviously greatest, as these cannot easily be crossed in any season in the event of a washout, and there is more threat to fisheries; Sturgill Creek and Middle Fork Sturgill Creek are both fish-bearing streams.

**2. Undersized Culverts on Ephemeral Draws:****Risk is High.**

A 12" relief culvert that actually drains 272 acres, with 67% moderate or high severity burning; an 18" CMP in an ephemeral drainage that was 90% burned at moderate or high severity; and an 18" CMP in an ephemeral drainage that was 100% burned at moderate or high severity.

3. Undersized Crossdrain Culverts:**Risk is High.**

A 15" partially-plugged pipe at the gabion structure; a 15" cross-drain pipe in the middle of a high-severity burn that had already plugged and was cleaned out after a storm; any other cross drains that are found to be plugged or undersized.

4. Timber Lag Retaining Wall – Landslide Site:

Risk is High.

This retaining wall is critical to stabilize the cutslope. Erosion actions ranging from dry ravel to mass failure onto the road will occur if these structures are not repaired. *Drainage features would be comprised. Potentially fill and road-prism failures could result. This could close the Sturgill Road for an extended time period.*



4. Gabion Wall – Landslide Stabilization Site:

Risk is High.

There is a 300-foot-long gabion wall that stabilizes a 2-acre landslide that requires repair. One culvert in the middle section of the gabion wall is now plugged and needs replaced. The fence that was built to keep cattle off the landslide to protect erosion control and stabilization vegetation was partially destroyed and needs to be rebuilt. Within the enclosure previously-planted, deep-rooted native shrubs and conifers were killed by the fire.

5. Road Cut/Fill Slope and Landslide Erosion Vegetative Erosion Control:

Risk is High.

It is estimated that approximately 2 acres need treatment due to the severity of the burn on cut and fill slopes. Several of these sites that need treatment are directly above perennial and ephemeral stream culverts or inslope ditch relief culverts. The Timber lag wall and rock gabion wall, both anchoring the toe of active landslides, need about 3 acres of treatment. Failure to stabilize these slopes may result in culverts being plugged, mass movement onto

the road, or total loss of the road prism. The Forest plans to use the forest watershed crew and forest hydroseeder to apply erosion control grass seed, mulch, and fertilizer to a total of 5 acres along the road and 2 landslide sites.

7. Monitoring Patrols:

Risk is High.

It is expected that rollout and debris will continue to fall onto the road, inslope ditches, culvert inlet, and cutslopes throughout the winter, requiring removal of these hazards in the spring and at least through summer 2014. The fire on steep slopes has caused both rocks, mud, and burnt snags to fall onto the road, inslope ditches, culvert inlets, and cutslopes. Removal of debris will protect public safety and maintain drainage features.

8. Road Closure Hazard Warning Signs:

Risk is High.

Sturgill Creek Road will be closed at the gate, and a sign will be needed to explain to the public the hazards and the need for closure; this sign should remain in place even after road is reopened as a caution to the public.

Threats to NFS Trails

Risk is High.

Three National Forest System (NFS) trails intersect the Weiser Complex fire perimeter: trails 270 (Benton Creek Trail), 272 (East Fork Sturgill Creek Trail), and 273 (Sturgill Creek Trail). Approximately 4.5 miles of these trails are located on NFS lands within the burned perimeter of the Weiser Complex, while an additional 0.25 miles of trail 270 is located on a private inholding. These trails were primarily located on low and moderate intensity burn areas, though one segment does occur on a high intensity segment.

All trails are open to pedestrian, equestrian, and bicycle travel but are closed to motorized use. These trails provide an important transportation route for both recreationists and livestock on the proximate grazing allotments. Recreation can be intensive during hunting seasons by both equestrians and hunters on foot.

Due to time constraints inherent in the BAER process, only 2.25 miles (49.2%) were directly surveyed, though overall trail impacts were interpolated from BARC data and its comparison to actual conditions on segments surveyed. Representative portions of all three affected trails were directly surveyed.

The portion of Trail 270 within the fire perimeter has existing drainage features (rolling dips, water bars, trail outslowing, and grade reversals) that are generally adequate for increased runoff and sedimentation generated by the low and moderate burn intensities lying upslope.

Trails 272 and 273 lacked intentional drainage features and can be expected to incur serious degradation from runoff events. Impacts were already clearly evident on Trail 272 (see photos) after the 9/13 rain event; this trail coincides with a substantial area of high burn intensity. The

rain event created serious tread damage and minor washouts, as well as evidence of the formation of new gullies across and emanating from the trail and its cutslope.



NFS Trail 272

Failure to address the impacts of the Weiser Complex are likely to render NFS Trails 272 and 273 impassable and unusable to both grazing permittees and the recreating public, as logs and debris block the trail and gullies and tread failures impede travel. This is also likely to create safety hazards for those attempting to use the trails, resulting in dispersed use from the trail, thereby amplifying the soil and erosion impacts created by cross-country travel and promoting the creation of unmanaged travel routes in the area. Future attempts to restore these trails to USFS standards will be disproportionately expensive if the preventative measures are not taken to reduce the effects expected post fire events.

Besides deterioration of trail infrastructure, the presence of Trails 272 and 273 within the burned area is also likely to lead to additional erosion and sediment impacts to water quality and aquatic habitat in the East Fork and main stem of Sturgill Creek if erosion control measures are not implemented on the trails.

Though impacts were limited on Trail 270, future trail maintenance is likely to be more expensive and difficult if minimal steps are not taken to address problematic areas.

B. Emergency Treatment Objectives:

NOXIOUS WEEDS and LIVESTOCK GRAZING

- a) Treat the minor amounts of known weed populations within or near the fire area with herbicides. The purpose of the treatment is to maintain ecosystem integrity by treating known weed infested sites to prevent invasion into the burned area. By reducing the amount of weed seed in the area and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants. Due to the September rains and subsequent above-freezing temperatures, some weeds (namely rush skeleton weed, or RSW) have already emerged and are in the “rosette” stage, with nutrients being routed to the root systems. This fall (October 2013) is the most efficient time to treat these emerging populations of RSW with maximum efficiency; if the first treatment is delayed until spring of 2014, it is likely that more acres will need to be treated and for a longer duration, as the new growth of this fall will already be established.
- b) Remove livestock grazing for at least one season to allow proper vegetation recover and help prevent the spread of noxious weeds and new weed infestations. Important to keep cattle from drifted back into the burned area.
- c) Monitor fire lines, bulldozer lines, treatment sites, and susceptible burned areas for three years to prevent the expansion of rush skeletonweed, Scotch thistle, spotted knapweed, Canada thistle, and houndstongue.

LAND TREATMENTS

1. Cut/Fill Slope Mulch Objectives: Reduce the risk of erosion, mass failure, and sediment from road cut and fill slopes in areas of high-severity burns. Stabilize the road and cut slopes to provide public safety, safety to BAER implementation crews, and the only access to the Benton Creek Ranch and Idaho Power’s Sturgill Creek Wildlife Conservation Ranch.

- a) Reduce the risk of erosion, mass failure, and sediment from road cut and fill slopes in areas of high severity burns.
- b) Restore erosion-control vegetation on several sections of FS roadway, cut slopes, and fill slopes.
- c) Maintain clear and safe passage for vehicles needed to travel along Forest Road #011 (Sturgill Creek Road) to access the Benton Creek Ranch and Idaho Power’s Sturgill Creek Wildlife Conservation Ranch.
- d) Reduce the risk of failure to the cross-drain and ephemeral-draw culverts by reducing cut-slope erosion.

- e) Reduce the risk of erosion and therefore the streambed fines delivered to streams, to protect fish habitat.

2. Decommission Abandoned and Unauthorized Road Objectives: Reduce the risk of erosion, mass failure, and sediment from abandoned roads in areas of moderate- and high-severity burns where high values downstream are present. Provide adequate drainage to prevent erosion. Remove two culverts (one with a failing, crimped outlet) and man-placed fills that exist in natural drainages. Increase infiltration and reduce peak flows. Restore soil productivity and hydrologic function. Minimize the risk of mass failures that could trigger debris flows.

- a) Treat 0.4 miles of abandoned road (including one CMP in an ephemeral draw with moderate burn above and one CMP on Middle Fork Sturgill Creek with a crimped outlet that reduces outlet capacity to approximately 60-75% of normal) in the Sturgill Creek subwatershed directly above the Benton Creek Ranch and Idaho Power's Sturgill Creek Wildlife Conservation Ranch.
- b) Reduce the risk of erosion and therefore the streambed fines delivered to streams to protect fish habitat.

3. Landslide Infrastructure Repair and Stabilization Objectives: Reduce the risk of mass movement onto Forest Road #011 (Sturgill Creek Road) and into Sturgill Creek at two landslide sites. Both sites have been stabilized in the past with various treatments that were damaged by the fire. The timber lag wall stabilizes the toe of a landslide that ends at the Sturgill Creek road prism. Those timbers were burnt, exposing a vertical cut slope of up to 6 feet. At the gabion wall, one culvert along the inslope ditch is now partially plugged with mud, and the enclosure fence intended to keep grazing activity off the landslide-stabilizing vegetation (now burned) was partially destroyed.

- a) Replace the damaged/destroyed timber in the lag wall to anchor toe of landslide.
- b) Replace the plugged cross-drain culvert at the gabion wall.
- c) Rebuild the enclosure fence at the gabion wall.
- d) Replant the deep-rooted native shrubs and trees that were killed by the fire on the landslide.

CHANNEL TREATMENTS

1. Culvert and Fill Removal Objectives: The culvert and fill removal is designed to reduce the risk of erosion, mass failure, and sediment from man-placed fills that exist in natural drainages. Culverts and drainage fill at two sites are to be removed on unauthorized roads. Risk of culvert and fill failure is much higher in the post-fire era. Implementation would minimize the risk of mass failures that could trigger debris flows. This BAER treatment reduces the risk and threats to several high-value properties and resources, including the following:

- a) Reduce the risk of culvert failure and sedimentation to Idaho Power's Sturgill Creek Wildlife Conservation Ranch water diversion.
- b) Reduce the risk of mass failure of man-placed fill in drainages on abandoned (unauthorized) road.

- c) Restore natural channel and floodplain.
- d) Reduce downstream risk at two stream crossings along Forest Road #011 (Sturgill Creek Road) and the irrigation and hydropower diversion.

ROADS

1. Road Treatment Objectives: Provide clear and safe vehicular travel along Forest Road #011 (Sturgill Creek Road). Sturgill Creek Road will remain closed this winter. The road provides the only vehicular access to the private inholding of the Benton Creek Ranch and Idaho Power's Sturgill Creek Wildlife Conservation Ranch.

Exigency road work will be accomplished *this fall until snow closure for the purpose of stabilization and no further loss of property or threat to safety over the winter/spring* and next summer for larger culvert/bridge upgrades.

- a) Provide clear and safe passage for vehicles along the Forest Road #011.
- b) Upgrade an under-sized culvert with either a larger open-bottom arch or a pre-cast concrete bridge. Upsize several other culverts to accommodate anticipated increased peak runoff and debris due to the fire.
- c) Replace 100 pressure-treated timber beams to repair the retaining wall to prevent cut-slope erosion and mass failure.
- d) Treat cut and fill slopes by blowing wood fiber mulch or agricultural straw mulch and hydroseeding on 5 acres of cut/fill slopes and landslide-stabilization sites.
- e) Reduce imminent hazards by removing hazardous downfall and rocks along road, in-slope ditch, and cut slopes of Sturgill Creek Road.
- f) Correct surface drainage by installing 10-12 dips and insloping or outsloping the surface as appropriate.
- g) Patrol and monitor the road for expected rollout and removal of hazards until winter closes the summit at Bear Saddle and as soon as snow melts in the spring.

TRAILS

1. Trail Objectives: Provide clear and safe passage to emergency treatment sites for both crews and stock support. Remove imminent safety hazards. Reestablish proper drainage and water management structures to prevent further loss to the Wilderness transportation infrastructure.

Emergency trail work will be accomplished next spring and early summer prior to mid- and late-summer thunderstorms.

- h) Provide clear and safe passage for crews and stock along the trails to the BAER treatment sites. Clear trails impacted by fire of trees and rocks, repair drainage, and reconstruct tread where needed to provide access to emergency treatment sites.
- i) Replace and install water diversions structures to accommodate runoff and reduce potential for trail washouts prior to the spring runoff.
- j) Remove debris slides where potential exists to wash out more trail.
- k) Monitor effectiveness of emergency treatments after each damage-producing storm events and during the first snowmelt runoff.

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

Land 80% Channel 80% Roads/Trails 80% Protection/Safety 95% (Closure)

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	95
Channel	80	80	90
Roads/Trails	80	90	95
Protection/Safety	95	95	95

E. Cost of No-Action (Including Loss): \$500,000.00

F. Cost of Selected Alternative (Including Loss): \$288,896

$$\text{TOTAL} = [(C + D) * A] + [(C + E) * B]$$

A = 80%, probability of success of primary treatment;

B = 20%, probability of failure of primary treatment;

C = \$188,986 primary treatment cost;

D = \$0, potential resource value loss if primary treatment succeeds; and

E = \$500,000.00, potential resource value loss if primary treatment fails.

$$\text{Selected Alternative} = [(\$188,896 + 0.) * .80] + [(\$188,896 + 500,000) * .20] = \$288,986$$

No Action Alternative = $[(0+0.) * .20] + [(0)+ 500,000) * .80] = \$500,000$

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range
<input type="checkbox"/> Forestry	<input 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 checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS

Team Leader: Dave Kennell
Melanie Vining (trainee)

Email: dkennell@fs.fed.us/mlvining@fs.fed.us

Phone: 208-634-0793/208-253-0131 **FAX:** 208-253-0109

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.)

TREATMENTS TO PROTECT ECOSYSTEM INTEGRITY FROM NOXIOUS WEEDS

Treat selected burned and unburned areas (approximately 200 acres) within or adjacent to source weed populations in the fall of 2013, spring of 2014, fall of 2014, spring of 2015, and fall of 2015 to prevent the expansion of rush skeletonweed, Scotch thistle, spotted knapweed, Canada thistle, and houndstongue. Spray with truck-mounted sprayers or use a back pack sprayer for areas not accessible by vehicle. **For the initial BAER request we will be treating weeds this Fall 2013, since recent green up and physiology for dormancy is the most effective time to treatment, and treat again in the Spring of 2014. If fall 2013 treatment is not possible, more extensive treatment in spring 2014 and possibly fall 2014 will be needed.**

TREATMENT TO PROTECT VEGETATION RECOVERY

Remove livestock grazing from the effected pasture for one growing season, until approximately July 15, 2014. At this time, evaluate vegetation condition and recovery *to see if livestock grazing can resume or if additional rest is needed for another growing season.* This would allow native vegetation to recover and help prevent the spread of noxious weeds and new weed infestations. This would be accomplished by permit administration through the annual operating instructions and grazing rotation for the current grazing season and by hiring a range rider to move cattle out of the burn area.

LAND TREATMENTS

1. Cut and Fill Slope Seed and Mulch

Description of Emergency Treatments:

Five acres of erosion control seed and mulch will be applied on cut and fill slope of Forest Road #011 where high-severity fire occurred.

Where Treatment is Applied: Treatments will be done in the in the Sturgill Creek subwatershed in areas of high severity burns on cutslopes and small ephemeral draws directly adjacent and along the Forest Road #011.

How Treatment is Applied: Five acres will be seeded with native seed, weed-free certified straw mulch will be blown, and tackifier will be applied. The Forest will apply all treatments using the Forest hydroseeder, blower, and force account crews.

Purpose of Treatment: The cut and fill slope treatment will mitigate the risk of cut and fill slope failure along the Forest Road #011. The road provides the only access to the Benton Creek Ranch and Idaho Power's Sturgill Creek Wildlife Conservation Ranch.

2. Reduce Erosion and Restore Hydrologic Function on Abandoned Roads.

Description of Emergency Treatments: Treat 0.4 miles of abandoned and unauthorized road to reduce expected post-fire increase in erosion and sediment delivery. The unauthorized road will be opened to access undersized culverts (one ephemeral and one failing perennial) slated for removal. The road will then be decommissioned to reduce erosion and sediment delivery and restore soil productivity and hydrologic function.

Where Treatment is Applied: All treatments will be done in Sturgill Creek subwatershed where most of the high percentage of moderate to high severity burns occurred.

How Treatment is Applied: The Forest will use a track excavator and Forest wage grade operator. Supervision will be done by a Forest watershed restoration crew leader. New disturbance will be dry seeded and mulched. Treatment will include the following:

- a) Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation;
- b) Blocking the entrance to a road and installing waterbars;
- c) Removing culverts, reestablishing drainage ways, removing unstable fills, pulling back road shoulders, and scattering slash on the inactive roadbed;
- d) Restoring natural contours and slopes.

Purpose of Treatment: The road treatments are designed to mitigate the risk and reduce the threats to several values and resources, including the following:

- a) Reduce the extent on erosion and sediment in the Sturgill Creek subwatershed the Benton Creek Ranch and Idaho Power's Sturgill Creek Wildlife Conservation Ranch.
- b) Reduce the risk of erosion mass failure of road fill along abandoned roads.
- c) Close out all temporary routes used for BAER channel treatment application where abandoned culverts and fill and drainages are removed.
- d) Eliminate the potential of these roads being used and established as unauthorized ATV and other motorized access routes in an area closed to motorized cross-country travel.
- e) Reduce the erosion and therefore the streambed fines delivered to Sturgill Creek and protect valuable fish habitat.

CHANNEL TREATMENTS

1. Remove Culverts and Fill within Road Drainages.

Description of Emergency Treatments: Remove two culverts and fill within drainages on one abandoned and unauthorized road. The culverts and fill have a high probability of failure. Risk is to high-value downstream private property and fish habitat.

Where Treatment is Applied: All treatments will be done in the Sturgill Creek subwatersheds with a high percentage of moderate- to high-intensity burns. .

How Treatment is Applied: All fill will be removed from the two culverts using a track excavator. Fill will be removed to natural pre-road level. The fill will be placed outside the drainages along the existing cutslope of the road prism. The stream channel will be designed to mimic the natural channel and stabilized with rocks and logs.

Purpose of Treatment: The Culvert and Fill Removal and Channel Treatment are designed to reduce the extent of erosion and sediment in the Sturgill Creek subwatershed.

ROAD TREATMENTS

1. Perennial Stream Culvert Upgrades:

- a. 36" CMP on main Sturgill Creek, 18% moderate to high-severity burning not far above the pipe. This pipe is already undersized and plugged in the first post-fire storm. USGS-predicted 100-yr flood would require a 60"-equivalent structure. Allowing for the burning upstream with anticipated increased debris and bedload, a 72"-equivalent structure should be considered. A concrete box culvert might be appropriate, as fish passage would be required. On installations requiring footings, consideration of the erosive soils in the area should be given and a scour analysis required.
- b. 48" CMP on Middle Fork Sturgill Creek, near lag wall. 15% of the drainage area had moderate to high-severity burning. This pipe is slightly undersized, but reinforcing and recontouring the slope around the culvert entrance would increase the hydraulic efficiency and stabilize the soil. We recommend reshaping and facing the area with riprap, which would need to be hauled in several miles from a suitable source.
- c. 24" CMP on perennial drainage, nicknamed "Mudflow Culvert," drainage was 39% burned at high or moderate severity. This was cleaned out at least once after a post-fire rain. Upsizing to 36" to handle increased debris and sediment is recommended. This pipe is deep and 50-60' long.

2. Ephemeral Draw Culvert Upgrades:

- a. 12" relief culvert actually drains 272 acres, with 67% moderate or high-severity burning. Parameters fall outside the USGS suggested range, but extrapolation indicates a 36" culvert size.
- b. 18" CMP on ephemeral drainage that was 90% burned at moderate or high severity. Recommend upsizing to 24" to accommodate sediment and debris.
- c. 18" CMP on ephemeral drainage that was 100% burned at moderate or high severity. Recommend upsizing to 24" for debris and sediment.

3. Cross-drain Culvert Upgrades:

- a. 15" partially-plugged pipe at the gabion structure would be replaced with an 18" x 32' pipe on a steeper grade.
- b. 15" cross-drain pipe is in the middle of a high-severity burn. It already plugged and was cleaned out after a storm. Recommend replacing with at least an 18" CMP. This pipe is deep and 50-60' long.

c. Any other cross drains that are found to be plugged or undersized will be replaced with 18-24" pipes.

4. Timber Lag Retaining Walls:

Repair timber lag retaining wall burned by the fire. Remove damaged timbers and fill material. Purchase new timbers. Haul to site and install 100 new timbers. Refill and compact fill behind timbers. Revegetate by hydroseed/mulch where disturbance occurs. These retaining walls are critical to stabilize the cutslope.

5. Cut/Fill Slope and Landslide Erosion Vegetative Erosion Control:

Hydroseed/mulch approximately 5 acres to treat cut and fill slopes, due to the severity of the burn. The Forest plans to use the Forest Watershed Crew and Forest Hydroseeder to apply erosion control grass seed, mulch, and fertilizer to a total of 5 acres along the 5 miles of cut and fill slopes within the Weiser Complex Fire perimeter.

6. Rock Rollout and Fallen Snags Hazards:

Remove rocks, sediment, and burnt snags that fall onto the road, inslope ditches, culvert inlet, and cutslopes. Use backhoe/loader and dump truck to haul to designated disposal site.

7. Monitoring Patrols:

Maintain regular patrol to monitor and remove hazards that will continue to fall onto the road, inslope ditches, culvert inlet, and cutslopes until snow closes the summit and as soon as snow melts in the spring.

TRAIL TREATMENTS

1. Remove rocks, debris slides, and burnt snags that have fallen onto or across trails:

Allow safe access for BAER treatment crews and to remove standing snags that pose a safety risk to crewmembers.

3. Stabilize tread and provide for surface drainage:

The entire length of trails 272 and 273 within the burned area (2.7 miles) need work to control surface water. Spot treatments may be necessary on approximately 7% of the segment of trail 270 within the burned area (approximately 0.2 miles of work).

Work to stabilize tread and cut and fill slopes and provide proper outslowing will be necessary for proper runoff control. Install drainage structures as necessary to increase the ability to respond to increased runoff patterns. Clean any existing and undamaged drainage structures to ensure capacity to respond to increased runoff patterns. Repair or replace any damaged water drainage structures. Remove down logs, rock fall, and debris that may create hazardous conditions for BAER treatment crews.

4. Provide for public safety over the long term:

Six warning signs will be installed. These will use the following text:

“Warning: This trail enters a burned area – expect hazards such as falling trees and unstable trail tread” (see photo).

Signs will be placed at the following six locations:

- Trailheads for trails 272 and 273 along NFS Road 50011
- Trailheads for trail 272 on Roads 50011 and 50085
- The junction of Trails 272 and 335
- The junction of Trails 273 and 283



Trail Warning Sign

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.)

Monitor fire lines, bulldozer lines, treatment sites, and susceptible burned areas for three years to prevent the expansion of rush skeletonweed, Scotch thistle, spotted knapweed, Canada thistle, and houndstongue.

Monitor rangeland for one to three seasons to determine when native vegetation has recovered sufficiently for grazing to be permitted again. Non-BAER.

Monitor effectiveness of channel road stabilization measures to determine when objectives are achieved and no additional stabilization is needed to protect life and property from the effects of the fire.

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

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands			All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units Non Fed	
A. Land Treatments									
Weed Spraying	acres	41	380	\$15,580	\$0		\$0	\$0	\$15,580
Range Rider	days	136	0	\$0	\$0		\$0	\$0	\$2,720
Cut and Fill Slope Mulch	acres	1000	5	\$5,000	\$0		\$0	\$0	\$5,000
Abandoned RD Drainage	miles	10000	0	\$0	\$0		\$0	\$0	\$0
Landslide Exclosure	each	5000	1	\$5,000	\$0		\$0	\$0	\$5,000
EDRR Noxious Weeds	days	300	5	\$1,500					
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
Subtotal Land Treatments				\$27,080	\$0		\$0	\$0	\$28,300
B. Channel Treatments									
Culvert Removal	each	2000	2	\$4,000	\$0		\$0	\$0	\$4,000
				\$0	\$0		\$0	\$0	\$0
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
Subtotal Channel Treat.				\$4,000	\$0		\$0	\$0	\$4,000
C. Road and Trails									
Lag Wall Timbers	each	100	120	\$12,000	\$0		\$0	\$0	\$12,000
Culvert Upgrade: 36" CMP to 72" AOP equivalent	each	100000	1	\$100,000	\$0		\$0	\$0	\$100,000
48" Culvert inlet modification	each	1200	1	\$1,200	\$0		\$0	\$0	\$1,200
Driveable Dips	each	400	10	\$4,000	\$0		\$0	\$0	\$4,000
Other Surface Drainage Work	each	400	1	\$400	\$0		\$0	\$0	\$400
Storm Patrol	each	1000	6	\$6,000	\$0		\$0	\$0	\$6,000
Trails	miles	2000	2.9	\$5,800	\$0		\$0	\$0	\$5,800
Culvert upgrades	each	4500	4	\$18,000	\$0		\$0	\$0	\$18,000
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
Subtotal Road & Trails				\$147,400	\$0		\$0	\$0	\$147,400
D. Protection/Safety									
Closure Gate	each	3000	1	\$3,000	\$0		\$0	\$0	\$3,000
Trail Warning Signs	each	91	6	\$546	\$0		\$0	\$0	\$546
Road Warning Sign	each	150	1	\$150	\$0		\$0	\$0	\$150
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
Subtotal Structures				\$3,696	\$0		\$0	\$0	\$3,696
E. BAER Evaluation									
Initial BAER Report	each	1	6000	\$0	\$6,000		\$0	\$0	\$6,000
<i>Insert new items above this line!</i>				---	\$0		\$0	\$0	\$0
Subtotal Evaluation				---	\$6,000		\$0	\$0	\$6,000
F. Monitoring									
Noxious Weeds	days	300	0	\$0			\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
Subtotal Monitoring				\$0	\$0		\$0	\$0	\$0
G. Totals				\$182,176	\$6,000		\$0	\$0	\$189,396
Previously approved									
Total for this request				\$182,176					

PART VII - APPROVALS

1. /s/ Keith Lannom Oct. 2, 2013
Forest Supervisor (signature) Date
2. /s/ Chris Iverson (for) 10/23/13
Regional Forester (signature) Date