Date of Report: 1/17/2024

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: Airplane Lake

B. Fire Number: OWF-374

C. State: WA

D. County: Chelan

E. Region:03

F. Forest: Okanogan Wenatchee

G. District: Wenatchee River

H. Fire Incident Job Code: P6QDG623 (0617)

I. Date Fire Started: 07/07/2023

J. Date Fire Contained: Estimated 1/31/2023

K. Suppression Cost: $250,000 (source: 209 dated 9/19/23)

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

1. **Fireline repaired (miles): N/A**
2. **Other (identify): N/A**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170200110101	Indian Creek	13,091	29	0
170200110102	Upper White River	31,953	10,745	34

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	10,774

OWNERSHIP	ACRES
OTHER FEDERAL (LIST AGENCY AND ACRES)	0
STATE	0
PRIVATE	0
TOTAL	0

O. **Vegetation Types:** Mountain hemlock-subalpine larch-white bark pine, Pacific silver fir/rusty menziesia, Avalanche Sitka alder

P. Dominant Soils: Fernow-Serene association, 30 to 60 percent slopes (27%), Humicryods-Andic Cryumbrepts-Rock outcrop complex, steep and very steep (23%), Rock outcrop-Rubble land-Glaciers, snowfields complex (15%).

Q. **Geologic Types:** Massive and Foliated Crystalline with some Tertiary Continental Sedimentary Rocks

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERENNIAL	116
INTERMITTENT	5
EPHEMERAL	
OTHER (DEFINE)	

S. **Transportation System:**
Trails: *National Forest (miles):* 7 *Other (miles):* 0
Roads: *National Forest (miles):* 0 *Other (miles):* 0

PART III - WATERSHED CONDITION

A. Burn Severity (acres): See Appendix A for burn severity map.

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	3,599				3,599	
Low	3,458				3,458	
Moderate	1,914				1,914	
High	1,347				1,347	
Total	10,318				10,318	

B. Water-Repellent Soil (acres): Not Determined

C. **Soil Erosion Hazard Rating:** 8,240 acres High (80%), 1,193 Moderate (12%), 705 acres Low (7%) plus 432 acres of rock/talus units considered “low”. See Appendix B for SRI map of erosion hazard ratings.

D. **Erosion Potential:** Active avalanche chutes are common throughout the burned area and already deliver and create depositional features along and within runout zones. High potential from steeper slopes prior to the fire and now increased from those steeper slopes identified as having moderate or high burn severity (~20% within the burned area perimeter). See Appendix C for SRI map of erosion potential plus 432 acres of rock/talus considered “low” independent of burn severity.

E. Sediment Potential: As above, high from steeper slopes identified as having moderate of high burn severity (~20% of the burned area perimeter). See Appendix D (3 maps) for USGS Debris flow

assessment. Existing active avalanche paths and steep tributaries are current sources of sediment and debris delivery to the White River**.**

F. Estimated Vegetative Recovery Period (years): 3 - 5

G. Estimated Hydrologic Response (brief description): Extreme flooding historically results from rain-on-snow events which are independent of fire. The average annual precipitation in the burned area is around 100" mostly falling as snow. Annual high flows result from late season snowmelt runoff which given the snow depths within the burn area should not appreciably change. Note: annual peak flows are about one third the value of recorded rain-on-snow events. Given the topography and size of the fire it is doubtful that a convective event would envelop the burned area. The watershed area of the White River mainstem at the fire perimeter is ~40.2 square miles with ~5.1 square miles of high and moderate burn severity (~13%). Small tributaries may see runoff response from a five year return convective event that equals or exceed snowmelt peak runoff by up to a factor of two. A basin wide storm may result in a peak flow comparable to snowmelt but would likely occur during late summer or fall with runoff amounts up to an order of magnitude greater than would be expected that time of year. **Smaller tributaries can see convective event related increases by up to two orders of magnitude greater than prefire events resulting from small and isolated storms.**

PART V - SUMMARY OF ANALYSIS

Introduction/Background

A. Describe Critical Values/Resources and Threats (narrative): See Appendix E for values at risk map.

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): White River Falls Campground, FS Road 6400, Trailhead, FS trail use**
   a. **Access and use of Forest Service Trail 1507 with two of seven miles in moderate or high burn severity plus an additional ~2.5 miles between the fire perimeter and the downstream trailhead.** The trail within the fire perimeter is mostly adjacent to the north side of the White River mainstem and already subject to active existing avalanche zones. Probability is "Likely" with a risk of "Low" (if managed) for a Magnitude of Consequences of "Minor".
   b. **Access and use of Forest Service Trail 1502 (downstream of fire perimeter) from trailhead to Indian Creek (~2 miles).** Probability is "Likely" with a risk of "Low" (if managed) for a Magnitude of Consequences of "Minor".
   c. **Access and use of White River Falls Campground (5 single sites, 2 vault toilets). Limted use of this site with no anecdotal information on impacts or threats from runoff events.** Probability is "Possible" with a risk of "Low" given limited use and occupancy (per District Staff) for a Magnitude of Consequences (if managed) of "Minor".
   d. **Forest Service Road 6400 (Maintenance Level 3).** Low spots are currently subject to innudation during very high flows normally asociated with snowmelt or rain-on-snow events. This frequency may increase due to rainfall events resulting in high flows not normally seen other than snowmelt. Probability is "Possible" with a risk of "Low" given transient use for a Magnitude of Consequences (if managed) of "Minor".
2. **Property (P):** Trail 1507 within the fire perimeter has a Probability of "Very Likely" and a risk of "Low" given that the trail within the fire has not been maintained in years for a Magnitude of Consequences of "Minor". From the trailhead to the fire perimeter, the Probability may be from "Possible" to "Unlikely"

with a risk of “intermediate” to “low” for a Magnitude of consequences of “Moderate”. This consequence could also occur independent of the burned area.

3. **Natural Resources (NR):** Water Quality, Aquatic Habitat
4. **Cultural and Heritage Resources:** None identified.

B. Emergency Treatment Objectives: Reduce potential post fire threats to human life and safety with signage, limited seasonal closures and public notifications.

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

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

F. Cost of Selected Alternative (Including Loss): N/A

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Gregory A. Kuyumjian (AD)
Email: gregory.kuyumjian@usda.gov **Phone(s)** 509.293.3066

Forest BAER Coordinator: Karenth Dworsky
Email: karenth.dworsky@usda.gov **Phone(s):** 907.223.2637

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

Skill	**Team Member Name**
Team Lead(s)	Gregory Kuyumjian
Soils	
Hydrology	Molly Hanson
Engineering	
GIS	Susanne Campbell
Archaeology	
Weeds	
Recreation	
Other	

H. Treatment Narrative: Signage at the 1507/1502/1562 Trailhead, Seasonal Closure of the burned area, if necessary, plus signage on FS Road 6400 and White River Falls Campground.

Land Treatments: N/A. Wilderness. No “boots on the ground” during suppression or BAER.

Channel Treatments: N/A. Wilderness. No “boots on the ground” during BAER.

Roads and Trail Treatments: N/A. 100% within Wilderness. No roads. Existing trails, within the perimeter, have not maintained in years.

Protection/Safety Treatments: Signage: Trailhead, Campground (5 single sites, 2 vault toilets), FS Road and Trails

S1a. Road Hazard Signs placed on FSR 6400 (ML 3) downstream of the fire perimeter and entrance to White River Falls Campground, two signs at $900 each covered by with Forest funds and resources to include available existing signs which would reduce estimated cost.
S1b - Trail warning/closure signs for two signs at $350 each covered by Forest funds and resources, to include available existing signs which would reduce estimated cost, at Trailhead and 1507/1562 intersection and/or another locations to be determined.

Item	Cost/Unit	# of Units	Total Cost	Description of Cost
S1b. Trail Hazard Signs	$350/unit	2	$700	Sign placement where trails intersect, or approach burned area. Trails: 1507/1502, 1562
S1a. Road Hazard Signs	$900/Sign	2	$1800	Alert public of potential unsafe conditions, FS road 6400, entrance to White River Falls Campground
Total			**$2,500**	

I. Monitoring Narrative:

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										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$0	$0		$0		$0	$0
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										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road and Trails				$0	$0		$0		$0	$0
D. Protection/Safety										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Protection/Safety				$0	$0		$0		$0	$0
E. BAER Evaluation										
Initial Assessment	Report			---	$15,000		$0		$0	$15,000
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$0	$15,000		$0		$0	$15,000
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				$0	$15,000		**$0**		**$0**	**$15,000**
Previously approved										
Total for this request				**$0**						

PART VII - APPROVALS

KRISTIN BAIL Digitally signed by KRISTIN BAIL
Date: 2024.01.19 12:21:12 -08'00'

1. _____
Forest Supervisor Date