Date of Report: October 15, 2020

BURNED-AREA REPORT

PART I - TYPE OF REQUEST

A. Type of Report

☒ 1. Funding request for estimated emergency stabilization funds
☐ 2. No Treatment Recommendation

B. Type of Action

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

☐ 2. Interim Request #___
☐ Updating the initial funding request based on more accurate site data or design analysis

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Buck

B. Fire Number: ID-BOF-000714

C. State: Idaho

D. County: Valley

E. Region: 04

F. Forest: Boise

G. District: Cascade

H. Fire Incident Job Code: P4NH0G

I. Date Fire Started: August 26, 2020

J. Date Fire Contained: Est. 10/31/2020

K. Suppression Cost: $5,384,500 (as of 10/15/2020)

L. Fire Suppression Damages Repaired with Suppression Funds (estimates):

Reference the Buck Fire suppression rehabilitation plan for more information.

1. **Fireline repaired (miles):** Approximately 4.4 miles of fire handline built in Idaho Power right-of-way parallel to County Road 413 will be repaired. Cupped or entrenched tread will be recontoured to natural grade. Water bars will be constructed to reduce erosion and slash dispersed onto the fireline to obscure and hinder use.
2. **Pump Sites:** Pump sites are identified for removal of dams, recontouring disturbed areas, rehabbing user-created trails, removal of contaminated soils and all plastic, trash or other foreign materials at the sites.
3. **Other (identify):** Incident command, base camps, staging areas and drop points are identified for suppression repair activities, including removal of flagging and trash, scattering of slash, and rehabbing any user-created trails. BAER treatments include Early Detection and Rapid Response (EDRR) in these locations during the next year to prevent noxious and invasive plants. EDRR will be used on areas where surface soils were disturbed and/or equipment may have moved non-native seed into the suppression activity areas.

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170602080105	Burntlog Creek	25,204	6,252	24%
170602080104	Ditch Cr. -Johnson Cr.	16,239	.2	1
170602080108	Porcupine Cr. – Johnson Cr.	21,529	4,762	22
170602080107	Riordan Creek	14455	527	4
170602080106	Trapper Cr. – Johnson Cr.	12,584	7,744	62
170602050601	Upper Little Pistol Cr	17,415	54	1

N. Total Acres Burned: 19,342

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	19,342
OTHER FEDERAL (LIST AGENCY AND ACRES)	
STATE	
PRIVATE	
TOTAL	19,342

O. **Vegetation Types:** Roughly 32% of the vegetation types in the fire perimeter previously burned in the 2007 Cascade Complex and are dominated by burned herbaceous or burned sparsely vegetated community types. Vegetation types in the remainder of the fire perimeter are dominated by coniferous forest consisting of Douglas fir at lower elevations, transitioning to Engelmann spruce, lodgepole pine, subalpine fir, and whitebark pine at higher elevations. Aspen also occurs in the area but is not a dominant vegetation type. A wide variety of native shrubs and grasses exist throughout the fire perimeter. Whitebark pine (*Pinus albicaulis*) is an ESA candidate species and a Regional Forester's Sensitive Species. Documented occurrences of *Helodium blandowii* and *Hierochloe odorata*, Forest Watch plant species, exist in the riparian communities located at Trapper Flat. The Chilcoot Peak Research Natural Area (RNA) exists in the fire area and includes two subalpine, glaciated basins with an unusually diverse assemblage of wetland and aquatic associations, including a high elevation lake, wet meadows, raised ponds with sphagnum moss mats and low- to steep-gradient streams. It also includes high elevation whitebark pine-subalpine fir habitat types. The Chilcoot Peak RNA was selected as an RNA because of its diverse representation of subalpine fir habitat types ranging from wet to dry sites and is the headwaters for Trapper Creek, a tributary to Johnson Creek.

P. Dominant Soils: Gravelly sandy loams with 15-50% fine gravels.

Q. Geologic Types: Idaho batholith granitic bedrock, slightly to moderately fractured and moderately soft; moderately weathered.

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERRENIAL	49
INTERMITTENT	3.1
EPHEMERAL	
OTHER (DEFINE)	

S. **Transportation System:**
Trails: *National Forest (miles):* 11 miles
Roads: *National Forest (miles):* 20.4 miles (open); 0 miles (closed)

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	3,520				3,520	19%
Low	5,836				5,836	30%
Moderate	8,344				8,344	43%
High	1,642				1,642	8%
Total	19,342				19,342	100%

B. Water-Repellent Soil (acres): Weak (11-40 seconds) water repellency was observed in the high burn severity areas and in a portion of the moderately burned areas. A rough estimate of 10-25% of the fire area is assumed to have fire-induced water repellency.

C. Soil Erosion Hazard Rating: Landtype inherent surface erosion hazards range low to high for bare soils. Reduced infiltration due to water repellency will push many soils toward the high rating.

D. Erosion Potential: ERMiT estimates erosion at 1.97 ton/acre in year one post-fire (for Moose Creek, as an example); based on Deadwood Dam adjusted climate scenario. Around 25% of the eroded fraction would be fine (sand-clay) material.

E. Sediment Potential: USGS debris flow modeling estimates 60-80% likelihood in Moose Creek, South Fork Bear Creek, and Middle/Lower Trapper Creek.

F. Estimated Vegetative Recovery Period (years): 1 to 3 years for understory graminoids/shrubs

G. Estimated Hydrologic Response (brief description): It is reasonable to expect increased post-fire runoff in Moose Creek, Bear Creek, and Trapper Creek. Burnt Log post-fire runoff may increase also. Flows may increase from 100-800% depending on the storm event and conditions at the time of the event. Increased flows are most likely from South Fork Bear Creek, Trapper Creek and Moose Creek.

PART V - SUMMARY OF ANALYSIS

Introduction/Background
The Buck Fire started on the Boise National Forest Cascade Ranger District on August 26, 2020, and grew to 19,631 acres by October 8, 2020. The fire eventually burned into the Frank Church River of No Return Wilderness which is mangered by the Payette National Forest Middle Fork Ranger District. A total of 296 acres burned in the wilderness. The fire was managed under 3 different IMTs. It was managed with a point protection strategy with few suppression activities. As part of fire suppression activities, roads and dispersed recreation areas were snagged and cleared for safety. Fire crews cleared fallen snags off Forest Road 447 (Burntlog Road) for the full length in the fire perimeter. Fire suppression cleared fallen snags on and felled standing snags adjacent to Forest Road 440 (Thunder Mountain Road) with a feller buncher and falling module, leaving felled snags in-place along the road side.

The BAER assessment team initiated field reconnaissance of the burned area on October 6, 2020, using a BAER assessment perimeter of 19,475 acres. At the time, the fire was 33% contained but there were minimal

access restrictions to the burned area for the BAER assessment team. The Buck Fire burned in the the Porcupine Creek-Johnson Creek, Riordan Creek, Trapper Creek-Johnson Creek, and Burntlog Creek watersheds on the Boise National Forest Cascade Ranger District.

The primary values at risk from post-fire effects due to the Buck Fire are: human life and safety, transporation infrastruction (roads, trails and culverts), soil productivity, hydrological function, loss of designated critical habitat and water quality for ESA-listed bull trout, chinook salmon and steelhead, site integrity of cultural resources, and native vegetation communities. The primary threats caused by the fire include increased runoff, which is expected to intensify the first 2 to 5 years following the fire until the burned watersheds recover, and accelerated hillslope erosion, which would results from amplified runoff and decreased infiltration rates. High intensity, short duration rainfall may result in sediment loading, localized debris flows and valley bottom flooding, primarily in the Porcupine Creek-Johnson Creek, Trapper Creek-Johnson Creek and Burntlog Creek drainages. Additional threats include falling trees and rolling rocks originating from destabilized hillslopes in the burned area.

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

Table 5: Critical Value Matrix

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**

1. Human Life and Safety (HLS):

Potential threats to visitors/recreating public, residents of private lands, & Forest Service employees include flooding with a minor potential for localized debris flows, hazard trees and rock fall, and loss of ingress and egress. These threats exist along roads, at recreation areas, and to permitted uses downstream or downslope of burned slopes, particularly in areas with a high or moderate soil burn severity. Risk is increased with higher probability in places having greater access and more frequent concentrations of people. Locations with increased risk include: road systems within the Burntlog Creek, Trapper Creek, and Buck Creek. Bear Creek Trailhead is also at a high risk due to hazard trees.

Very high risk (likely, major) to forest visitors and Forest Service employees within and adjacent to the burned area travelling 440, 440A, and 451 NFS roads, and at dispersed recreation sites due to the increased threat of falling trees, rolling rocks, flash floods, and debris flows within the burned area. (Treatments PS-01 Warning Signs)

High risk (possible, major) to forest visitors and Forest Service employees within and adjacent to the burned area travelling 447 NFS road, 413 forest road, 081 and 090 NFS Trails and at dispersed recreation sites due to the increased threat of falling trees, rolling rocks, flash floods, and debris flows within the burned area. (Treatment PS-01 Warning Signs, PS-02 Recreation Site Hazard Removal, RT-02 Trail Drainage Rehabilitation/Trail Marking)

2. Property (P):

Road Infrastructure

There are 20.4 miles of National Forest System Roads (NFSR) within the fire area. Post-burn conditions and the predicted watershed response indicate the potential for increased runoff and overland water flow, with movement of sediment and debris downslope into roadway drainage features such as roadside ditches, culvert inlets, roadway dips and run outs. Once these drainage features become impacted and overwhelmed by the increased runoff, their function fails causing uncontrolled

water to divert, with a resulting in major damage to the invested road improvements, loss of road function, and loss of access along some road segments.

There is a high risk (possible, major) to NFS road prisms from increased overland flow and accelerated hillslope erosion concentrating on road segments downslope from areas burned at moderate and high severity. Damage to or failure of road segments constitute a loss of Forest Service infrastructure, with the accumulated threat of accelerated sediment delivery to adjacent streams impacting designated critical or suitable occupied habitat for ESA-listed aquatic fish species and water quality. (Treatment RT-01 Road Drainage Storm Proofing)

There is a high risk (likely, moderate) where NFS roads cross perennial and intermittent drainages from post-fire runoff. Increased post-fire runoff is expected from upslope drainages burned at moderate and high severity and overwhelm undersized culverts. Damage to or failure of culverts constitute a loss of Forest Service infrastructure, with the accumulated threat of sediment delivery from road crossing fill negatively altering designated critical or suitable occupied habitat for ESA-listed aquatic fish species and water quality. (Treatment: RT-01 Road Drainage Storm Proofing)

3. Natural Resources (NR): Native Plant Communities

High Risk (likely, moderate) to native and naturalized plant communities including: riparian zones and rangelands with naturally low vegetation cover, and areas that had disturbances caused by suppression activites such as hand lines and drop points are at risk due to spread of noxious weeds and invasive plant species. Invasive weed species that exist within and adjacent to the fire area that may impact native plant communities include: Rush skeleton weed, Canada thistle and oxeye daisy. (Treatment L-01 Early Detection and Rapid Response)

Low Risk (possible, minor) to whitebark pine habitat due threat of loss of individuals and habitat. No treatments proposed.

Bull Trout and Chinook Salmon

High Risk (likely, moderate) throughout the fire area to designated critical habitat (DCH) or suitable occupied habitat (SOH) to ESA-listed bull trout (Salvelinus confluentus) and chinook salmon (Oncorhynchus tshawytscha). Potential threats include short- and long-term modification of suitable occupied or designated critical habitat due to channel scouring from increased stream flows, accelerated erosion, increased sediment delivery, debris flows, and potential stream channel diversion down road prisms, primarily in locations associated with moderate and high burn severity areas. (Treatments RT-01 Road Drainage Storm Proofing)

Soil Productivity

There is a high risk (likely, moderate) to soil productivity associated with post-fire threats from accelerated hillslope and sheet erosion, rilling, and gullying in moderate and high burn severity areas. Increases in soil erosion are expected from post-fire environments primarily from the loss of protective soil cover and nutrient-rich organic matter, thereby decreasing soil productivity. Analysis of existing soil conditions and landtypes within the burned area suggests an increased probability for elevated erosion over the inherent high erosion hazard. Damaging erosion events will likely be localized in the moderate and high burn severity areas in the short term (< 10 years) and not result in long-term soil degradation. Risks to soil productivity will diminish as forest floor recovery occurs, therefore natural soil recovery is considered an appropriate response action. While there are no treatments recommended to protect the soil productivity, other land and road treatments will provide some protection to soil productivity in the burn area.

Hydrologic Function

High risk (likely, moderate) from increased run-off with overland flow influencing erosion and sediment delivery to hydrologic function from post-fire conditions. The conditions that contribute to these include: decreased infiltration, reduced vegetation canopy and ground cover. Impacts to watershed process that regulate hydrologic function are expected within moderate and high burn severity areas. The recommended response action is natural recovery.

There is a potential threat for scour and changes in channel morphology in high and moderate severity in the upper and mid drainages that flow into Trapper Creek and Buck Creek. These drainages also flow into Johnson Creek. This potential threat is from increased sediment. No treatments recommended.

4. Cultural and Heritage Resources:
Very High Risk (very likely, moderate) to critical Cultural and Heritage Resources within the burn perimeter as a result of increased potential for looting resulting from increased public searching for sites and exposure of previously concealed artifacts and features.(PS-03 Cultural Resource Protection Patrols)

B. Emergency Treatment Objectives:

1. Reduce unacceptable risks to human life and safety from flooding, debris flows, and other threats such as hazard trees. Taking immediate actions to protect human life is the single overriding objective prior to implementing other actions.

2. Reduce unacceptable risks to roads, trails, and bridge infrastructure due to imminent erosion and flooding post fire events. Prevention of additional loss to infrastructure and a reduction of threats to threatened and endangered species habitat are objectives for the proposed treatments.

3. Reduce unacceptable risks to critical and occupied habitats of federally listed species. Many drainages within the fire provide habitat for bull trout, Steelhead trout, and Chinook salmon.

4. Reduce unacceptable risks to native and naturalized vegetation communities from the threat of noxious weeds and invasive species.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:
Land:
Channel: NA
Roads/Trails: 70%
Protection/Safety: 90%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	*3 years after treatment*	*5 years after treatment*
Land	80	80	90
Channel			
Roads/Trails	80	90	90
Protection/Safety	90	80	70

E. Cost of No-Action (Including Loss): The cost of loss related to human life and safety cannot be calculated.

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

☒ Soils ☒ Hydrology ☒ Engineering ☒ GIS ☐ Archaeology
☒ Weeds ☒ Recreation ☐ Fisheries ☐ Wildlife
☐ Other:

Team Leader: Holly Hampton
Email: holly.hampton@usda.gov **Phone(s)** 208-596-2245

Forest BAER Coordinator: Holly Hampton
Email: holly.hampton@usda.gov **Phone(s):**

Team Members: *Table 7: BAER Team Members by Skill*

Skill	Team Member Name
Team Lead(s)	Holly Hampton
Soils	Matt Robinson
Hydrology	Matt Robinson & Clay Roehner
Engineering	Brett Barry, Dave Woras & Rick Stone
GIS	Tony Beauchaine
Archaeology	Susie Osgood
Weeds	Noe Reyes
Recreation	Zach Van Abbema
Other	Jennifer Brickey

H. Treatment Narrative:

Land Treatments:

L-01 EDRR: Reduce the potential for establishment of new noxious weed infestations in native or naturalized communities, particularly establishment of new noxious weed infestations in highly susceptible burned areas, prevent spread of existing infestations, and decrease rate of spread of weed density from existing infestations.

Invasive plants and weed assessments will be conducted in FY2021 for Early Detection and Rapid Response (EDRR) on any new infestation located within the fire perimeter. Treatments will occur at proper phenology of each species to ensure maximum control. This treatment will be supplemented by natural re-vegetation. Assess areas that have a high potential for weed/invasive species establishment. The fire area falls within an area is largely free of noxious weeds and native vegetation is a critical value. Additional critical areas include roads, hand lines, and burned areas where suppression vehicles and equipment traveled through known noxious weed/non-native invasive plant species populations. Disturbed areas within and along the fire perimeter, such as hand lines, staging areas and ICP will also be prioritized for monitoring. Acres priority for EDRR are as follows:

Suppression EDRR

1) *Drop points 8 acres*
2) *Handline 1 acre*
3) *ICP: Landmark 5 acres, Johnson Creek Cabin Rental 5 acres*
4) *Roads 79 acres (Suppression Damaged Road Prism)*

BAER EDRR (Acreage calculated within high and moderate burn severity)

5) *Roads 184 acres*
6) *Handline 22 acres*
7) *Trails 20 acres*

8) Existing weed population 54 acres

1. Conduct short-term monitoring in FY2021 using early detection and rapid response (EDRR) assessment/monitoring of noxious weed/non-native invasive plant species infestations within the burned area. Monitoring to determine the post-fire presence or spread of invasive species throughout the fire area.

2. Inventory/assessment, photos and map new noxious weed infestations within burned area using GPS technology and upload into the Cascade Ranger District GIS Noxious Weeds database.

3. Chemical treatments using pickups, UTVs and backpack spray units will be used on any noxious weeds located within the fire on public lands. Coordination with County Departments of Agriculture and or the private land owner will be conducted on noxious weeds found on private lands inside and outside of the burn perimeter.

EDRR Treatment Cost Estimate

Item	UOM	Unit cost	# of units	Total Cost
Suppression EDRR	Acre	$41.00	98	$4,018
BAER EDRR	Acre	$41.00	280	$11,480
Total				**$15,498**

Channel Treatments: None proposed.

Roads and Trail Treatments:

RT-01 Road Drainage Storm Proofing: Increased runoff resulting from burned slopes impacting stream channels adjacent to roads will damage roadway surfaces, drainage structures, and increase associated threats to Human Life and Safety (loss of ingress/egress) and Natural Resources (damage to designated critical or suitable occupied habitat for bull trout).

The purpose of this treatment is to mitigate additional risk to Human Life and Safety, property, emergency ingress/egress, loss of access to visitors and local residents, and impacts to water quality, riparian, and bull trout, chinook salmon, and steelhead (listed species). Approx. 20.4 miles of National Forest System Roads are located within fire perimeter, representing a significant financial property investment. Protect road infrastructure and minimize sediment delivery into the watersheds that run into Trapper Creek and Bear Creek (which contain listed species such as Bull Trout) and Johnson Creek (which contains listed species such as Bull Trout and Chinook salmon/steelhead).

Of the 20.4 miles within the perimeter, approximately 14.8 miles were surveyed or had reconnaissance performed.

The roads listed below were found in areas of high and moderate burn severity. The minimal treatments required to remedy these issues are:

1. Drain Dips (with or without armor) – Construct rolling dips per Forest Service standards. Place rip rap across the roadway and on the fill slopes where potential runoff can occur if flow was to overtop the roadway from a plugged culvert or excessive runoff.

2. Waterbars – Construct waterbars per Forest Service and/or BLM standards. Place enough waterbars where necessary that will quickly divert flow off the roadway, before causing surface erosion.

3. Culvert Cleaning – Remove any blockages from inlet, outlet and inside barrel. Straighten bent inlets. Catchment-basins shall have all existing silt and debris removed and either hauled away or spread out such that the material cannot reenter the drainage structure during a runoff event.

4. Ditch Cleaning – All drain ditches along the length of the roads shall have all existing silt and debris removed and either hauled away or spread out such that the material cannot reenter the drainage structure during a runoff event.

5. Reshape the road surface to provide positive drainage to ditches and culverts. Remove berm where water will flow off roadbed, repair large ruts in the middle of the roadbed that channel water downgrade

NFSR #440 (3.6 miles to be treated)
Road Template Reshaping: 3.6 Miles
Waterbars reconditioning/reconstruct (existing): 60 Each
New waterbars: 10 each

NFSR #440A (1.7 miles to be treated)
Road Template Reshaping: 1.7 Miles
New waterbars: 10 each

NFSR #447 (2.0 miles to be treated)
Culvert Cleaning: 6 Each
Road Template Reshaping/Ditch Cleaning: 2.0 Miles
New waterbars: 20

NFSR #451 (1.1 miles to be treated)
Road Template Reshaping: 1.1 Miles
New waterbars: 10 Each

NFSR #451A (0.3 miles to be treated)
Road Template Reshaping: 0.3 Miles
Waterbars: 3 Each

Road Drainage Storm Proofing Cost Estimate

Item	UOM	Unit cost	# of units	Total Cost
Road Drainage Storm Proofing	miles	$2,007.80	8.7 miles	$17,468

*See Road Drainage Storm Proofing treatment specification form for complete cost description

RT-02 Trail Drainage Rehabilitation/Trail Marking:

Increased runoff resulting from burned slopes with high severity adjacent to trails will damage trail surfaces, drainage structures, and increase associated threats to Human Life and Safety (loss of ingress/egress).

The purpose of this treatment is to mitigate additional risk to Human Life and Safety, property, and emergency ingress/egress. These treatments would take place in severely burned areas to prevent unacceptable risks to human life and safety, erosion and loss of trail investment and minimize potential additional degradation to water quality. Stabilization of the trail would also decrease risk and potential for injury to pubic and administrative users. Adding trail markers would help ensure that users can identify the trail location and not mistakenly travel off trail, potentially being exposed to higher risks from hazard trees.

The minimal treatments required to remedy these issues are:

1. Install water-bars depending on steepness of trail (4-8 per section) on approximately 3 identified steep sections of the 081 trail.
    a. Install water bars in sections of trail that have continuous gradient for a length of greater than 50 feet and are either in sloped (cupped) or show evidence of routing water (rills, gullies).

2. Construct tread retention structures where necessary and downslope, stabilizing vegetation has been consumed.

3. Install trail marking signage (blazes) in needed areas along the same stretch of the 081 trail (approximately 4-8 markers per section), and along the first 1,000' of the 090 trail where it leaves the 047-road heading West (4-8 markers needed).

Item	UOM	Unit cost	# of units	Total Cost
Trail Drainage Rehabilitation/Trail Marking	Site 090 Trail	$1,433	1	$1,433
Trail Drainage Rehabilitation/Trail Marking	Site 081 Trail	$5,734	1	$5,734
Total				$7,167

Protection/Safety Treatments:

PS-01 Warning Signs The overall purpose of this treatment is to reduce risks to human life and safety by warning motorists and/or Forest visitors of existing threats while traveling within and downstream of the burned area.

"Entering Burned Area" signs are needed to alert the public of possible threats to their life and safety that exist within or downstream of a burned area. The signs contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and flash floods.

Hazard Warning Signs Cost Estimate.

Item	UOM	Unit cost	# of units	Total Cost
Roadside & Trailhead Signs: "Entering Burned Area Warning"	Number of signs	$318.91	11	$3,508

PS-02 Recreation Facility Hazard Removal

The fire burned around trailheads and along critical pieces of trail that will require tread repair. The treatment is to fall hazard trees at the 081 Trail (Bear Creek Trail) and contour fall the hazard trees along the Bear Creek trail for approx. .6 miles. This .6 miles will be where work is being completed under the RT-2 Treatment. The purpose of the treatment is to prevent damage to human life and safety from fire damaged trees. A dead tree is considered a hazard tree in a developed area setting. Falling of these trees will prevent unnecessary injury to the public or their property.

Recreation Facility Hazard Removal Cost Estimate

Item	UOM	Unit cost	# of units	Total Cost
Recreation Site Hazard Removal	sites	$5,631	1	$5,631

PS-03 Cultural Resource Protection Patrols

The primary purpose of resource protection patrols, provided by forest service personnel is to reduce or mitigate the risk of archeological looting during a time (through Fall 2021) when hunters and post-fire "sightseers" are expected to be in the area. This treatment is a preventative action rather than an enforcement treatment action. Forest users will be notified of the risk as appropriate to assist in lowering the possible risk of looting. The sites identified are eligible or potentially eligible for listing on The National Register of Historic Places. These sites are most vulnerable to looting immediately after a fire when there is no vegetation to help obscure artifact visibility. Cultural resources are scattered throughout the fire area, making area closure difficult. Administrative closures can draw attention to specific site locations.

There is a high risk to cultural resource sites within the burn perimeter as a result of increased potential for looting resulting from increased public access to sites and exposure of previously concealed artifacts and features, and loss of sites and/or site integrity as a result of erosion, runoff, and flash flooding from post wildfire storm events.

Cultural Resource Protection Patrols Cost Estimate

Item	UOM	Unit cost	# of units	Total Cost
Cultural Resource Protection Patrols	site	$530.53	15	$7,958

I. Monitoring Narrative:

LT-01 Treatment sites will be evaluated annually for the next three years to ensure control methods are meeting resource objectives and to inventory for new invaders. Monitoring years 2 and 3 will be completed with regular program funding. Weed specialist/technicians will visit chemically treated sites after treatment; this is especially important for weed populations that are sprayed to ensure efficacy of herbicide application. Initiate follow-up treatments if additional non-native species or new infestations are discovered. Control will be considered successful upon determination that all noxious weeds have been controlled and non-native invasive plants have not spread beyond their pre-fire locations.

Implemented road drainage improvements (RT-01) will be evaluated to ensure stabilization objectives are being met after storm events.

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

Line Items	Units	Unit Cost	# of Units	BAER $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
A. Land Treatments										
L-01 EDRR BAER		41	280	$11,480	$0		$0		$0	$11,480
L-01 EDRR Fire Suppression		41	98	$4,018	$0		$0		$0	$4,018
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$15,498	$0		$0		$0	$15,498
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										
RT-01 Road Drainage Storm	Miles	2,008	9	$17,468	$0		$0		$0	$17,468
RT-02 Trail Drainage Rehab	Site	2,389	3	$7,167	$0		$0		$0	$7,167
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road and Trails				$24,635	$0		$0		$0	$24,635
D. Protection/Safety										
PS-01 Warning Signs	Sign	319	11	$3,508	$0		$0		$0	$3,508
PS-02 Recreation Site Haza	Site	5,631	1	$5,631	$0		$0		$0	$5,631
PS-03 Cultural Resource Pr	Site	531	15	$7,958						$7,958
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Protection/Safety				$17,097	$0		$0		$0	$17,097
E. BAER Evaluation										
Initial Assessment	Report			$23,043	$0		$0		$0	$23,043
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$23,043	$0		$0		$0	$23,043
F. Monitoring										
				$0	$0		$0		$0	$0
				$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				$57,230	$0		**$0**		**$0**	**$80,273**

PART VII - APPROVALS

1.

/s/ TAWNYA BRUMMETT Oct 16 2020

Forest Supervisor Date