Date of Report: 10/6/2023

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Brice Creek

B. Fire Number: OR-UPF-000359

C. State: Oregon

D. County: Douglas

E. Region: 6 Pacific Northwest

F. Forest: Umpqua

G. District: North Umpqua RD

H. Fire Incident Job Code: P6QLF4(0615)

I. Date Fire Started: 8/14/2023

J. Date Fire Contained: estimated 10/31/2023

K. Suppression Cost: unknown

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

1. **Fireline repaired (miles): unknown**
2. **Other (identify):**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170900020202	Brice Creek	36,258	571	2%

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	571
TOTAL	571

O. Vegetation Types:

The Brice fire has impacted multiple vegetation communities on Forest Service land. Western hemlock, Douglas fir, Sugar pine and Incense cedar forest dominates the slopes, with understories of Golden chinquapin, Pacific rhododendron, snowbrush and manzanita. Primary ground cover species include Vanilla leaf and Dwarf Oregon grape. Along ridgetops there are also White fir and Red fir mixed into the canopy. Forest types are also interspersed by dry rocky meadows with populations of Oregon white oak and Poison oak. Down in moister creek draws Douglas fir, Big-leaf Maple and Grand fir cover populations of Pacific dogwood, Salal, Vine maple and Sword fern. These ecosystems also host rare and sensitive plant, lichen, and fungus species.

P. Dominant Soils:
Soils are largely gravelly loams. Soils tend to be shallow to moderately deep with good drainage and moderate erosion potential. Depth to bedrock is 3 feet. Dominant soils originate from tuffs, basalts, and breccia.

Q. Geologic Types:
The fire is within the Western Cascade Range that consists of deep narrow valleys and rugged topography. The rock formations have been extensively modified by stream erosion and slope instability. Geology largely consists of undifferentiated tuffaceous sedimentary rocks, tuffs, basalts, and hornblende diorite.

R. Miles of Stream Channels by Class:

Table 3: Miles of Stream Channels by Class

Streams	Miles
Perennial, non-fish bearing	3.0
Intermittent	2.4
Total	5.4

S. Transportation System:
Trails: *National Forest (miles):* 0
Roads: *National Forest (miles):* 2.7

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	State	Private	Total	% within the Fire Perimeter
Very Low	190				33%
Low	297				51%
Moderate	83				14%
High	4				1%
Total	579				

B. Water-Repellent Soil (acres): 87
Fire-induced or altered hydrophobicity occurred on approximately 14% of soils (100% of high burned soil and 50% of moderately burned soil) or around 87 acres. Inherent hydrophobicity was also noted in field observations, which could contribute higher counts of water repellent soils that may not have been fire induced.

C. Soil Erosion Hazard Rating:

Erosion Hazard	Erosion Hazard (acres)	Erosion Hazard (%)
Low	487	85%
Moderate	43	7%
High	44	8%
Very High	0	0%

D. Erosion Potential: 3 tons/acre/year

E. Sediment Potential: 7,000 tons/year

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

G. Estimated Hydrologic Response (brief description): Hydrologic response following wildfire in the Brice Fire burned area will include reduced interception and infiltration of precipitation, increased runoff and erosion, higher stream flow volumes for a given precipitation or snowmelt input, and a more rapid rise of stream and river levels compared with those of unburned conditions. Additionally, the probability of severe erosion, debris flows (USGS debris flow model Appendix A), and hillslope failure is moderately higher, and will remain so for at least the next few years. For additional information refer to the Fire Hydrology Report.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

The Brice Fire was started by lightning on August 24,2023. Hot, dry weather, low humidity and drought conditions increased fire behavior leading to fire spread. Most of the fire is low soil burn severity with ground creeping fire and isolate pockets of tree torching. The fire had beneficial fire impacts on the landscape in most areas, however the fire burned with moderate soil burn severity in a few larger patches and were identified as a risk to human life and safety. Two treatments are proposed to help mitigate the risk.

Three additional fires (Dinner, Ridge, Grizzly) that started the same time as Brice were not assessed due to the sizes of the fires, however soil burn severity maps were still produced and are in the project record. All 3 fires largely burned at low soil burn severity with small patches of moderate.

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): Road hazard signs to alert visitors of post-fire hazards on FS Road 22 and 2216. These are high use maintenance level 3 roads and probablity for debris/rock fall is likely due to mod burn patches and steep rocky slopes surounding the road.**

2. **Property (P): Storm inpsection and response to protect FS road 22. There is a likely probablity of damage/loss due to the mod burn severity in patches above road and large portion of watershed drains to one culvert, that could lead to substatial property damage.**

3. **Natural Resources (NR): none identified**

4. **Cultural and Heritage Resources: none identified**

B. Emergency Treatment Objectives: Road warning signs to alert visitors of post-fire hazards and storm patrol response to monitor FS Road 22 after major storm events.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:
Land: None proposed
Channel: None proposed
Roads/Trails: High
Protection/Safety: High

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	*3 years after treatment*	*5 years after treatment*
Land			
Channel			
Roads/Trails	100%	100%	100%
Protection/Safety	100%	100%	100%

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

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:
Range

Team Leader: Luke Cerise; Sarah Brame (T)
Email: luke.cerise@usda.gov; sarah.brame2@usda.gov **Phone(s)** 509-486-5108; 541-957-3374

Forest BAER Coordinator: Joe Blanchard
Email: joseph.blanchard@usda.gov **Phone(s):** 541-957-3356

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

Skill	**Team Member Name**
Team Lead(s)	Luke Cerise; Sarah Brame (T)
Soils	Sarah Brame; Luke Cerise
Hydrology	Amy Rusk; Jackson Wilhite (T)
Engineering	Steve Hanussak
GIS	Nathan Duncan (T)
Archaeology	
Weeds	Kathleen Walsh (T)
Recreation	
Other	Summer Cross (T); Courtney Quinn (T)

H. Treatment Narrative:

Land Treatments:
No land treatments are proposed.

Channel Treatments:
No Channel Treatments are proposed.

Road Treatments:
R3. Storm inspection and response at two locations (Map in appendix A)

Protection/Safety Treatments:
S1a. Road hazard signs are proposed to alert the public of post fire hazards on the FS 22 and 2216 roads from rockfall and debris at 3 locations. These are high use maintenance level 3 roads. (Map in appendix A)

I. WORK TO BE DONE

A. Provide a Brief General Description of Treatment

Roads within the Brice Fire contain drainage structures that cross streams located in watersheds that have a high to moderate burn severity. These streams now have the potential for increased runoff and debris flows. These increases in flows pose a threat to the existing crossings which may result in plugging drainage structures or exceeding their maximum flow capacity. If these flows plug drainage structures the result could be massive erosion and debris torrents further down the drainage due to the failure. Storm inspection/response keeps culvert and drainage structures functional by cleaning sediment and debris from the inlet between or during storms. This work will be accomplished through Forest Service Road Crew, equipment rental, and general labor.

B. Describe Specific Treatment Location or General Description of Suitable Sites for Treatment

Per the BAER Treatments Catalog, storm patrols are intended for use at the following locations:
1. Road crossings where loss of control of water or exceedance is identified.
2. Road access is necessary throughout the storm season.
3. Road crossings where high sediment and debris is anticipated.
4. Roads susceptible to landslides.
5. Roads with all-season surfacing (aggregate or asphalt).
Other roads within the fire perimeter may be patrolled as necessary depending on the storm magnitude and location.

C. Provide and Number Detailed Design/Construction Specifications

1. FS personnel will direct the work. The patrols are used to identify those road problems such as plugged culverts and washed out roads and to clear, clean, and/or block those roads that are or have received damage.
2. Immediately upon receiving heavy rain the FS will send out patrols to identify road hazard conditions – obstructions such as rocks, sediment, washouts, and plugged culverts so the problems can be corrected before they worsen or jeopardize motor vehicle users.
3. The road patrols shall bring in heavy equipment necessary to mechanically remove any obstructions from the roads and culvert inlets and catch basins where necessary.
4. All excess material and debris removed from the drainage system shall be placed outside of bank-full channel where it cannot re-enter stream channels.

D. Describe Purpose of Treatment Specification – What Resource will be Protected

The purpose of patrols are used to identify those road problems such as plugged culverts and washed out roads and to clear, clean, and/or block those roads that are or have received damage. The storm patrollers shall have access to at least a backhoe and dump truck that can be used when a drainage culvert is plugged or soon to be plugged and to repair any road receiving severe surface erosion. The BAER Team considered this treatment to be the minimum necessary to achieve a reduction in risk to the accumulated critical values of:
1. Travelers,

2. Hydrologic function, 3. Road and bridge infrastructure, and 4. Occupied critical habitat.
E. Describe Treatment Effectiveness Monitoring
Monitor roads and culverts after storms for possible obstructions and damage and initiate maintenance.

II. LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
Storm Patrol, 2 days x $300/day Heavy Equipment, 2 days x $3,500	$600 $7,000
TOTAL PERSONNEL SERVICE COST	**$7,600**

TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item	**COST/ITEM**
Mobilization of equipment	$3,000
TOTAL TRAVEL COST	**$3,000**

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2024					ESR	P

FUNDING SOURCES	*SPECIFICATION TYPE*	*METHOD OF COMPLETION*
F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	T
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	
P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression	

III. RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Review the Engineering Specialist report for the 2023 North Zone BAER, the Burned Area Emergency Response Treatments Catalog 0625 1801 - SDTDC

IV. TOTAL COST BY JURSIDICTION

JURISDICTION	UNITS TREATED	COST
USFS, Umpqua National Forest	1	$10,600
TOTALS	**1**	**$10,600**

I. WORK TO BE DONE

A. Provide a Brief General Description of Treatment

Installation of the warning signs to inform the public of the hazards associated with post-fire events, such as falling objects, hazard trees, mud slides and rolling rocks, and potential for flooding (especially during heavy wind or rain events).

Road	MP	Sign Description
22	15.45	Burned Area, Fallen Trees Rock And Debris
22	12.92	Burned Area, Fallen Trees Rock And Debris
2216	9.82	Burned Area, Fallen Trees Rock And Debris

B. Describe Specific Treatment Location or General Description of Suitable Sites for Treatment

"Burned Area Fallen Trees Rock and Debris" (FW8-14e 48"x24" 4C Inch Letters) warning signs are to be installed on the Brice fire.

C. Provide and Number Detailed Design/Construction Specifications

FHWA Standard Specifications for Roads and Bridges on Federal Highway Projects (FP-14) with Forest Service supplemental specifications.
Sign and Poster Guidelines for the Forest Service EM7100-15

D. Describe Purpose of Treatment Specification – What Resource will be Protected

Inform users of the dangers associated with entering/recreating within a burned area as well as inform them of hazards.

The probability of motorist accessing routes or hitting objects not marked within the roadway is about 95% or nearly certain will occur. The loss is difficult to estimate since this a safety issue. One could conclude damages to a vehicle would occur but the risk of someone getting injured if their vehicle strikes something or gets stranded on a route unknown to them is increased when involved in a vehicle accident or when loss in this particular environment. If the treatments are implemented the probability of someone damaging their vehicle is greatly reduced if they are able to see the obstacles within the roadway and know what roads they are operating on. This would give an estimated success rate of around 90% since the treatments are highly understood by all common drivers.

E. Describe Treatment Effectiveness Monitoring

Regularly inspect signs for visibility, damage, or loss

II. LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item **Do not include contract personnel costs here (see contractor services below).**	
Laborer 4X4X 12' Posts and Hardware for BURNED AREA Warning Signs, 3 @ $75/Each Warning signs stating "Burned Area Fallen Trees Rock and Debris" x 3 @ $500 Each	$225 $1,500
TOTAL PERSONNEL SERVICE COST	**$1,725**

Overhead and Contract Costs and Travel Cost	COST/ITEM
Contract preparation, inspection	$450
TOTAL OVERHEAD, TRAVEL AND SERVICE COST	**$2,175**

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2024				$2,175	ES	EFC
TOTALS						

FUNDING SOURCES	*SPECIFICATION TYPE*	*METHOD OF COMPLETION*
F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program	ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression	P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire

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2. Documented cost figures from similar project work obtained from local agency sources.	P
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	T
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	
P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression	

III. RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan
Review the Engineering Specialist report for **2023** North Zone BAER. Burned Area Emergency Response Treatments Catalog 0625 1801 – SDTDC. The Federal Highway Specifications FP-14

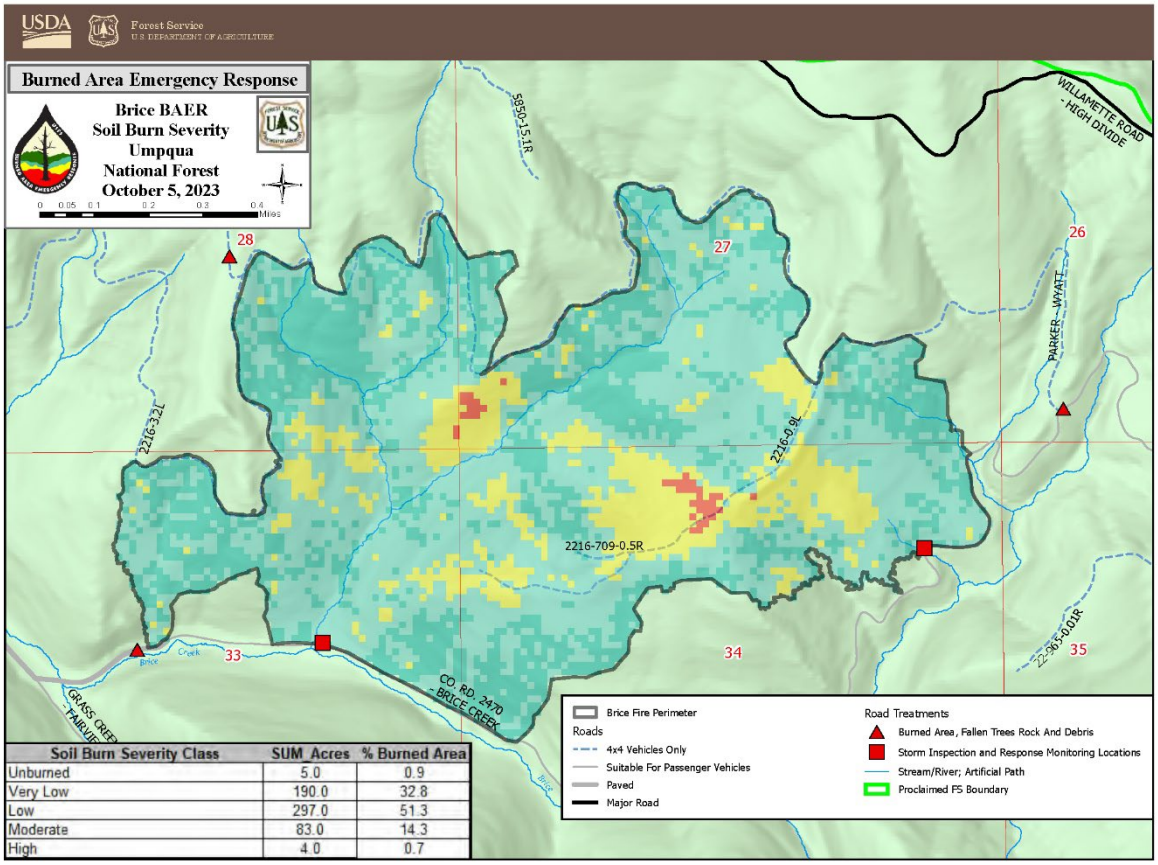
IV. TOTAL COST BY JURSIDICTION

JURISDICTION	UNITS TREATED	COST
USFS, UMPQUA NATIONAL FOREST	3	$725
TOTALS	**3**	**$2,175**

Cultural and Heritage Resources Treatments:
No cultural resource treatments proposed.

I. Monitoring Narrative:
Local District Staff will monitor post-fire affects as needed.

Appendix A: Maps



Soil Burn Severity Class	SUM_Acres	% Burned Area
Unburned	5.0	0.9
Very Low	190.0	32.8
Low	297.0	51.3
Moderate	83.0	14.3
High	4.0	0.7

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

			NFS Lands				Other Lands				All
		Unit	# of		Other		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$		units	$	Units	$	$
A. Land Treatments											
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Land Treatments				$0	$0			$0		$0	$0
B. Channel Treatments											
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Channel Treatments				$0	$0			$0		$0	$0
C. Road and Trails											
R3. Storm inspection and response	Each	$10,600	1	$10,600							
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Road and Trails				$0	$0			$0		$0	$0
D. Protection/Safety											
S1a. Road Hazard Signs	Each	725	3	$2,175							
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Protection/Safety	each			$12,775	$0			$0		$0	$0
E. BAER Evaluation											
Initial Assessment	Report	$10,000	1		$0						$0
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				$0	$0			$0		$0	$0
F. Monitoring											
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Monitoring				$0	$0			$0		$0	$0
G. Totals				$12,775	$0			**$0**		**$0**	**$12,775**
Previously approved											

Total for this request				**$12,775**							

PART VII - APPROVALS

1. ALICE CARLTON Digitally signed by ALICE CARLTON Date: 2023.10.12 08:27:04 -07'00'

Forest Supervisor Date