Date of Report: 9/16/2024

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: Easy Fire

B. Fire Number: WA-OWF-000435

C. State: Washington

D. County: Skagit

E. Region: 6 Pacific Northwest

F. Forest: Okanogan-Wenatchee

G. District: Methow Valley

H. Fire Incident Job Code: P6R3U924

I. Date Fire Started: 7/17/2024

J. Date Fire Contained: estimated 10/31/2024

K. Suppression Cost: ~$14,000,000

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

1. **Fireline repaired (miles): No mechanical fire line**
2. **Other (identify):**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
171100050504	Lower Granite Creek	24,936	323	1%
171100050503	Upper Granite Creek	21,309	1,955	9%
170200080201	West Fork Methow River-Methow River	31,911	14	<1%

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	2,292
TOTAL	2,292

O. Vegetation Types:
Pre-fire vegetation consisted of two primary zones, each covering roughly half the fire perimeter: a lower elevation Douglas-fir zone and a higher elevation Subalpine-fir zone. The lower elevation zone was dominated by Douglas-fir and Ponderosa cover-types, while the higher elevation zone was dominated by Lodgepole Pine, Subalpine Fir, and some Engelmann Spruce. The highest elevations were larger rock scree and high elevation herbs and shrubs. Understories were dominated by alder, ceanothus, and huckleberry.

P. Dominant Soils:
The dominant soil orders within the Easy fire perimeter include Andisols and Inceptisols, with medial, ashy and/or lithic modifiers. Volcanic ash exists in large concentrations within the upper profile of all mapped andic soils. Dominant soil textures are moderately coarse to fine sandy loams, most of which are located on steep backslope down to toe slope positions. Soils within the burned area generally have extremely high rock content throughout the entire upper profile, ranging from 35% to 90%. Unconsolidated materials dominate the upper 1/3 backslopes of most landforms within the perimeter, with these being highly fragmental (>90% rock fragments). Shallow soils with very stony to extremely stony surface phases comprise over 50% of the fire perimeter.

Q. Geologic Types:
Eastern facing slopes in the fire area are dominant by sedimentary rocks (Kps) and volcanic rocks (Kpv). The sedimentary rocks (Kps) are mostly sandstone, shale, and pebble conglomerate. As the ancient Methow Ocean filled with marine sediments, streams and rivers deposited sand, gravel, and mud on top of them. In a few areas, ocean deposits are interlayered with the stream deposits. The volcanic rocks (Kpv) are predominantly andesitic breccia and tuff, locally fluviatile maroon siltstone, sandstone, and conglomerate. About 90 million years ago, volcanoes erupted on the flood plains of rivers that flowed over sediments of the former Methow Ocean, burying both the river deposits and the underlying Methow Ocean sediments under volcanic rocks.

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

Easy BAER	
*streams around perimeter are included to account for impacts from fire and are included in unburned category	
Streams	**Miles**
Perennial Stream (Fcode 46006)	**9.7**
Granite Creek	4.1
Swamp Creek	2.1
No GNIS Name	3.5
Grand Total	**9.7**

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

Roads: *National Forest (miles):* 0

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

B. *Table 4: Burn Severity Acres by Ownership*

Soil Burn Severity	NFS	State	Private	Total	% within the Fire Perimeter
Unburned	383				17%
Low	994				43%
Moderate	754				33%
High	161				7%
Total	2,292				

C. Water-Repellent Soil (acres): 153

Fire-induced or altered hydrophobicity occurred on approximately 12% of soils (50% of high burned soil and 25% of moderately burned soil) or around 269 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.

D. Soil Erosion Hazard Rating:

Dominant Soils	*Andisols and Spodisols with high volcanic ash and rock content*			
Geologic Types	*Tonalite – granite – alluvial and colluvial deposits - glacial drift deposits*			
Water Repellent Soil	*161 acres*			
Soil Erosion Hazard Rating (acres)	*Low*	*Moderate*	*High*	*Very High*
	1,377	*377*	*538*	*161*

E. Erosion Potential: ~1 ton/acre/year

F. Sediment Potential: ~4200 tons/year

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

G. Estimated Hydrologic Response (brief description): Hydrologic response following wildfire in the Easy 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 levels compared with those of unburned conditions. Modeling did not indicate significant increases from the unburned condition. 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 Easy fire started on July 17, 2024. 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 isolated pockets of tree torching. Overall, the fire had beneficial fire impacts to the Upper Granite Creek Watershed. Debris flows have occurred within the fire perimeter. They initiated above the fire perimeter due to an intense thunderstorm and continued through the fire terminating on Hwy 20. There were no Forest Service BAER

Critical Values identified that needed protection. The only road through the fire is State Highway 20; the highway right of way is administered by WSDOT.

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

Table 1: 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):**
2. **Property (P)**

3. **Natural Resources (NR):**

4. **Cultural and Heritage Resources:**

B. Emergency Treatment Objectives:

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

Land: None proposed
Channel: None proposed
Roads/Trails: None proposed
Protection/Safety: None proposed

D. Probability of Treatment Success

Table 2: Probability of Treatment Success

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

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
Email: luke.cerise@usda.gov **Phone(s)** 509-486-5108

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

Team Members: *Table 3: BAER Team Members by Skill*

Skill	Team Member Name
Team Lead(s)	Luke Cerise, Robert George (T)
Soils	Luke Cerise
Hydrology	Lance George
Engineering	
GIS	David Keenum
Archaeology	
Botany	Kelly Baraibar
Recreation	
Other	

H. Treatment Narrative:

Land Treatments:
No land treatments are proposed.

Channel Treatments:
No Channel Treatments are proposed.

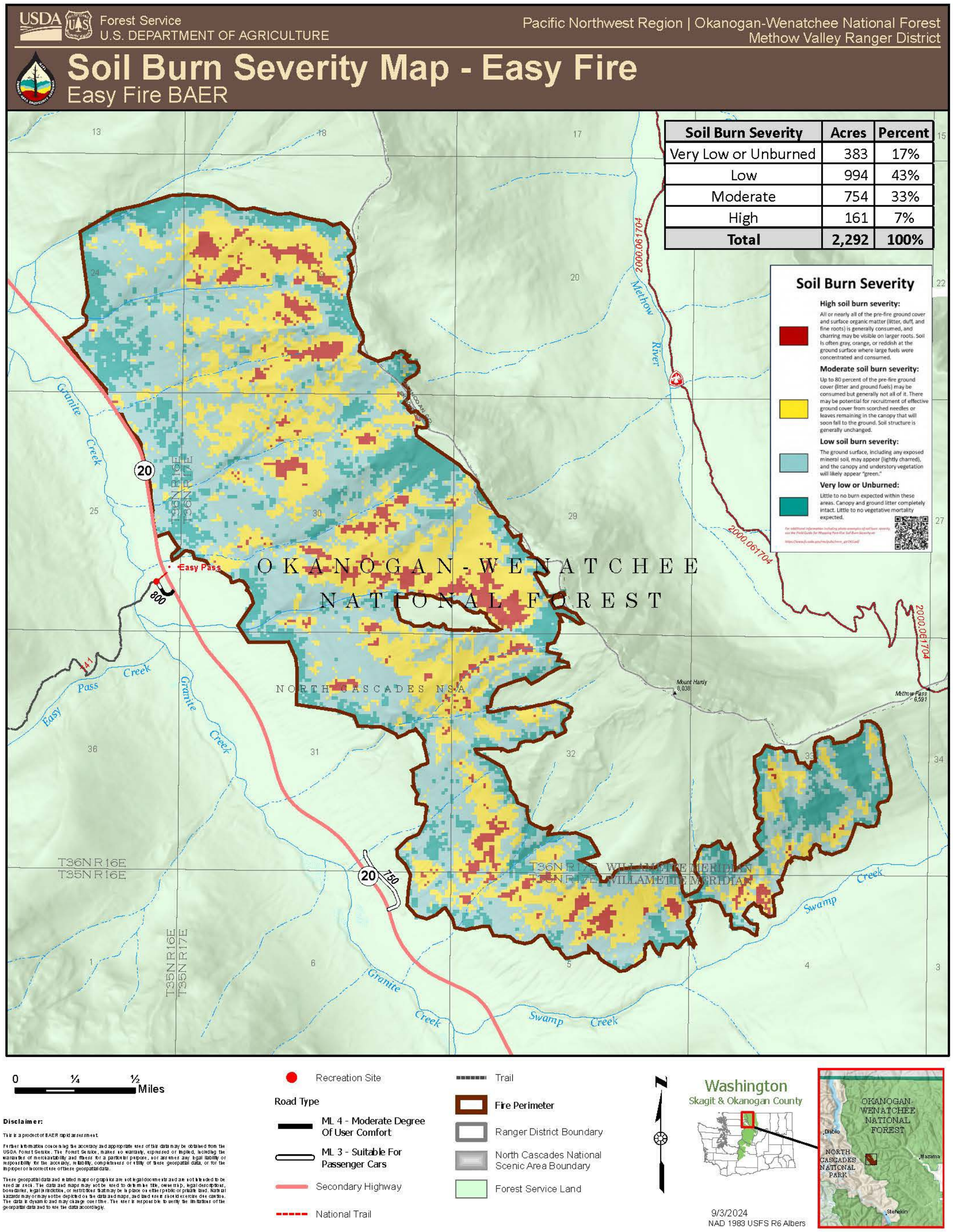
Road Treatments:
No road treatments are proposed.

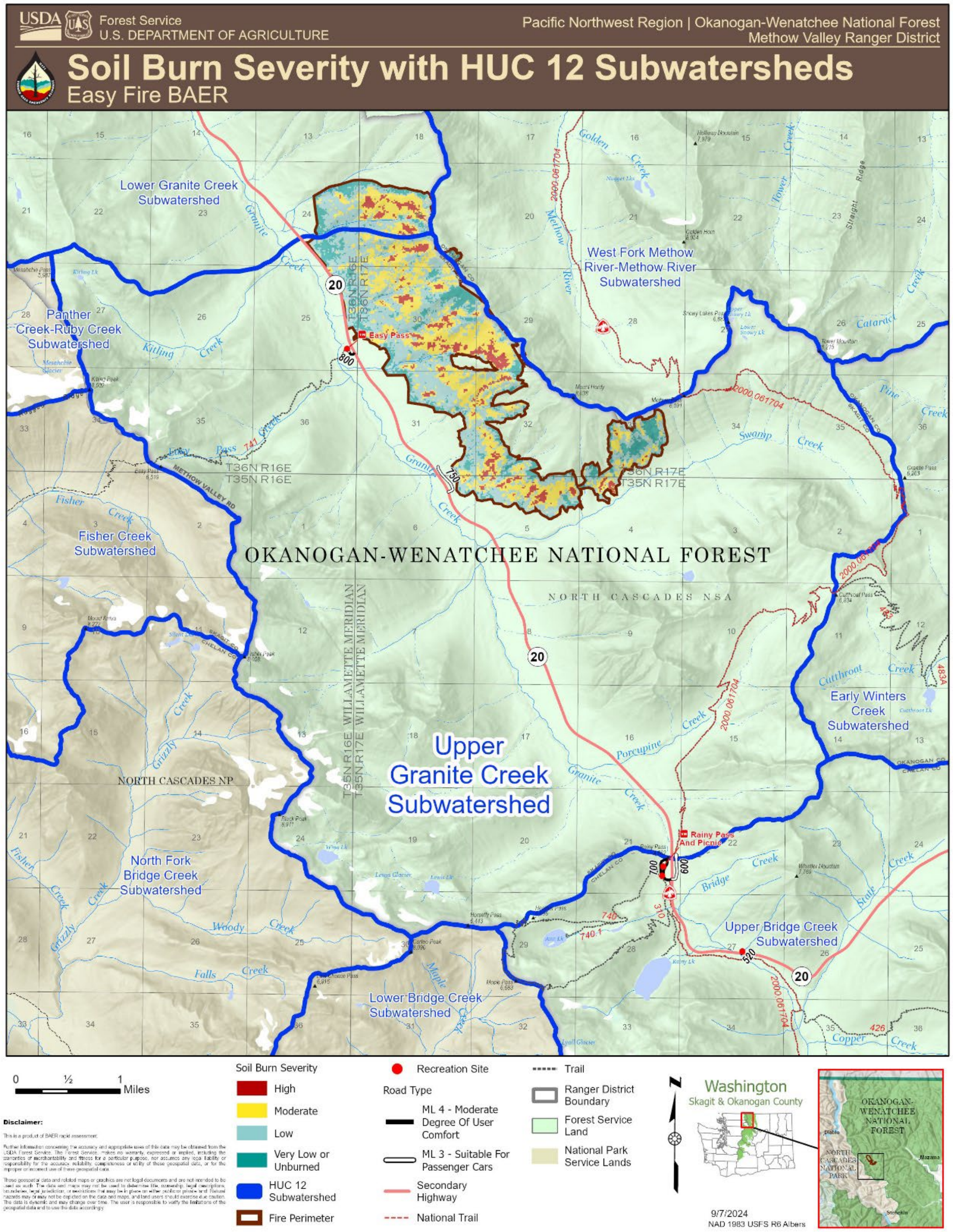
Protection/Safety Treatments:
No protection/safety treatments are proposed.

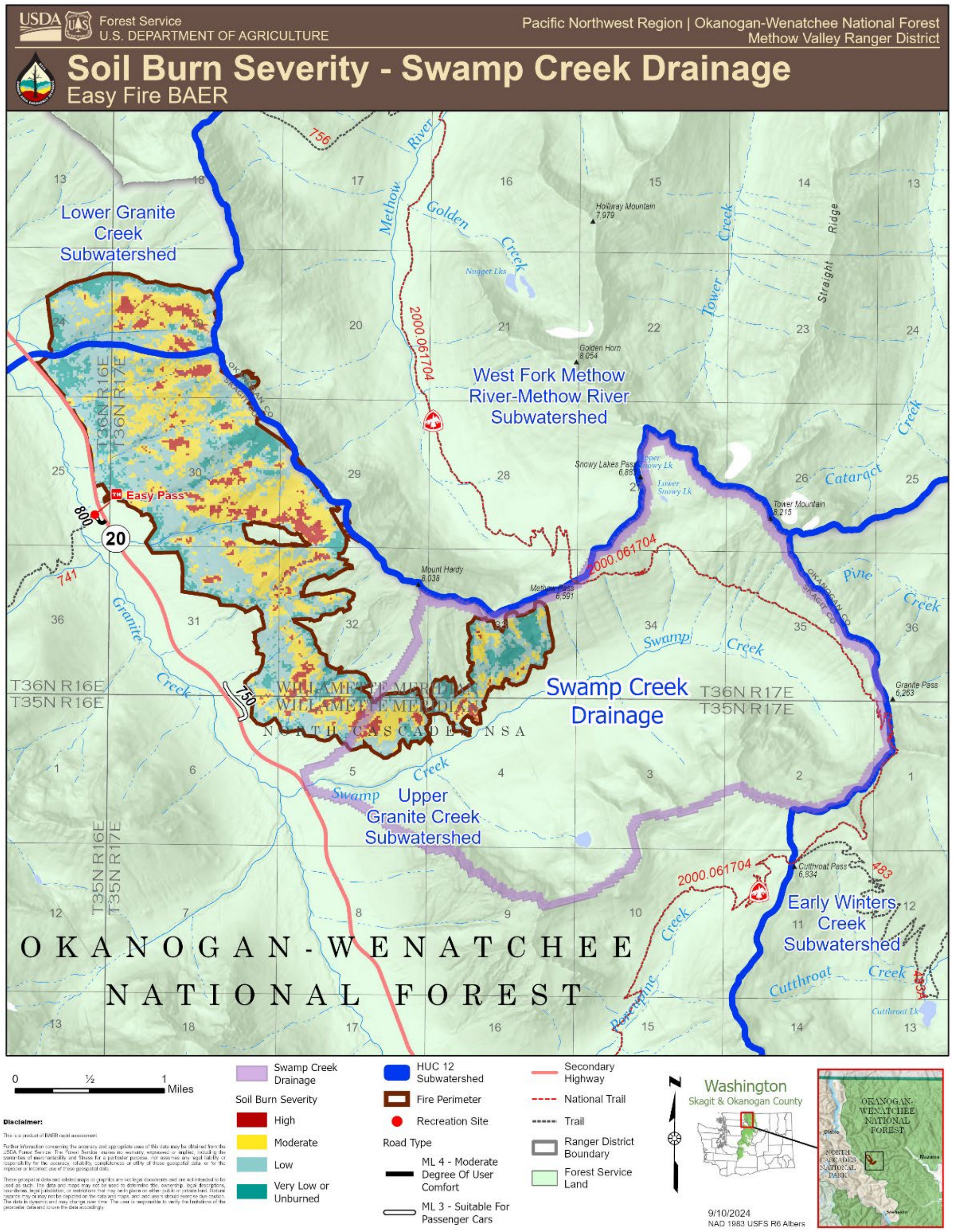
Cultural and Heritage Resources Treatments:
No cultural resource treatments proposed.

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

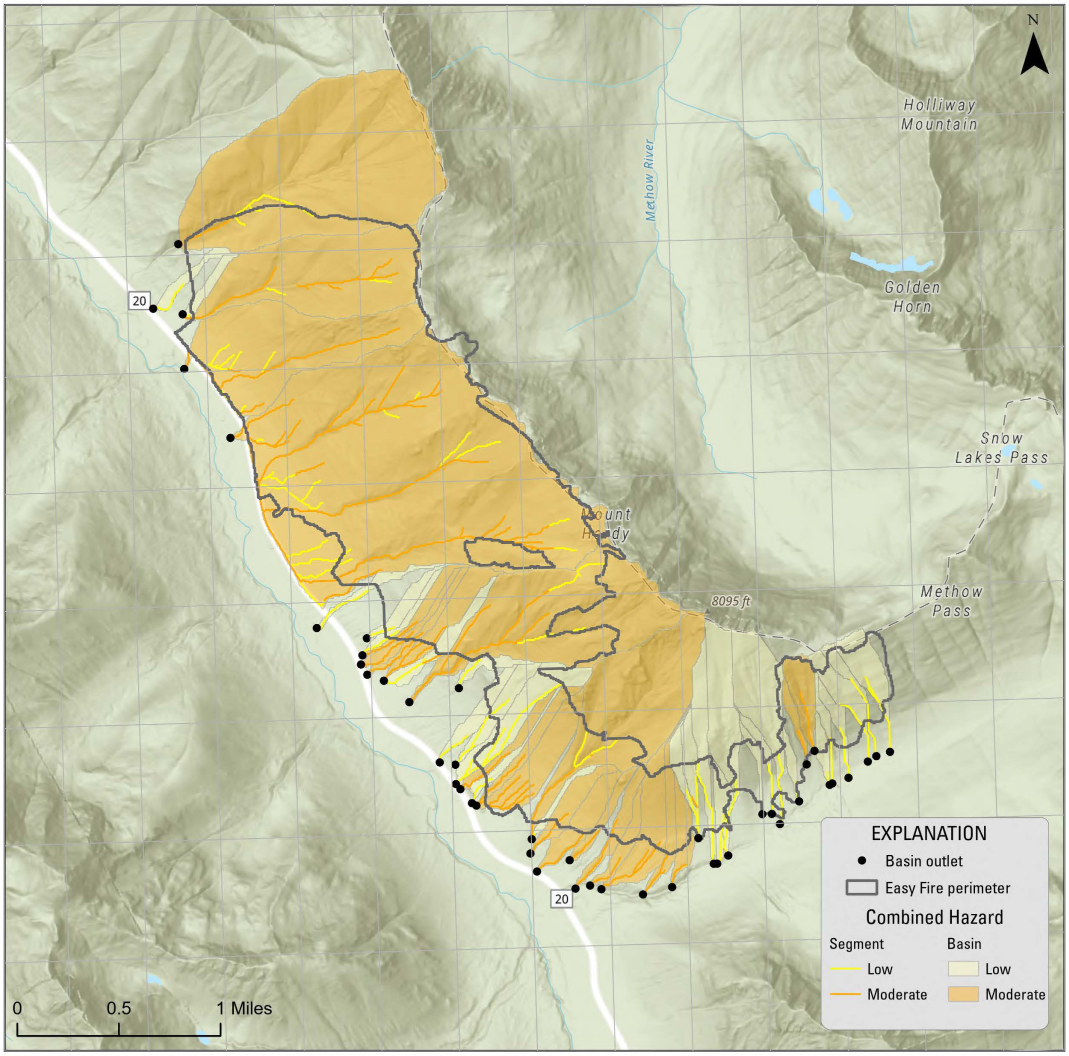
Appendix A: Maps




USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE
Pacific Northwest Region | Okanogan-Wenatchee National Forest
Methow Valley Ranger District
Soil Burn Severity with HUC 12 Subwatersheds
Easy Fire BAER
Lower Granite Creek Subwatershed
West Fork Methow River-Methow River Subwatershed
Panther Creek-Ruby Creek Subwatershed
Fisher Creek Subwatershed
OKANOGAN-WENATCHEE NATIONAL FOREST
NORTH CASCADES NSA
Early Winters Creek Subwatershed
Upper Granite Creek Subwatershed
NORTH CASCADES NP
North Fork Bridge Creek Subwatershed
Upper Bridge Creek Subwatershed
Lower Bridge Creek Subwatershed
Easy Pass
Rainy Pass And Picnic
WILLAMETTE MERIDIAN
T36N R16E
T35N R16E
T36N R17E
T35N R17E
METHOW VALLEY RD
0 ½ 1 Miles
Soil Burn Severity
High
Moderate
Low
Very Low or Unburned
HUC 12 Subwatershed
Fire Perimeter
Recreation Site
Road Type
ML 4 - Moderate Degree Of User Comfort
ML 3 - Suitable For Passenger Cars
Secondary Highway
National Trail
Trail
Ranger District Boundary
Forest Service Land
National Park Service Lands
Washington
Skagit & Okanogan County
9/7/2024
NAD 1983 USFS R6 Albers
Disclaimer:


USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE
Pacific Northwest Region | Okanogan-Wenatchee National Forest
Methow Valley Ranger District
Soil Burn Severity - Swamp Creek Drainage
Easy Fire BAER
Lower Granite Creek Subwatershed
West Fork Methow River-Methow River Subwatershed
Swamp Creek Drainage
Upper Granite Creek Subwatershed
Early Winters Creek Subwatershed
Easy Pass
T36N R16E
T35N R16E
T36N R17E
T35N R17E
2000.061704
OKANOGAN-WENATCHEE NATIONAL FOREST
Swamp Creek Drainage
Soil Burn Severity
High
Moderate
Low
Very Low or Unburned
HUC 12 Subwatershed
Fire Perimeter
Recreation Site
Road Type
ML 4 - Moderate Degree Of User Comfort
ML 3 - Suitable For Passenger Cars
Secondary Highway
National Trail
Trail
Ranger District Boundary
Forest Service Land
0 ½ 1 Miles
Disclaimer:
Washington
Skagit & Okanogan County
9/10/2024
NAD 1983 USFS R6 Albers

Easy Fire, Okanogan-Wenatchee National Forest, Washington
Combined Hazard
Design storm: Peak 15-minute rainfall intensity 24 mm/h



Disclaimer - Limitations of Hazard Assessment

Hazard assessments use a design rainstorm with a given peak 15-minute rainfall intensity to predict the probability, volume, and combined relative hazard of debris flows in basins burned by the fire. Differences in model predictions and actual debris-flow occurrence will arise with differences in actual storm duration and intensity. The occurrence of higher rainfall intensities or longer storm durations may increase the probability or volume of potential debris flows.

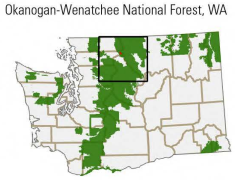
The models were developed, calibrated, and tested using data from the western United States. The models have not yet been tested in burn areas in the eastern United States, western Oregon, or Washington (west of the Cascade Range). Currently, efforts are being made to validate model predictions in the eastern United States, western Oregon, and Washington.

In addition, this hazard assessment relies upon readily available geospatial data, the accuracy and precision of which may influence the estimated likelihood and magnitude of post-fire debris flows. However, local conditions (such as debris supply) certainly influence both the probability and volume of debris flows. Unfortunately, locally specific data are not presently available at the spatial scale of the post-fire debris-flow hazard assessment. As such, local conditions that are not constrained by the model may serve to dramatically increase or decrease the probability and(or) volume of a debris flow at a basin outlet. The input geospatial data are also subject to error based upon mapping resolution, elevation interpolation techniques, and mapping and(or) classification methods. Finally, this assessment is specific to debris-flow hazards; hazards from flash-flooding are not described in this study and may be significant.

This assessment also characterizes potential debris-flow hazards at a static point in time immediately following wildfire. Studies of post-fire debris flow in the western United States have indicated that debris-flow activity in recently burned areas typically occurs within 2 yr of wildfire. As vegetation cover and soil properties return to pre-fire conditions, the threat of debris-flow activity decreases with time elapsed since wildfire. Conversely, the hazards from flash-flooding may persist for several years after the wildfire.

Finally, this work is preliminary and is subject to revision. It is being provided due to the need for timely "best science" information. The assessment is provided on the condition that neither the U.S. Geological Survey nor the United States Government may be held liable for any damages resulting from the authorized or unauthorized use of the assessment.

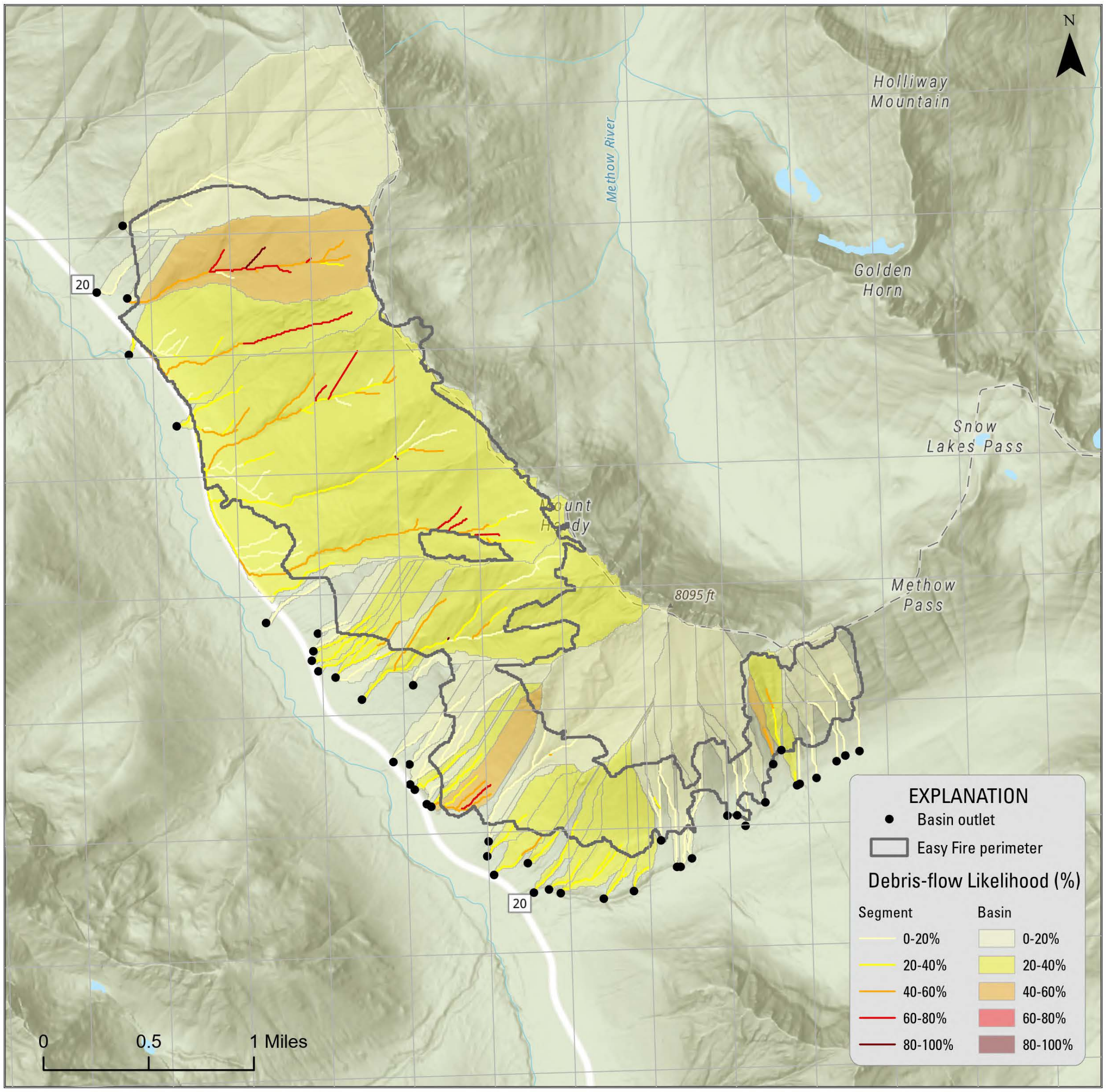
Okanogan-Wenatchee National Forest, WA



Projection: NAD1983, UTM Zone 10N

Easy Fire, Okanogan-Wenatchee National Forest, Washington
Debris-Flow Likelihood
Design storm: Peak 15-minute rainfall intensity 24 mm/h

USGS science for a changing world



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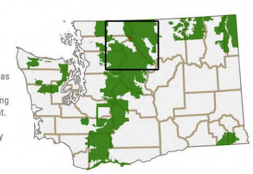
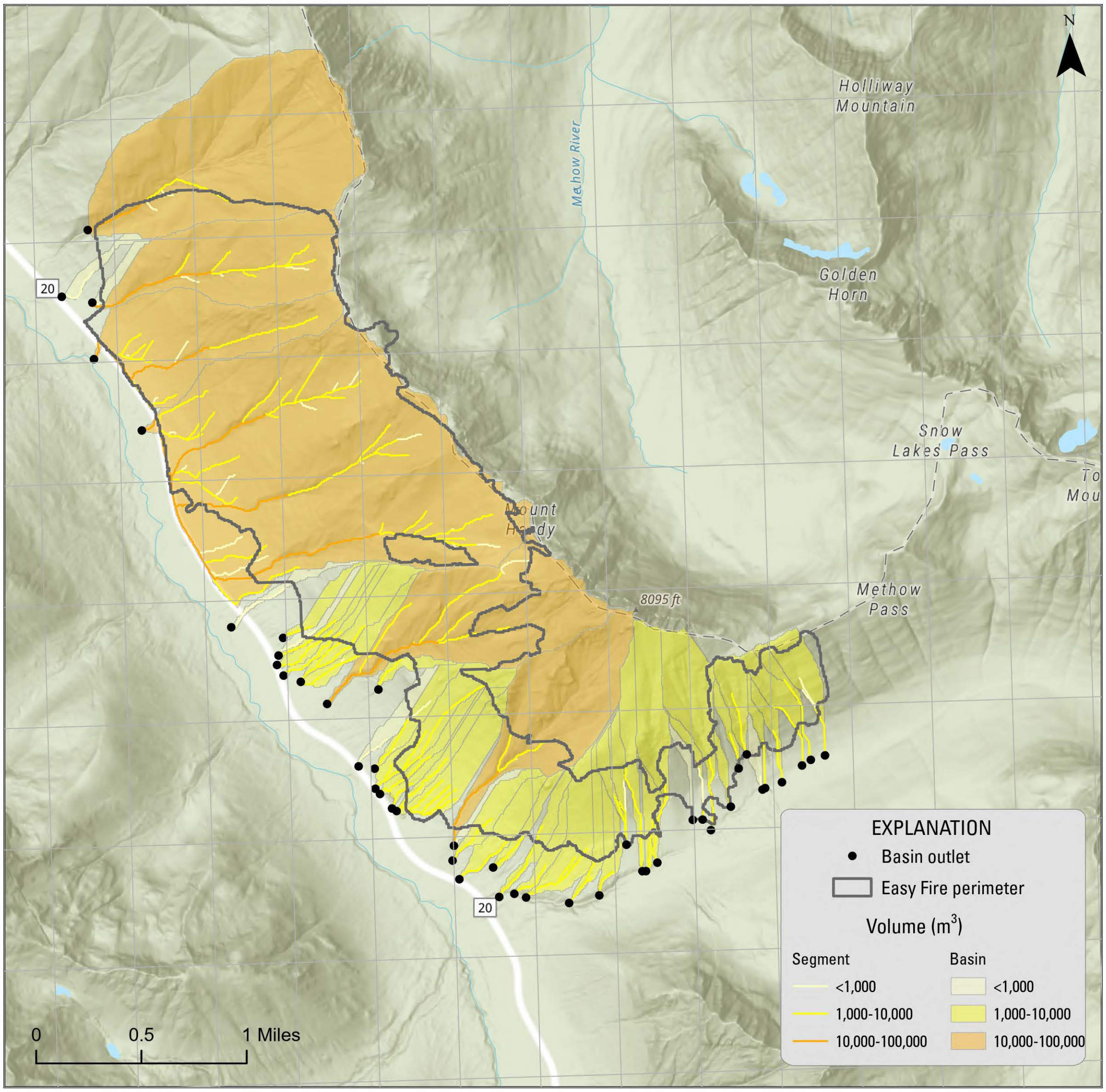


Projection: NAD1983, UTM Zone 10N

Easy Fire, Okanogan-Wenatchee National Forest, Washington
Potential Volume
Design storm: Peak 15-minute rainfall intensity 24 mm/h

USGS science for a changing world



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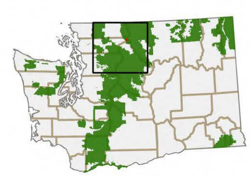
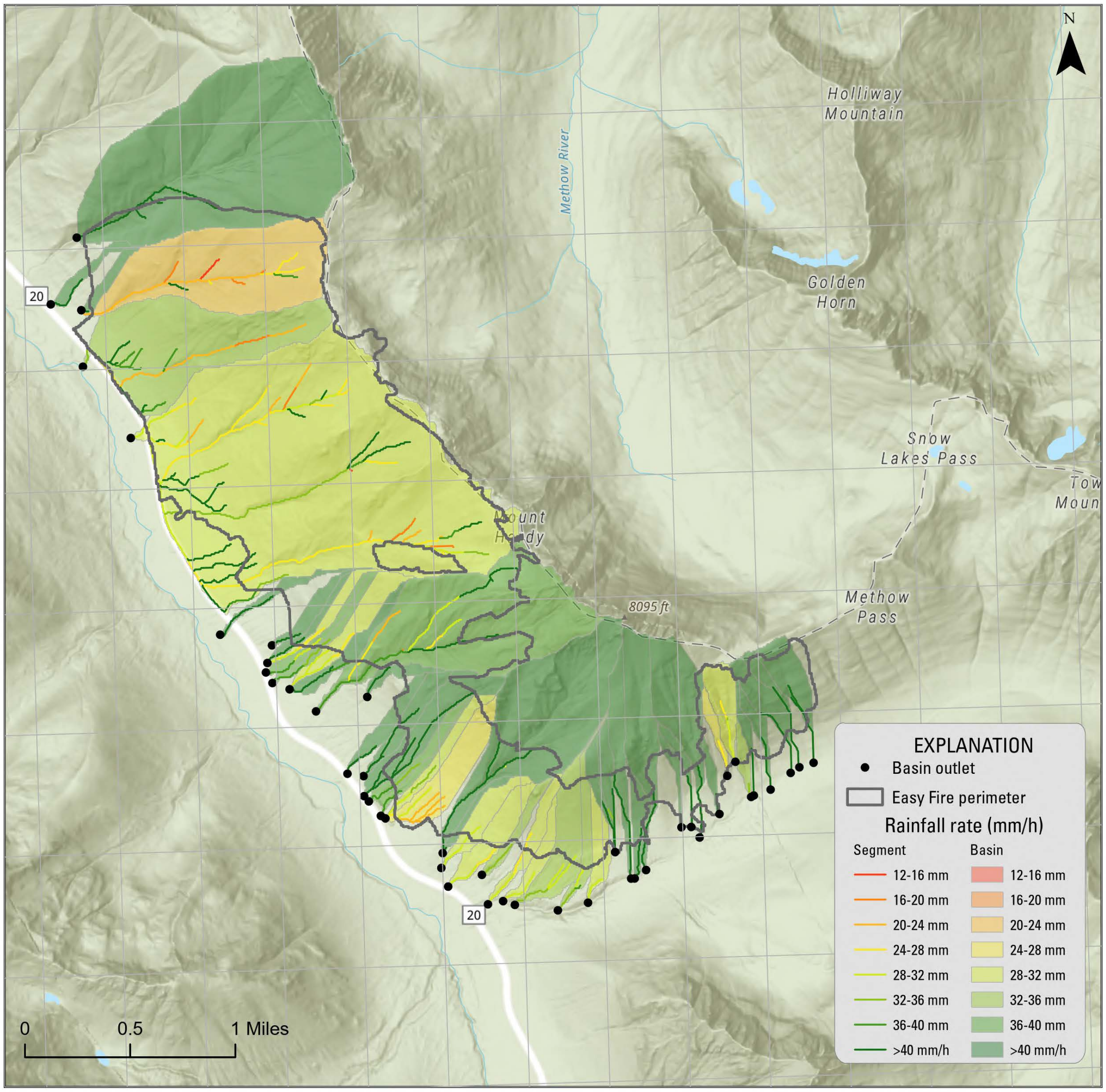


Projection: NAD1983, UTM Zone 10N

Easy Fire, Okanogan-Wenatchee National Forest, Washington
Year 1 Rainfall Thresholds
Rainfall rates that have a 50% likelihood of producing debris flows

USGS science for a changing world



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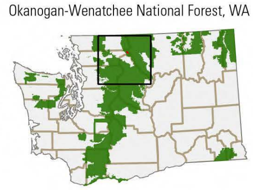

Projection: NAD1983, UTM Zone 10N

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										
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road and Trails				$0	$0		$0		$0	$0
D. Protection/Safety										
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Protection/Safety	each			$0	$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				$0	$0		**$0**		**$0**	**$0**

PART VII - APPROVALS

TARA UMPHRIES

Digitally signed by TARA UMPHRIES
Date: 2024.09.18 11:33:14 -07'00'

1.____

Acting Forest Supervisor Date