

Date of Report: 07/11/2023**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 #1 – updates/changes are shown in red font #2 -updates/changes are shown in blue font
- ☒ Updating the initial funding request based on more accurate site data or design analysis

PART II - BURNED-AREA DESCRIPTION**A. Fire Name: Irving Peak/White River****B. Fire Number: OWF-315/OWF-319****C. State: Washington****D. County: Chelan****E. Region: Pacific Northwest (6)****F. Forest: Okanogan-Wenatchee (17)****G. District: Wenatchee River****H. Fire Incident Job Code: P6PZ47, P6PZ48****I. Date Fire Started: 08/11/2022****J. Date Fire Contained: 12/15/2022****K. Suppression Cost: \$21,093,828****L. Fire Suppression Damages Repaired with Suppression Funds (estimates):**

1. Fireline repaired (miles):
2. Other (identify): 5 miles of road used as fireline.

M. Watershed Numbers:*Table 1: Acres Burned by Watershed*

| HUC # | Watershed Name | Total Acres | Acres Burned | % of Watershed Burned |
|--------------|------------------------------------|-------------|--------------|-----------------------|
| 1702001101 | White River-Little Wenatchee River | 175,286 | 11,230 | 6% |
| 170200110110 | Lower Little Wenatchee River | 12,386 | 1,491 | 12% |
| 170200110105 | Lower White River | 16,821 | 2,928 | 17% |
| 170200110108 | Middle Little Wenatchee River | 8,857 | 4,573 | 52% |
| 170200110103 | Panther Creek | 11,993 | 320 | 3% |
| 170200110106 | Upper Little Wenatchee River | 21,760 | 1,919 | 9% |

N. Total Acres Burned:

| Ownership | High | Moderate | Low | Unburned | Grand Total |
|--------------------|------------|--------------|--------------|--------------|---------------|
| Private Land | | 10 | 19 | 34 | 63 |
| State Land | | 2 | 4 | 10 | 16 |
| Forest Service | 159 | 4,297 | 3,819 | 2,810 | 11,085 |
| Grand Total | 159 | 4,309 | 3,842 | 2,854 | 11,164 |

O. Vegetation Types:

Moist, montane forests with grand fir, western hemlock and Douglas fir. Many large western red cedars are present in the lower elevations near streams and wetlands. White bark pine grows on rocky slopes at the highest elevations on Wenatchee Ridge and Irving Peak.

P. Dominant Soils:

Pumiceous or Ashy-pumiceous over loamy-skeletal, glassy over isotic Andic Haplocryods
 Ashy over loamy-skeletal, glassy over isotic, frigid Typic Vitrixerands
 Loamy-skeletal, isotic frigid Andic Dystroxerepts
 Asy-skeletal, amorphic Andic Haplocryods
 Ashy over sandy or sandy-skeletal, glassy over isotic Spodic Vitricryands
 Medial over loamy-skeletal, micaceous Typic Vitricryands

Volcanic ash or mixed volcanic ash 3 to 25 inches thick over colluvium and residuum dominate most of the soils in the area. Fine soil textures include: sandy loam, ashy sandy loam, and ashy fine sandy loam. Rock fragments at the surface range from 0 to 60 percent. Fragment sizes are pebble, cobble, and stones. Pumice found in some profiles result in paragravelly horizons.

Q. Geologic Types:

The Irving Peak and White River fires are located in the northern Cascade mountains, a linear mountain range in Washington primarily composed of pre-Tertiary crystalline rock. More specifically, the fires occur inside the Nason terrane, which is composed of igneous and metamorphic rocks from regional volcanism and deformation (Magloughlin, 1989). The Nason terrane is primarily Late-Cretaceous schist, gneiss, and serpentinized peridotite (Tabor et al., 1987). Strike is typically to the NW-SE, with a predominant dip to the NE. Dip is locally reversed to the SW due to isolated structures, such as the Little Wenatchee River anticline. Locally overlying the Nason terrane is a variety of Quaternary deposits, including glacial drift, landslides, blockslides, alluvium, and talus. The glacial drift is typically till deposited by alpine glaciers, composed of matrix-supported sediment and a variety of clast sizes.

R. Miles of Stream Channels by Order or Class:

Table 2: Miles of Stream Channels by Order or Class

| STREAM TYPE | MILES OF STREAM |
|-------------------------------|-----------------|
| PERENNIAL | 15.01 |
| INTERMITTENT | 1.59 |
| EPHEMERAL | |
| OTHER (ARTIFICIAL PATH) | 0.42 |

S. Transportation System:

Trails: National Forest (miles): 2.21

Other (miles):

Roads: National Forest (miles):37.91

Other (miles):

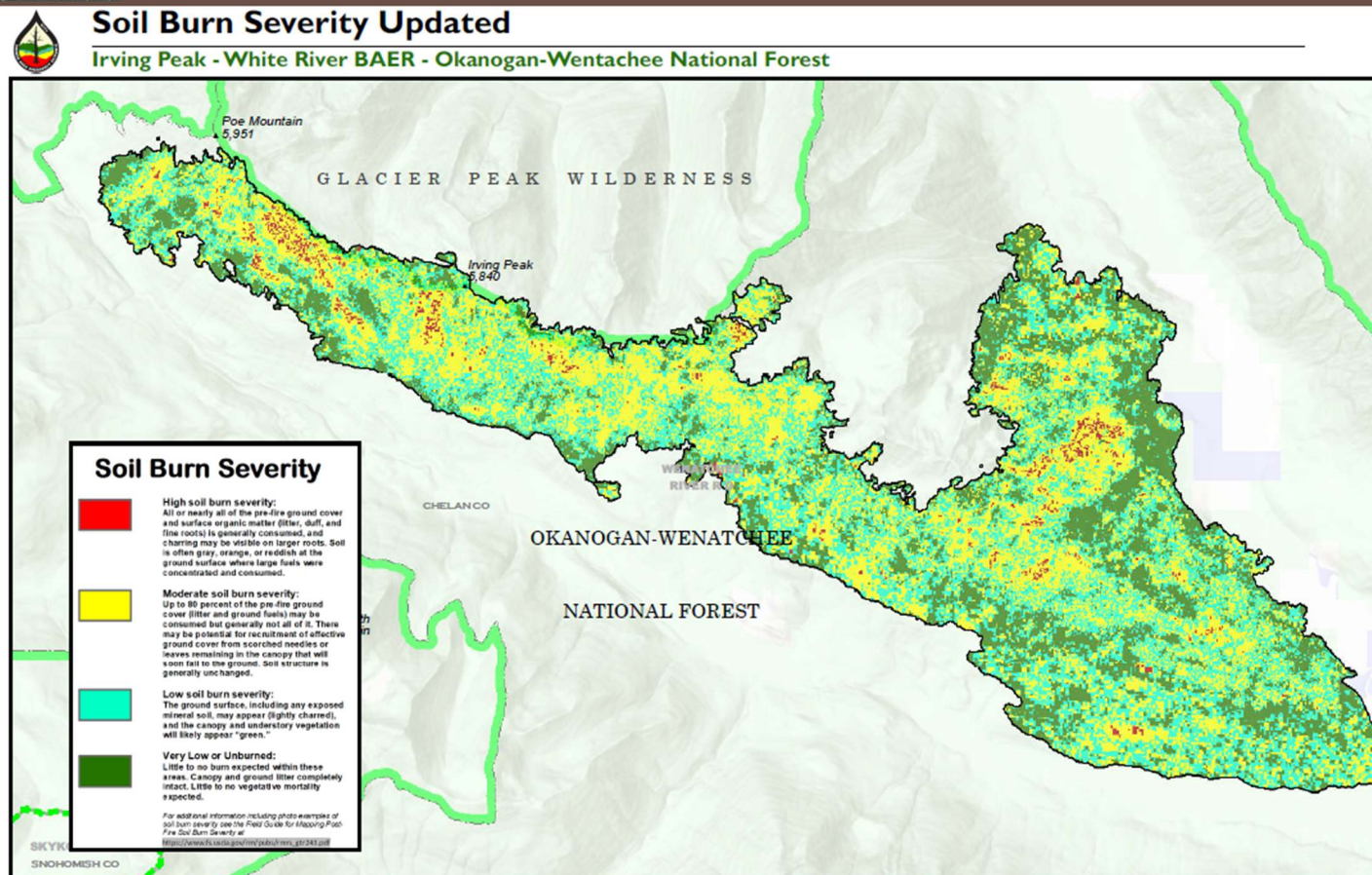
| OpML | High | Moderate | Low | Unburned | Grand Total |
|-------------------------------------|-------------|-------------|--------------|--------------|--------------|
| 1 - BASIC CUSTODIAL CARE (CLOSED) | 0.03 | 2.42 | 3.13 | 5.23 | 10.82 |
| 2 - HIGH CLEARANCE VEHICLES | 0.05 | 4.28 | 5.87 | 6.71 | 16.92 |
| 3 - SUITABLE FOR PASSENGER CARS | 0.05 | 1.75 | 1.96 | 3.31 | 7.07 |
| 4 - MODERATE DEGREE OF USER COMFORT | | 0.41 | 0.84 | 0.97 | 2.22 |
| No OPML given | | 0.39 | 0.38 | 0.12 | 0.89 |
| Grand Total | 0.13 | 9.26 | 12.18 | 16.35 | 37.91 |

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

| Ownership | High | Moderate | Low | Unburned | Grand Total |
|--------------------|------------|--------------|--------------|--------------|---------------|
| Private Land | | 10 | 19 | 34 | 63 |
| State Land | | 2 | 4 | 10 | 16 |
| Forest Service | 159 | 4,297 | 3,819 | 2,810 | 11,085 |
| Grand Total | 159 | 4,309 | 3,842 | 2,854 | 11,164 |

Detail Map of Irving Peak and White River SBS map.



B. Water-Repellent Soil (acres):

| Soil Burn Severity | Total acres | Estimated Water Repellent Acres | Percent of SBS Acres |
|--------------------|-------------|---------------------------------|----------------------|
| Moderate | 3,330 | 67 | 2% |
| High | 140 | 7 | 5% |

C. Soil Erosion Hazard Rating:

| | Low SBS | Moderate SBS | High SBS |
|-----------------------------|---------|--------------|----------|
| Risk, slope <30% | No | Low | Moderate |
| Risk, slope > 30% | Low | Moderate | High |

D. Erosion Potential:

High volcanic ash content at the soil surface is susceptible to erosion by wind and more severely by sheet, rill and gully erosion in areas where organic matter accumulation at the surface has been consumed by fire. Soils with rock fragment content in the surface horizon less than 35 percent are increasingly susceptible to erosion with increasing slope. Soils with stone, cobble, and pebble size content of 35 to 60 percent are less susceptible to erosion because the fragments hold finer material in place between fragments.

NRCS soil survey calculations of wind or water erosion, or T values, estimate 2 to 5 tons of soil erosion per acre per year for the deeper soils in the fire perimeter before productivity is affected. Estimates of 1 ton or less per acre per year for shallow soils before productivity is affected. These same soils, shallow through deep, are predicted to be slightly to slightly-moderate susceptible to sheet or rill erosion based on a calculated K Factor from the soil survey. A few areas of moderate susceptibility to surface flow erosion are present in the fire perimeter. The K Factor calculation includes presence of rock fragments in its results. These estimates are for farmlands but can be applied to the forested area for an understanding of risk to soil productivity. WEPP cloud modeling was completed to estimate the risk of soil erosion. Soil erosion values varied inside the complex, mostly depending on SBS, hillslope characteristics, and soil type. WEPP cloud calculations of low and moderate SBS areas typically had soil erosion values estimated at less than 100 lbs per acre per year. Subwatersheds with larger concentrations of high and moderate SBS had elevated soil erosion values in comparison, but still less than 1 ton/ac/yr of erosion.

Removal of surface organic matter by fire activity in high and moderate SBS areas are expected to increase erosion potential for moderate and high SBS areas. The timing, intensity, and duration of precipitation events is the biggest factor in scale and severity of the erosional events on all slopes. The scale and severity of erosion events is also dependent on connectivity of high and moderate SBS areas. If high SBS areas are interrupted by lower ratings of SBS the potential for large events lessens and will likely remain localized. Refer to the 'Indicators of Soil Burn Severity' table in the soil section later in this analysis for features observed that will decrease the effects of erosion on the landscape.

About 1.5 percent of the area is rock outcrop. Rock outcrop exposure increases overland flow rates to adjacent areas of soil accumulation. Areas where high and moderate SBS are surrounded or adjacent to rock outcrop have greater potential for soil erosion than the same ratings surrounded by unburned or low SBS.

E. Sediment Potential:

Sediment potential is likely for isolated areas of discontinuous moderate and high SBS and adjacent to streams. Sedimentation is possible where moderate and high SBS are discontinuous and buffered by unburned and low SBS. Where high and moderate SBS are continuous surface flow energy is predicted to build due to the lack of surface organic matter disrupting flow, making sedimentation likely. Where slopes are steep the potential for sedimentation is highest under high and moderate SBS. WEPP cloud calculations for sediment discharge did not vary substantially throughout the fire area. In areas with low and moderate SBS, sediment discharge increases from the unburned watershed condition were negligible (approximately 5-10%

increase). In areas of higher concentrations of moderate and high SBS, sediment discharge increases were higher but still relatively negligible (up to 20% increase) from the baseline condition.

F. Estimated Vegetative Recovery Period (years): Vegetative recovery, as defined by pre-fire effective ground cover (post-fire erosion rates), and not overstory recovery, depends on many factors; including soil burn severity, vegetation type, and post-fire annual precipitation. Estimated 3-5 years.

G. Estimated Hydrologic Response (brief description):

The fire has reduced or eliminated overstory canopy and groundcover and has altered soil structure with varying degrees of hydrophobicity across extensive areas within the fire perimeter. These changes will lead to reduced precipitation interception, soil infiltration capacity, and surface roughness. Elevated erosion, runoff, and sediment transport relative to pre-fire conditions are likely due to these post-fire conditions.

Watershed response to rain and snowmelt will include an initial flush of ash, which is deep and widespread in some areas of the fire due to near-complete consumption of thick duff layers in the fire. Rill and gully erosion in headwater drainages and on steep slopes within the burned area are likely to occur, as are debris-laden flash floods or debris flows in response to high-intensity rain events and elevated snowmelt peak flows. Water quality will be diminished during seasonal peak runoff, as well as during and after high-intensity summer rains due to elevated ash, fine sediment, and nutrient loading. Elevated post-fire response will gradually diminish over time as vegetation and groundcover become re-established over the next few years, although some impacts are likely to persist for a decade or longer.

Portions of five sixth-field hydrologic unit code (HUC12) subwatersheds were affected by the fire. Four of these subwatersheds flow toward the Little Wenatchee River, and one to the White River. Within these subwatersheds, four drainages were delineated at road crossings to evaluate the potential post-fire threat to specific critical values, as well as to provide information on potential hydrologic response from other unevaluated drainages in the burned area.

Drainages were evaluated using the WEPP-Cloud tool for pre- and post-fire conditions (Table X below). A stochastically generated climate based on PRISM and nearby meteorological station data was used to simulate 100 years of climatic conditions, runoff, and erosion in the selected drainages. Small, steep watersheds with extensive moderate-to-high soil burn severity (SBS) showed the greatest increase in runoff response. Unburned (pre-fire) conditions generated modest runoff from the design events, while post-fire runoff from the same storm generated large, quickly developing responses in several catchments. Refer to the hydrology report for additional information, and to the debris flow potential discussion that follows.

Table 3: Estimated pre and post-fire flows at selected points, 50% probability flow event (WEPP)

| Drainage | Pre-fire (cfs) | Post-fire (cfs) | Change (%) |
|------------------------------|-------------------|--------------------|---------------|
| Ninemile Creek at FSR 65 | 18 | 170 | 844% |
| Elevenmile Creek at FSR 65 | 8 | 120 | 829% |
| Sears Creek at FSR 6404 | 14 | 130 | 2,088% |
| UT01 Sears Creek at FSR 6404 | 10 | 210 | 1,381% |

Debris Flow Potential

The USGS provides estimates of debris-flow probability, approximate volume, and combined hazard for several storms with a range of 15-minute peak intensities. Peak 15-minute rain intensities of 28, 32, and 40 mm/hr were used to evaluate risk to critical values in this BAER assessment. These rainfall intensities correspond roughly to a 100%, 50%, and 20% probability of occurrence in the first year following the fire (one-year, two-year, and five-year return interval rain event).

Additional information on the USGS debris flow model used for the Irving Peak – White River Fire is available at:

https://www.usgs.gov/natural-hazards/landslide-hazards/science/scientific-background?qt-science_center_objects=0#qt-science_center_objects

The model outputs are posted on the USGS public-facing webpage: https://landslides.usgs.gov/hazards/postfire_debrisflow/ which has an interactive map and downloadable geospatial data. The interactive map on the USGS website only allows the display of the 24 mmh⁻¹ peak 15-minute rainfall intensity event, which could be expected to occur multiple times in the first year following the fire.

Summary of Observations:

- A storm event with a 15-minute peak intensity of 28 mm/hr (roughly the one-year rainstorm) was predicted to have 0-40% probability of debris flows from much of the burned area. Exceptions include a large tributary to Sears Creek on the White River side and some headwaters of Elevenmile and Lodgepole Creeks on the Little Wenatchee River side, with predicted debris flow probabilities from 60-100% from the same storm.
- The USGS model predicted roughly 80-100% probabilities of debris flow occurrence from the 40 mm/hr (roughly five-year) storm in several headwater drainages flowing south from Wenatchee Ridge, including Pheasant, Elevenmile, and Lodgepole Creeks, as well as several unnamed streams on that face. Most other streams draining the burned area were predicted to have 40-80% chance of experiencing a debris flow from this rainstorm magnitude.
- Larger, more intense rainstorms with lower probability of occurrence will increase the risk of debris flows throughout the burned area.
- There is little development in the headwater basins with the highest probability of debris flows, other than lower-standard FS roads. However, debris flow impacts could potentially cause disruptions further downstream to paved FS roads, the Lake Creek Campground, and potential dispersed campsites.
- Non-FS values within and downstream of the burned area may also be threatened by inundation from flooding and debris flows, including people and dwellings in some locations below the fire.
- People and infrastructure near headwater channels with higher probability of debris flow occurrence are at risk of injury or damage from direct impact of debris and flood flows, as well as loss of egress from damaged roads.
- The increased probability of debris flow activity will likely subside within 3-5 years following fire containment, as conditions within the burned watershed recover and hillslopes stabilize.

PART V - SUMMARY OF ANALYSIS**Introduction/Background**

The Irving Peak and White River fires were two lightning caused fires that started on August 11, 2022 and eventually burned together. The fire has mostly been moving slowly downhill to meet containment lines and road systems in the area. A few spot fires have been started by rolling logs but were quickly contained by firefighters. No dozer lines have been constructed and very few handlines – old and existing roads were selected as containment lines.

A. Describe Critical Values/Resources and Threats (narrative):*Table 4: 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 |

Critical Value Table for Irving Peak and White River Fires.

| Value | Life/ Property/ Resources | Critical Value | Threat to Value | Probability of Damage or Loss | Rationale for Probability | Magnitude of Consequence | Rationale for Magnitude | Risk | Treatment Options Considered | Recommended Treatment |
|---------------------|--|--|--|-------------------------------|---|--------------------------|--|-----------|---|---|
| BAER critical value | Property - Roads | FSR 6504000 (Devils Club) | Elevated runoff, flooding and dry ravel, debris flows, tree and rockfall from post fire conditions | Likely | Moderate-and high SBS burned hillslopes and drainages above the road | Major | Loss of ML 3 road, loss of road would result in cascading failure on to FSR 6500 and ML 4 road which is access to private landowner, Trailhead and campground are located at the end of the road | Very High | Storm proof, storm inspection/response, construct dips to mitigate diversion potential, close road | Construct dips to mitigate diversion potential at main crossings and clean ditches to restore functional drainage |
| BAER critical value | Property - Roads | FSR 6404121 (Sears Creek Spur) | Elevated runoff, flooding and dry ravel, debris flows, tree and rockfall from post fire conditions | Likely | Moderate-and high SBS burned hillslopes and drainages above the road, hydro modeling showed | Moderate | Loss of ML 1 road (not hydraulically stable), loss of road would result in cascading failure on top FSR 6404 and sole access to private landowner | Very High | Keep road closed, open road with heavy equipment and construct dips, open road and remove culverts, remove culverts through detonation | Remove culverts through detonation |
| BAER critical value | Property - Roads | All non-surveyed ML 3 and higher roads within, or directly adjacent to, the fire and within or below High and Moderate SBS | Elevated runoff, flooding and dry ravel, debris flows, tree and rockfall from post fire conditions | Very Likely | Moderate-Low SBS burned hillslopes above and below | Major | ML 3 and higher roads represent major investment and are typically collectors and access FS infrastructure (admin/rec sites), loss of road prism, loss of access to spur roads off collectors and increased sedimentation into adjacent drainages. | Very High | Close road, assess road | Close roads administratively until they can be assessed |
| BAER critical value | Natural Resources - Native Plant Communities | Natural Resources - Native Plants | Encroachment of invasive species into uninfested areas that are now vulnerable because of burned soils and loss of canopy cover. | Very Likely | Approximately 0.44 acres of invasive plants have been previously mapped in the footprint of the fire. There were additional previously unmapped invasive plant infestations observed within the burned area during BAER field assessment. Many of these are species that flourish post-fire. | Moderate | These invasive plants often contain allelopathic compounds which change soil pH and can outcompete native plant communities in severely burned soil. | Very High | EDRR: survey and treat new infestations with herbicide or manual removal along roadsides and the 2.1 miles of trail that occur within the fire perimeter. | EDRR survey and treatment as well as recording new infestations. |
| BAER critical value | Life and Safety | users of Lake Creek Campground | debris flow, flooding | Possible | The campground sits on an old debris fan. The headwater tributaries to Elevenmile Creek, which passes the campground, were estimated to have a 40-80% probability of producing debris flows from a roughly annual-probability rainstorm, and 60-100% probability for a five-year return-period rainstorm. | Major | injury or loss of life | High | Administrative closure, install gate, post signs | Administrative closure, install gate at campground entry, post signs |
| BAER critical value | Life and Safety | Trails- #1520 Poe Mountain, #1545 Irving Pass, #1543 Little Wenatchee Ridge | injury or impeded egress due to fallen or falling hazard trees, stumpholes, unstable tread along trails | Possible | Trails passing through areas of moderate to high SBS possess numerous hazards to hikers. | Major | injury or loss of life | High | Administrative Closure, post signs, maintain closure order | Maintain Closure Order, post signs |
| BAER critical value | Life and Safety | People traveling on FS Roads within or directly adjacent to fire | Flooding, debris flows, rock fall, hazard trees | Possible | Large Potential of snags, felling of trees, rock/land movement or other unforeseen timing of hazards | Major | Human safety at risk from post fire hazards | High | Road Warning Signs at Fire Perimeter, Closure | Road Warning signs at perimeter, closure of roads to public until post winter runoff |
| BAER critical value | Property - Roads | FSR 6506115 (Twelve Mile Spur) | Elevated runoff, flooding and dry ravel, debris flows, tree and rockfall from post fire conditions | Likely | North pier cast on bedrock, bridge downstream of bend were LWD appears to be collecting and river upstream lacks confinement for carrying debris flows long distances | Moderate | Loss of ML 2 road, loss of road would result in cascading failure on to FSR 6500 and ML 4 road which is access to private landowner, Trailhead is located at the end of the road | High | Storm proof, storm inspection/response, construct dips to mitigate diversion potential, close road | Construct dip to mitigate diversion potential at main crossing |
| BAER critical value | Property - Trails | #1545 Irving Pass, #1543 Little Wenatchee Ridge | damage/loss of trail tread from elevated runoff in areas of high and moderate SBS | Likely | elevated runoff from high/moderate severity burned areas can overwhelm the drainage features on the trails | Moderate | The replacement and repair costs of trails is considered moderate property damage based on the cost of repair | High | Install drainage features, tread stabilization and repair | Install drainage features, tread stabilization and repair |
| BAER critical value | Property - Roads | All non-surveyed ML 2 roads within, or directly adjacent to, the fire and within or below High and Moderate SBS | Elevated runoff, flooding and dry ravel, debris flows, tree and rockfall from post fire conditions | Likely | Moderate-high SBS burned hillslopes above and below | Moderate | ML 2 road, loss of road prism, loss of access and increased sedimentation into adjacent Drainages | High | Close road, assess road | Close roads administratively until they can be assessed |

1. **Human Life and Safety (HLS):** Human life and safety is at risk from threats associated with burned trees, rock fall, debris flows, flooding, and loss of egress/access throughout the burned area. Probability of post-fire threats to life and safety were determined for several trails, roads and developed recreational facilities within the burned area. Separate ratings were determined for hazard trees and flooding/debris flows to better inform temporary closure treatment recommendations and future decisions about re-opening the closed roads, trails and facilities. For both hazard trees and flooding/debris flows, the BAER risk ratings for the roads, trails and facilities listed below generally ranged from *unlikely* to *likely*. The magnitude of consequences ranged from *minor* to *major*. Roads with *high* or *very high* BAER risk ratings for human life and safety due to the threat of direct injury or death or loss of egress from falling hazard trees and rocks as well as flash flooding and debris flows include all road segments within or immediately downslope of the burned area. Trails with *high* or *very high* BAER risk ratings for human life and safety due to the threat of direct injury or death or loss of egress from falling hazard trees and rocks as well as flash flooding and debris flows include all trail segments within or immediately adjacent to or downslope from areas of moderate or high soil burn severity. The Lake Creek Campground was given a *high* BAER risk rating for human life and safety due to the threat of flash flooding and debris flows.

 2. **Property (P):** Loss of road and trail prisms and drainage system function could occur from increased runoff, erosion, flooding, and debris flows for road and trail sections within and downstream of areas of moderate and high soil burn severity. Risk ratings were determined for trails, roads and developed recreational facilities within the burned area and are displayed in the Critical Values table. The probability of damage or loss was determined based on the likelihood and magnitude of damage from increased hillslope runoff to the road or trail drainage system as well as elevated flooding and debris flows leading to failure of stream-crossing structures. The magnitude of consequences was based on the degree and extent of potential property damage. Several road segments were judged to be at *high* or *very high* risk of damage or loss due to post-fire conditions, and treatments have been recommended to reduce those risks. Trails in the burned area were judged to be at *high* risk of damage or loss due to post-fire conditions either because of likely probability of post-fire threats, of moderate magnitude of consequence. Details on the roads and road infrastructure risk assessment are in the BAER engineering and trails reports.
- Natural Resources (NR): Hydrologic Function:**
Likely, Minor; Low

Hydrologic function will initially be altered, particularly in areas of moderate to high soil burn severity or loss of forest canopy. Reduction in canopy, groundcover, and soil infiltration capacity leads to elevated runoff and reduced seepage to groundwater and subsurface flowpaths during rainstorms and snowmelt. Increased surface flow leads to greater erosion and sediment transport to watercourses, and increased flood flows for a given precipitation event. Reduced canopy interception, shading, and wind protection can influence accumulation, movement, and ablation of snow, which affects the distribution of snowpack and the timing of spring melt. Extensive tree mortality greatly reduces water losses from transpiration as well as interception and evaporation. Soil hydrophobicity will substantially diminish during spring snowmelt in the first year following the fire, and conditions affecting movement and storage of water will gradually recover at varying rates in the coming years. The probability of impact to the resource is **likely** and the magnitude of consequence is **minor**. The resulting risk is **low**.

b. Water Quality:

Elevated soil erosion and subsequent sedimentation increases are predicted throughout and downstream from the burned area. The cumulative effect of elevated peak flows as well as ash- and sediment-laden runoff from the burned area increases the risk of degraded water quality within and downstream from the burned area. Beneficial uses of water include aquatic habitat (including critical habitat for Columbia River Steelhead, Spring-Run Chinook, and Bull Trout) as well as agricultural and municipal uses downstream of the National Forest, among others. The probability of loss of water quality was estimated to be very likely, the magnitude of consequences was estimated to be minor, and the risk low. Given the risk rating, no BAER

erosion mitigation treatments were considered. Natural recovery processes should be encouraged, potentially facilitated by revegetation efforts under the Burned Area Rehabilitation (BAR) program.

c. Native Plant Communities:

Threats to Native Plant Communities: Very likely, Moderate (Very High)

The spread of invasive plant populations along roads prepped as fire line and into adjacent burned soils within the fire perimeters is very likely. Invasive plants can colonize disturbed soil and cause disruption to habitat that was previously occupied by native species.

Threats to Wetland Plant Communities: Possible, Moderate (Intermediate Risk)

Invasive species encroachment into un-infested unique habitats. These shaded, wetland habitats may become vulnerable due to burned soils, loss of canopy cover, and threat of burial from burn-related soil erosion.

Threats to T&E Habitat: Possible, Moderate (Intermediate Risk)

Loss of suitable habitat and of whitebark pine trees in areas of moderate to high intensity fire is possible. Habitat degradation could also occur from invasion of non-native invasive plants from trails and roadsides into newly burned soils.

d. Threatened or Endangered Fish or Wildlife:

ESA fish resources: Many small, fishless streams that drain water and sediment into the Little Wenatchee River were burned. The Little Wenatchee River is Designated Critical Habitat for Columbia River bull trout along the length of fire and for Upper Columbia River spring chinook salmon and Upper Columbia River steelhead along part of the length. In addition, part of the fire burned to the White River, which is Designated Critical Habitat for all three ESA listed species. Sears Creek has documented presence of Columbia River bull trout.

Probability of Damage or Loss: **Very Likely**. Part of the fire burned to the streambank of the White River, meaning that some delivery of ash and sediment is almost certain. The magnitude of Consequences is **Minor** (low intensity fire in Riparian Reserves, only 5.3% of Riparian Reserve acres had 50% basal mortality). Therefore, the risk is **Low** to listed fish.

e. Soil Productivity:

Risk to soil productivity on this fire is soil erosion and mass wasting events as a result of reduced vegetative ground cover and fire consumption of duff and fine woody debris on the soil surface following wildland fire.

Soils in the area naturally average a 3 to 10 cm thick slightly decomposed plant horizon (Oa or Oe horizons) that protects the mineral soil from rain fall, sheet, or gully erosion. High and moderate soil burn severity (SBS) areas have lost the protective organic horizon as the fire slowly consumed the duff and fine wood. The resulting 2 to 10 cm of loose organic ash in these areas, if eroded, may affect other resource but will have minimal effect to soil productivity. Absence of the organic horizon increases the potential for sheet and rill erosion, isolated debris and mud flows, and small areas of slumping within and adjacent to high and moderate SBS areas. In some cases, the risks may persist for several years after fire. Due to surface pumice content of soils, alteration of surface horizons is less likely to result in surface sealing in high or moderate soil burn severity areas that result in increased runoff to adjacent areas.

Indicators of Soil Burn Severity

| Indicators considered | Importance | Low SBS | ModerateSBS | High SBS |
|---|--|--|--|--|
| Aerial view of canopy and understory | Areas validated during a recon flight | Tree canopy relatively unaltered, under story present with charred areas | Tree canopy green on tops, dry branches on bottom half for most areas and other areas of dry canopy throughout, understory is consumed or charred in many areas | Trees are charred entirely, most branches missing, no remaining understory |
| Surface litter depth and color | Surface organic matter consumption decreases protection of mineral soil from erosion. Ash (1 up to 10+ cm thick) is susceptible to wind and rain erosion | large continuous areas of intact surface litter, small discontinuous areas of charred or partially consumed surface litter, down large and fine wood present | Areas of charred surface litter still recognizable, between areas of loose ash (1-10 cm thick). Woody debris is charred but present, high potential for needle cast or leaf litter | No surface litter, light puffy ash 91-10 cm thick), small areas of reddish oxidized soil near surface, no to minimal potential for needle cast |
| Roots in Surface Horizon | Roots in surface horizons hold soil in place | Fine roots are unaffected by fire supporting soil structure strength | very fine and fine roots are charred down to 1 cm but continue to support soil structure | Very fine and fine roots are charred and consumed down to 1 cm, charring of large roots in mineral soil |
| Soil Structure | Soil structure provides resistance to erosion from wind, rain fall, and overland flow. Loss of structure increased susceptibility to erosion. | Unchanged | Minimally altered, generally less than 1 cm, with small spatial areas of structure weak to loose | altered within 1 to 3 cm which is now loose |

Low SBS areas have very **low** to no elevated risk of decreased soil productivity because duff, surface wood, rock cover, and/or live vegetation along with intact surface soil structure are at levels that slow surface flow and catch soil movement before it leaves the area. Moderate and high SBS areas are **likely** to have a decrease in soil productivity but is expected to be as isolated areas leaving most of the area with minimal change resulting in a **minor** consequence and **low risk**. Limited canopy/understory cover, lack of intact duff, and reduced woody debris allow for increased potential for sheet, rill, and gully erosion to remove soil from the area and out of the system

f. **Cultural and Heritage Resources:**

FS Site # 06170600003, DAHP # 45 CH01048, the Jox Homestead, was burned over. It was not visited due to unsafe conditions.

B. Emergency Treatment Objectives:

The primary objective of this Burned Area Emergency Response Report is to recommend treatments to manage identified unacceptable risks from “imminent post-wildfire threats to human life and safety, property, and critical natural resources on National Forest System lands” (FSM 2523.02). These treatments are expected to substantially reduce the probability of damage to identified BAER critical values. The objective of land treatments is to promote and protect native and naturalized vegetative recovery by reducing the spread of noxious weeds (Pa1). The objective of trail treatments is to protect trail investments from becoming impassible and damaged as a result of increased post-fire runoff (T1). Proposed road treatments are to prevent damage by anticipated flow in areas where undersized culverts in good condition have potential for blockage based on upslope debris potential which damages road surfaces by excessive flow (R2a and R5). Actions are also to direct surface flow from roads through ditches (R1 and R3). Removal of culverts will maintain high flow areas without resulting in greater debris movement under

conditions of blockage on closed roads (R4). The objective of proposed safety treatments is to protect human life and safety by raising awareness through posting hazard warning signs at trailheads and where the general public congregate (S1).

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

Land: 70

Channel: N/A

Roads/Trails: 70

Protection/Safety: 80

D. Probability of Treatment Success

Table 5: Probability of Treatment Success

| | 1 year after treatment | 3 years after treatment | 5 years after treatment |
|--------------------------|-----------------------------------|------------------------------------|------------------------------------|
| Land | 75 | 85 | 90 |
| Channel | | | |
| Roads/Trails | 80 | 85 | 95 |
| Protection/Safety | 75 | 90 | 95 |

E. Cost of No-Action (Including Loss): \$6,269,175

F. Cost of Selected Alternative (Including Loss): \$742,5814

Cost of Total BAER treatment request for Irving Peak and White River fires: \$156,007

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Anne Poopatanapong, Brigitte Ranne (t), Brien Park

Email: anne.poopatanapong@usda.gov, brigitte.ranne@usda.gov, brien.park@usda.gov

Phone(s) 971-201-9489, 509-663-6118

Forest BAER Coordinator: Karenth Dworsky

Email: karenth.dworsky@usda.gov **Phone(s):** 509-470-4134

Team Members: *Table 6: BAER Team Members by Skill*

| Skill | Team Member Name |
|------------------------|--|
| Team Lead(s) | Anne Poopatanapong, Brigitte Ranne (t), Brien Park |
| Soils | Brien Park, Andrew Farris |
| Hydrology | Dave Callery |
| Engineering | Ken Bigelow, Dave Colbert |
| GIS | Susanne Campbell |
| Archaeology | Anne Jansson, Theodore Thompson (t) |
| Invasive Plants | Helen Lau, Lauren Segarra (t) |
| Recreation | Angela McPhee |
| Fisheries | Eric Merten |

H. Treatment Narrative:

Land Treatments:**P1a. Invasive Plant Early Detection and Rapid Response (EDRR)**

Early detection and rapid treatment of non-native invasive plants is critical in order to prevent them from establishing in recently burned soils. Treatment is most effective when the initial infestations are small and can be removed before they are able to produce seed. EDRR is covered under the Okanogan-Wenatchee Forest-wide Site-specific Invasive Plant Management FEIS and ROD (2017) with multiple treatment options including manual removal and the use of 9 herbicides.

Roads and trails within the perimeters of both fires did not have previously recorded invasive plant infestations in the NRM TESP-IS database, but multiple new infestations were found during BAER field reconnaissance of the burned interior. Within the Irving Peak and White River fires, there are 2.1 miles of trails and **23** miles of roads with invasive plant infestations. Areas of moderate and high SBS are targeted for treatments. To calculate the area for EDRR 50 feet was multiplied by the length of the road or trail. Fifty feet was selected because of the known dispersal mechanisms of the invasive plants of concern. The EDRR needs for trail infestations total 12.7 acres and the roadside treatments total **129.3** acres. Trails can be treated with hand pulling and backpack spray. The roadsides can be treated with a truck mounted spray tank fitted with long hoses (applicators walk behind the truck) or a combination of truck mounted sprayer and backpack sprayer.

Infested Roads within fire perimeter – **23** mi//**129.3** acres, 10 days

Infested Trails within fire perimeter – 2.2 mi/12.7 acres, 2 days

Crew days – 12 days of a 2-person (GS-06) field crew at \$332/day = \$3,984

Herbicide and PPE - \$**1000**

BAER EDRR **total – 142 acres**, 12 days, x2 visits (survey, treatment) = 24 total days

35 days of a 2-person (GS-06) field crew at \$332/day = \$**11,638**

Herbicide and PPE - \$1000

Total Cost - \$12,638

| Item | Cost/Unit | # of Units | Total Cost | Description of Cost |
|-----------------------|-----------|------------|-----------------|--|
| Land Treatments, EDRR | \$89/Acre | 142 | \$12,638 | Roadsides within fire perimeter: 23 miles or 129.3 acres Trail-sides within fire perimeter: 2.2 miles or 12.7 acres |

Channel Treatments: N/A**Roads and Trail Treatments:**

Roads:

R1. Storm Proofing (existing features) - cleaning ditches along Devil's Club road. *On Irving Peak Fire.*

R2a. New Drainage Feature – Drainage Dip – add dips along road in areas where diversion potential may occur due to undersized culverts or blockage from transported debris. *One on White River fire and 6 on Irving Peak fire.*

R3. Storm Inspection and Response - Inspection by qualified persons, after significant storm events, determination of effectiveness, coordination of treatment restoration including bringing out equipment if needed. Repair damages that compromise the effectiveness of these efforts. *Road 6500 is a paved roadway that has had multiple washouts and plugged culverts due to storms that occurred in the burn scar immediately after the fire. Road 6504 is a gravel road with multiple downed trees. This storm event directly relates to the fire far surpass that amount of funding that was allotted for the storm inspection and response. Due to both increase in cost as well as treatments needed to prevent further damage. Storm inspection and response will focus on preventing further damage rather than restoring the road and drainages to their pre-fire conditions.*

1.25 miles on White River and 6.35 miles on Irving Peak fire.

R4. Culvert Removal – remove 3 culverts using explosives along the closed Sears Creek Spur. Potential for blockage of undersized culverts on the closed road is high resulting in increased debris movement. Removal of undersize culverts down slope of a large area of high and moderate SBS and above critical fish habitat is recommended. *All on White River Fire.*

R5. Critical Dip – Stream Crossing – add dips along road at major stream crossings in areas where diversion potential may occur due to undersized culverts or blockage from transported debris. *One on White River Fire and 5 on Irving Peak Fire.*

| Item | Cost/Unit | # of Units | Total Cost | Description of Cost |
|--|--|------------|-----------------|---|
| R1. Storm Proofing (Existing Drainage) | \$2,400/Mile | 0.8 | \$1920 | FSR 6504000 (Devil's Club) ditch cleaning and re-construction |
| R2a. New Drainage Feature – Drainage Dip | \$5,300/Dip | 7 | \$37,100 | FSR 6504000 (Devil's Club), FSR 6506115 (Twelve Mile Spur), FSR 6404000 (Sears Creek) construct armored dips to major stream crossings to mitigate diversion potential. |
| R3. Storm Inspection and Response | \$14600/Mile (originally \$4,900/mile) | 7.6 | \$110960 | Monitor existing road drainage features, armoring and other treatments as they respond to significant storm events and subsequently repair damages that compromise the effectiveness of these efforts |
| R4. Roads, Culvert removal | \$10,000/Culvert | 3 | \$30,000 | FSR 6404121 (Sears Creek Spur) remove pipes by detonation on closed road |
| R5. Roads, Stabilization Dips | \$4,100/Dip | 6 | \$24,600 | FSR 6504000 (Devil's Club), FSR 6500000 (Little Wenatchee), construct dips to mitigate diversion potential. |
| Total | | | \$204580 | |

Trails: Trail storm-proofing involves cleaning or armoring existing drainage structures to remove accumulated sediment and add drainage structures to provide capacity for elevated post-fire runoff: 1.21 miles within high or moderate burned severity.

T1. Trail Drainage stabilization. Treatment includes trail stabilization and drainage improvements to include armoring and/or cleaning existing water-control structures and adding additional drainage features to provide additional capacity for elevated sediment-laden post-fire runoff. A total of 2.19 miles with 1.21 miles within moderate and high burn severity polygons. The Irving Pass/Poe Mtn. Trail is a steep trail that climbs directly to the ridgeline then traverses the ridge with many steep ups and downs, often below the ridgeline with steep slopes above, before you reach the summit of Poe Mtn. This trail sits near the crest of the Cascade Mountains and receives well over 100 inches of precipitation annually. The 6000' elevation results in an annual snowpack of 200" or more. The combination of steep terrain, heavy precipitation and deep snowpack results in a lot of runoff and erosion especially in the fall and spring seasons. Good quality, functioning drainage is key to maintaining the tread to USFS standards and specifications.

\$2,350 per mile, total of \$2,844 *All on Irving Peak fire.*

| Item | Cost/Unit | # of Units | Total Cost | Description of Cost |
|-----------------------------|--------------|------------|------------------|--|
| Trail Stabilization | \$2,350/Mile | 1.21 | \$2,844 | Trail drainage improvements include, install water bars and dips. Trails: #1545 Irving Pass, #1543 Little Wenatchee Ridge. |
| Total | | | \$2,844 | |
| Total Road and Trail | | | \$127,089 | |

Protection/Safety Treatments:

S1a. Road Hazard Signs placed on roads leading into the fire perimeter. *All on White River Fire.*

S1b - Trail warning/closure signs for Lake Creek campground and two trailheads (Irving Pass, Little Wenatchee). Four signs at \$250 each = \$1000 *All on Irving Peak fire.*

S2 – Physical Closure Device (Gate) located at Lake Creek Campground to close off access in the event of a large debris flow or results of major post fire flooding resulting in unsafe condition downstream from fire. A very strong gate is needed at this location because this is a popular campground along a major road. On the Little Wenatchee Road (6500) a gate is needed as the current structure is being ignored and moved so the public is constantly able to access the closed area. The closure is for public safety especially given post-fire debris flows and need to provide for extensive storm inspection and response to prevent further damage. *Irving Peak fire.* \$14,000 per single road gate. A double road gate is \$25,000. There is one of each needed for a total cost of \$39,000.

S3. Hazard Tree Felling at Irving Pass Trailhead = \$600/ site *Irving Peak.*

S7. Infrastructure Protection Lake Creek Campground = \$2,150/ site *Irving Peak*

| Item | Cost/Unit | # of Units | Total Cost | Description of Cost |
|-------------------------------|----------------------|------------|-----------------|---|
| S1b. Trail Hazard Signs | \$250/unit | 4 | \$1,000 | Sign placement at head of trails and where trails intersect with burned area. Trails: #1520 Poe Mountain, #1545 Irving Pass, #1543 Little Wenatchee Ridge |
| S2. Gate Closure | \$14,000/ Gate | 1 | \$14,000 | Entrance to Lake Creek Campground. |
| <u>S2. Gate Closure</u> | <u>\$25,000/Gate</u> | <u>1</u> | <u>\$25,000</u> | <u>Double road gate closure</u> |
| S3. Hazard Tree Felling | \$600/ Site | 1 | \$600 | Trailhead at Irving Pass trail. |
| S7. Infrastructure Protection | \$2,150/Site | 1 | \$2,150 | Actions to remove movable items from the campground area. |
| S1a. Road Hazard Signs | \$750/Sign | 3 | \$2,250 | Alert public of potential road hazards and unsafe conditions |
| Total | | | \$45,000 | |

I. Monitoring Narrative: NA

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS
for IRVING PEAK FIRE

| 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 | | | | | | | | | | |
| P1a. Invasives EDRR | Acres | 89 | 55 | \$4,895 | \$0 | | \$0 | | \$0 | \$4,895 |
| P1a. Invasives EDRR | Acres | 89 | 42 | \$3,738 | \$0 | | \$0 | | \$0 | \$3,738 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Land Treatments</i> | | | | \$8,633 | \$0 | | \$0 | | \$0 | \$8,633 |
| B. Channel Treatments | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Channel Treatments</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| C. Road and Trails | | | | | | | | | | |
| R1. Storm Proofing (existing features) | Miles | 2,400 | 1 | \$1,920 | \$0 | | \$0 | | \$0 | \$1,920 |
| R2a. New Drainage Feature - Drainage Dip | Dip | 5,300 | 6 | \$31,800 | \$0 | | \$0 | | \$0 | \$31,800 |
| R3. Storm Inspection and Response | Miles | 4,900 | 5 | \$24,500 | \$0 | | \$0 | | \$0 | \$24,500 |
| R3. Storm Inspection and Response | Miles | 4,900 | 3 | \$14,700 | \$0 | | \$0 | | \$0 | \$14,700 |
| R3. Storm Inspection and Response (2023) | Miles | 9,700 | 6.35 | \$61,595 | \$0 | | \$0 | | \$0 | \$61,595 |
| R5. Critical Dip - Stream Crossing | Dip | 4,100 | 5 | \$20,500 | \$0 | | \$0 | | \$0 | \$20,500 |
| T1. Trail Drainage Stabilization | Miles | 2,350 | 1 | \$2,844 | \$0 | | \$0 | | \$0 | \$2,844 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Road and Trails</i> | | | | \$157,859 | \$0 | | \$0 | | \$0 | \$157,859 |
| D. Protection/Safety | | | | | | | | | | |
| S1b. Trail/Rec Hazard Signs | Sign/Post | 250 | 4 | \$1,000 | \$0 | | \$0 | | \$0 | \$1,000 |
| S2. Physical Closure Device (Gate) | Gate | 14,000 | 1 | \$14,000 | \$0 | | \$0 | | \$0 | \$14,000 |
| S2. Physical Closure Device (Gate) | Gate | 25,000 | 1 | \$25,000 | \$0 | | \$0 | | \$0 | \$25,000 |
| S3. Hazard Tree Falling | Site | 600 | 1 | \$600 | \$0 | | \$0 | | \$0 | \$600 |
| S7. Infrastructure Protection | Site | 2,150 | 1 | \$2,150 | \$0 | | \$0 | | \$0 | \$2,150 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Protection/Safety</i> | | | | \$42,750 | \$0 | | \$0 | | \$0 | \$42,750 |
| E. BAER Evaluation | | | | | | | | | | |
| Initial Assessment | Report | | | \$35,021 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | --- | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Evaluation</i> | | | | \$35,021 | \$0 | | \$0 | | \$0 | \$0 |
| F. Monitoring | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Monitoring</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| G. Totals | | | | \$209,242 | \$0 | | \$0 | | \$0 | \$209,242 |
| Previously approved | | | | \$122,647 | | | | | | |
| Total for this request | | | | \$86,595 | | | | | | |

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS
for White River Fire

| 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 | | | | | | | | | | |
| P1a. Invasives EDRR | Acres | 89 | 45.2 | \$4,023 | \$0 | | \$0 | | \$0 | \$4,023 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Land Treatments</i> | | | | \$4,023 | \$0 | | \$0 | | \$0 | \$4,023 |
| B. Channel Treatments | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Channel Treatments</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| C. Road and Trails | | | | | | | | | | |
| R2a. New Drainage Feature - Drainage Dip | Dip | 5,300 | 1 | \$5,300 | \$0 | | \$0 | | \$0 | \$5,300 |
| R3. Storm Inspection and Response | Miles | 4,900 | 1.25 | \$6,125 | \$0 | | \$0 | | \$0 | \$6,125 |
| R3. Storm Inspection and Response | Miles | 9,700 | 1.25 | \$12,125 | \$0 | | \$0 | | \$0 | \$12,125 |
| R4. Roads, Culvert Remove | Culvert | 10,000 | 3 | \$30,000 | \$0 | | \$0 | | \$0 | \$30,000 |
| R5. Critical Dip - Stream Crossing | Dip | 4,100 | 1 | \$4,100 | \$0 | | \$0 | | \$0 | \$4,100 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Road and Trails</i> | | | | \$57,650 | \$0 | | \$0 | | \$0 | \$57,650 |
| D. Protection/Safety | | | | | | | | | | |
| S1a. Road Hazard Signs | Sign/Post | 750 | 3 | \$2,250 | \$0 | | \$0 | | \$0 | \$2,250 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Protection/Safety</i> | | | | \$2,250 | \$0 | | \$0 | | \$0 | \$2,250 |
| E. BAER Evaluation | | | | | | | | | | |
| Initial Assessment | Report | | | \$35,021 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | --- | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Evaluation</i> | | | | \$35,021 | \$0 | | \$0 | | \$0 | \$0 |
| F. Monitoring | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Subtotal Monitoring</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| G. Totals | | | | \$63,923 | \$0 | | \$0 | | \$0 | \$63,923 |
| Previously approved | | | | \$51,798 | | | | | | |
| Total for this request | | | | \$12,125 | | | | | | |

PART VII - APPROVALS

1. _____
 Forest Supervisor Date _____