Date of Report: 11/6/23

BURNED-AREA REPORT

PART I - TYPE OF REQUEST

A. Type of Report

☐ 1. Funding request for estimated emergency stabilization funds

☒ 2. No Treatment Recommendation

Note, that this report concentrates on the Mount Baker Snoqualmie National Forest values and makes no recommendations for the Okanogan Wenatchee National Forest.

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: Dome Peak

B. Fire Number: WA-MSF-000265

C. State: WA

D. Counties: Snohomish & Chelan

E. Region: R6

F. Forests: Mt. Baker Snoqualmie & Okanogan Wenatchee NFs

G. Districts: Darrington & Chelan RDs

H. Fire Incident Job Code: P6 QJ52 (0605) [P]

I. Date Fire Started: 7/29/2023

J. Date Fire Contained: Estimated 10/27/2023

K. Suppression Cost: No on-ground suppression cost. Unknown amount of flight monitoring costs occurred.

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

1. **Fireline repaired (miles):** 0
2. **Other (identify):** 0

M. Watershed Numbers (Watershed Boundary Dataset) see Figure 1:

Table 1: Acres Burned by Watershed

Forest	HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
MBS[1]	**HUC10 1711000602**	Upper Suiattle River	118,025	622	0.5%
MBS	HUC12 171100060203	Sulphur Creek	21,190	622	2.9%
Ok Wen[2]	**HUC10 1702000901**	Stehekin River	218,736	1,170	0.5%
Ok Wen	HUC10 170200090108	South Fork Agnes Creek	24,740	1,170	4.7%

1 Mt Baker Snoqualmie NF
2 Okanogan Wenatchee NF

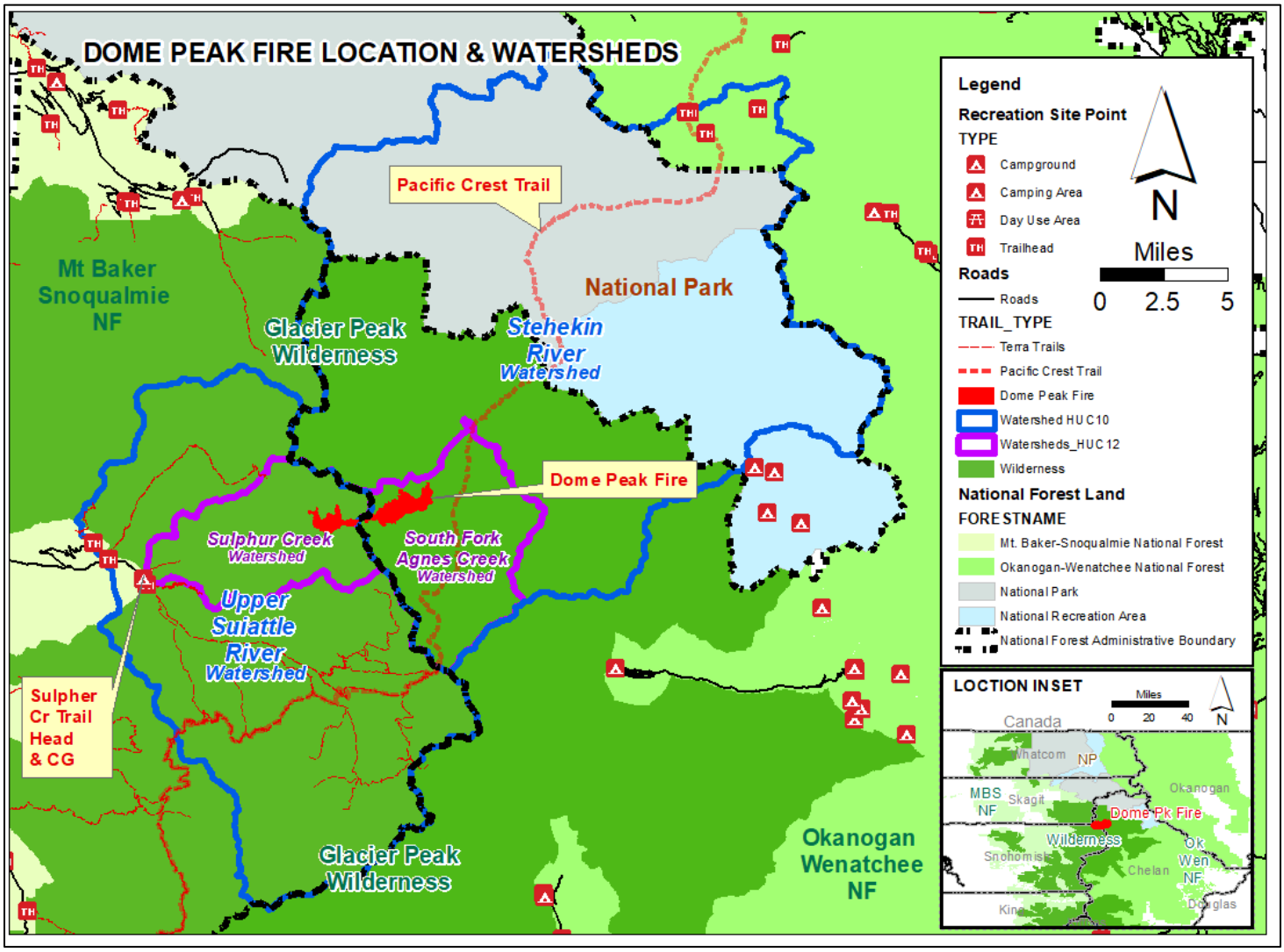

Figure 1. Location of Fire and Points of Interest

N. Total Acres Burned: 1,792

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS Mt Baker Snoqualmie NF	622
Okanogan Wenatchee NF	1,170
NFS Total (All in Wilderness)	1,792
OTHER FEDERAL (LIST AGENCY AND ACRES)	0
STATE	0
PRIVATE	0
TOTAL	1,792

O. Vegetation Types: The vegetation is defined by high elevations, ranging approximately from 3,500 feet to 6,500 feet. Vegetation is dominated by Pacific Silver fir and Mountain Hemlock overstories with Subalpine opens or parklands. Ground cover would include species associated alpine elevations such as alpine shrubs, meadows and rock cover.

P. Dominant Soils: The fire has a large presence of surface rock, see Table 4 and Figure 3. The fire occurred in an area of steep slopes, and a lack of extensive soil development. Based on the Soil Resource Inventory (SRI) soil layer for the Mt Baker Snoqualmie NF, where soil is present, it is notably shallow and coarse. The SRI shows 42% of the burned area is mapped as igneous and gneissic rock outcrop on ridge crests and steep side slopes devoid of soil, while an additional 19% is mapped as talus slopes on steep, gravelly and boulder side slopes also devoid of soil or containing very shallow, very

gravelly loams and very gravelly sandy loams. However, note there is limited vegetation on these rocky areas in terms of subalpine tree and shrub species. The remaining 37% of the area are designated as shallow nonplastic soil derived from residuum and colluvium located on very steep, dissected side slopes and containing thin gravelly sandy loams.

Q. Geologic Types: The Dome Peak Fire area, on the Mt Baker Snoqualmie NF side, is dominated by Cretaceous gneiss and is entirely Miocene granite to the east on the Okanogan Wenatchee NF.

R. Miles of Stream Channels by Order or Class: There are approximately 8 miles of streams within the fire perimeter. Most are perennial flows associated with glacier runoff, spring run-off events, and small high-elevation lakes. Stream channels are steep and primarily occupied by riparian vegetation. Due to the increase soil moisture remained primarily low or unburned, particularly on the Okanogan Wenatchee NF side. Areas of riparian vegetation and meadows burned low or minimally and remain mostly intact on the landscape.

Table 3a: Miles of Stream Channels by Order or Class on the Mt Baker Snoqualmie NF

STREAM TYPE	MILES OF STREAM
PERENNIAL	2.94
INTERMITTENT	0.90
EPHEMERAL	0
OTHER (DEFINE)	0

Table 3b: Miles of Stream Channels by Order or Class on the Okanogan Wenatchee NF

STREAM TYPE	MILES OF STREAM
PERENNIAL	4.28
INTERMITTENT	0
EPHEMERAL	0
OTHER (DEFINE)	0

S. Transportation System:
Trails: *National Forest (miles):* 0 miles of trails *Other (miles):* 0 miles
Roads: *National Forest (miles):* 0 miles of national forest roads.

Other (miles):

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	MBS NF	Ok Wen NF	Other Federal	State	Private	Total	MBS% within the Fire Perimeter	Ok Wen % within the Fire Perimeter	% within the Fire Perimeter
Unburned (Veg)	116	99	0	0	0	215	6.5%	5.5%	12.0%
Unburned (Rock)	65	147	0	0	0	212	3.6%	8.2%	11.8%
Total Unburned	**181**	**246**	**0**	**0**	**0**	**427**	**10.1%**	**13.7%**	**23.8%**
Low	**129**	**316**	**0**	**0**	**0**	**445**	**7.2%**	**17.6%**	**24.8%**
Moderate	**278**	**446**	**0**	**0**	**0**	**724**	**15.5%**	**24.9%**	**40.4%**
High	**33**	**163**	**0**	**0**	**0**	**196**	**1.8%**	**9.1%**	**10.9%**
Total	**621**	**1,417**	**0**	**0**	**0**	**1,792**	**34.7%**	**65.3%**	**100.0%**

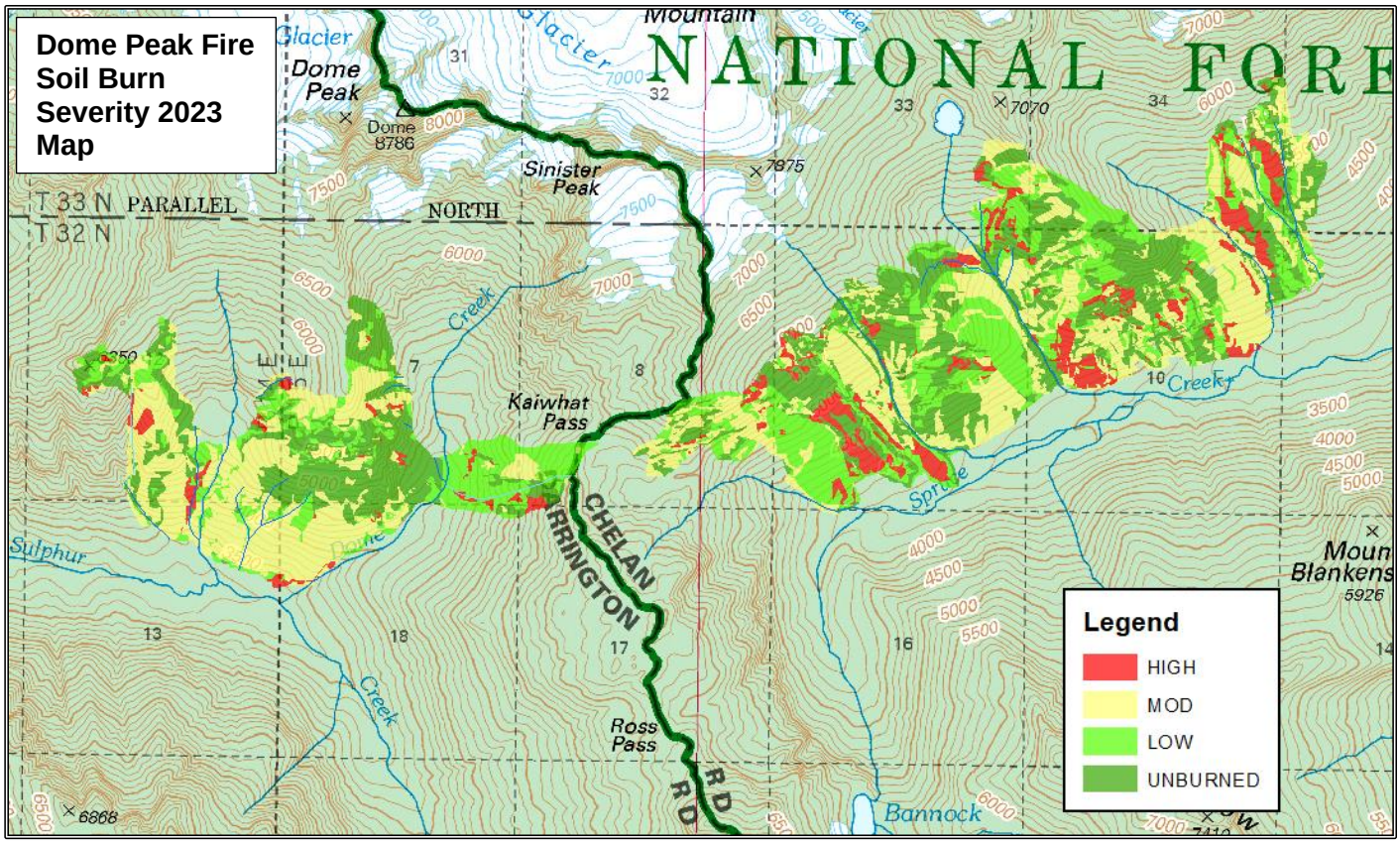

Figure 2. Dome Peak Fire - SBS Map

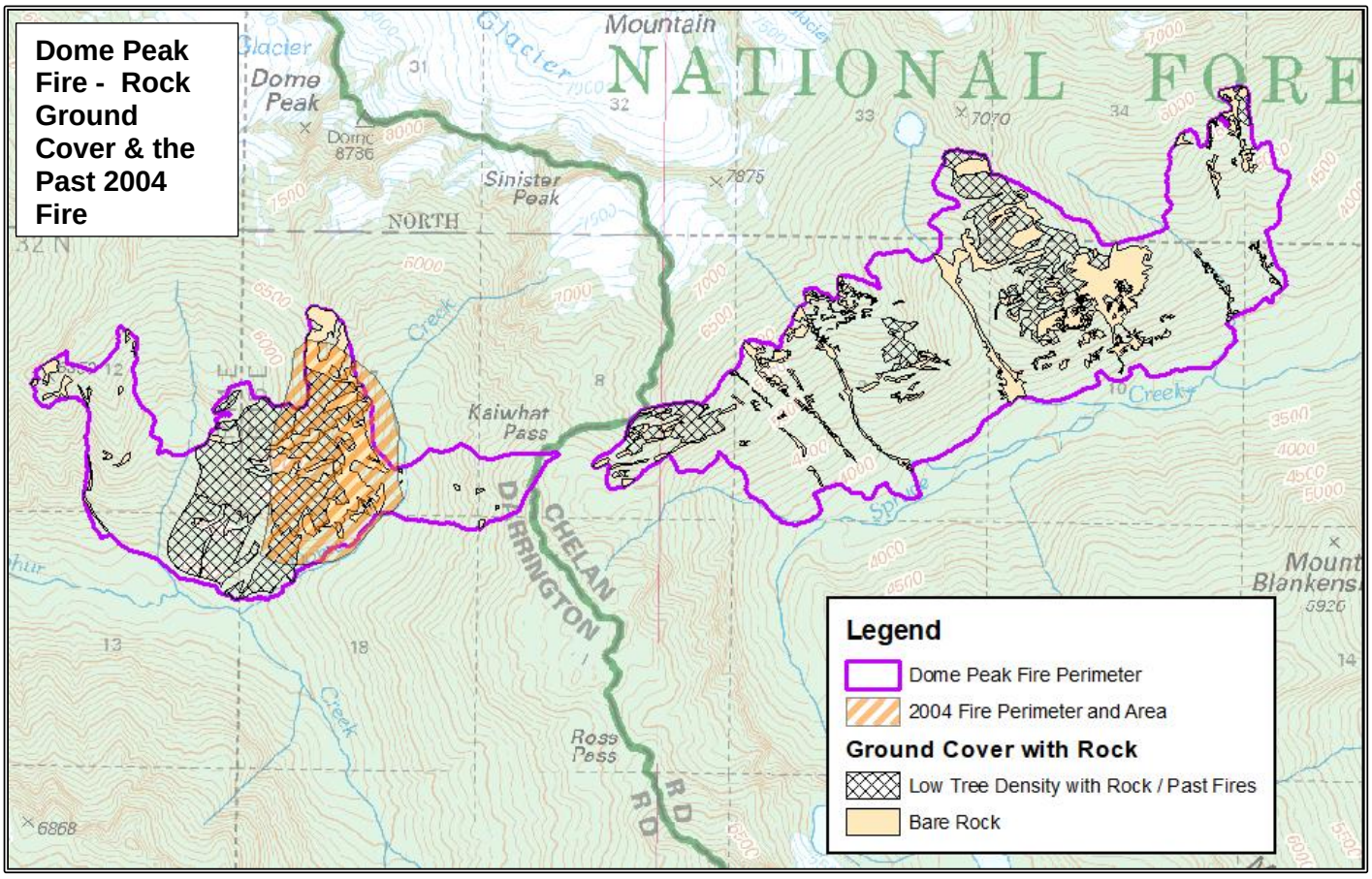

Figure 3. Dome Peak Fire - Rock Ground Cover & the Past 2004 Fire

B. Water-Repellent Soil (acres): No on-the-ground field visits occurred for this fire area and consequently no hydrophobicity was determined.

C. Soil Erosion Hazard Rating: Most of the SRI soil map units do not have erosion hazard ratings. Where soil erosion is indicated, in the MBS SRI, it is low to moderate. Further, where there are talus slopes, gravelly and bouldery rock areas, soil erosion would be low. Based on the majority of the area being at an unburned or low burn severity, soil erosion hazard is expected to be low.

D. Erosion Potential: Low SBS areas have no/low potential for erosion, which is over half of the burned area. Moderate SBS areas have low to moderate-low potential for erosion, at 40% of the fire area.

E. Sediment Potential: There is some potential for sediment to enter any waterways or waterbodies. The mapped perennial streams and corresponding riparian zones that flow through moderate SBS areas have sediment potential. This potential is possible from overland flow from moderately rated SBS surrounding soils.

F. Estimated Vegetative Recovery Period: Meadow habitats should recover in 1-3 years depending on SBS. Shrubland habitat should recover in 2-5 years depending on SBS as well as forested habitat with low severity. Forested habitats that endured moderate SBS will take more than 5 years to recover.

G. Estimated Hydrologic Response: Hydrologic response due to the Dome Fire, is expected to be mostly limited. This is due given that over half of soil burn severity of the fire is in a non-burned/low burn rating. Further, talus slopes, and bouldery rock areas, rated as a non-burned condition, will continue to show the same hydrologic response after this fire as in the past. However, moderate SBS-rated areas cover 40% of the fire area and will respond more hydrological than in the preceding years. This response would continue in the first few winters until ground vegetation recovery occurs.

PART IV - HYDROLOGIC DESIGN FACTORS –

Not Applicable

Given the low number of acres in the watersheds stated in Table 1, no hydrological analysisis warrented.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

The Dome Peak Fire started by lightening on July 29th near Dome Peak, primarily on the Mt Baker Snoqualmie NF. The fire spread east onto the Okanogan Wenatchee NF, in the upper Spruce Creek area, later in the summer. This fire is fully within the Glacier Peak Wilderness. The naturally occurring fire burned in a somewhat mosaic pattern, but the fire made several steep uphill runs as the summer progressed. Burn soil severities tended to be low to moderate throughout the burned area. Note that topography and slopes are steep within this fire's perimeter.

There were two BARC images requested, the latest dated September 29th and showed the fire had increased in size to the east on the Ok Wen. This BARC indicated a high fire rating in talus slopes, and bouldery rock fields, areas of low vegetation density with rocky ground cover, as well as meadows. No field visits occurred due to the remoteness of this fire. Therefore, only a rough SBS was generated, which moved talus slopes, and bouldery rock areas to a non-burned rating. While areas with low vegetation density and rocky ground cover, as well as meadows, were assumed to have at most the highest SBS rating of only Moderate.

Critical Values/Resources and Threats:

The only MBS values observed, are at the confluence of Sulphur Creek and the Suiattle River. These values are more than seven stream miles downstream of this fire. There are several lakes/wet areas that would along the course of Sulphur Creek that will act as catchments of any debris or sediment that would flow down before

the confluence with the Suiattle River, protecting the values of interest. These values are the Suiattle Trailhead, the Sulphur Creek Campground, and the bridge over Sulphur Creek, all near the Suiattle River/Sulphur Creek confluence.

- Property (roads, culverts) – There are no threats to these assets due to their distance from the fire.

- Human Life and Safety – There are no designated trail heads or camp sites within or immediately adjacent to the fire. No unacceptable threats to human life posed by post-fire conditions were identified.

The generated SBS ratings for the Dome Creek Fire show a limited number of acres with high fire ratings. Further, it appears that about half of the fire has a non to low burn classification, along with areas with rock scree or rock-based material. The size of the vegetation mortality area is approximately three hundred acres, out of a total Sulphur Creek HUC 12 watershed. The Sulphur Creek watershed is approximately 16,000 acres in size. This implies less than 3% of the watershed is affected. This would indicate a limited peak winter flow effect on the MBS Forest values of interest, located at the pour point or outlet of this watershed.

Due to the low to moderate burn soil severities, the stream distance to stated values above, and lack of resource concerns in the area, no critical values or resources were identified as threatened on the MBS. So therefore, no values were identified as requiring or needing treatment on the MBS.

This BAER 2500-8 did not look closely at values on the Ok Wen. However, there may only be one value of interest, which is the Pacific Crest Trail (PCT). It is 1.4 stream miles from this fire to the Spruce Creek/SF Agnes Creek confluence, which is some 200 feet from the PCT. Spruce Creek has a very low gradient from the fire to the SF Agnes Creek. This low gradient will allow any debris from the fire into Spruce Creek to deposited in this drainage before the SF Agnes Creek confluence. Further, the PCT is parallel by several hundred feet to the east of the SF Agnes Creek, for several stream miles. This span between the PCT and the SF Agnes Creek would likely lead to no influence from the fire on the PCT.

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**

The categories below were left bank but are likely all rated as very low on the both MBS and the Ok Wen.

1. **Human Life and Safety (HLS):**
2. **Property (P):**
3. **Natural Resources (NR):**
4. **Cultural and Heritage Resources:**

A. Emergency Treatment Objectives: No Emergency Treatment Objectives proposed.

B. Probability of Completing Treatment Prior to Damaging Storm or Event:
Land:
Channel:
Roads/Trails:
Protection/Safety:

D. Probability of Treatment Success: No Treatment proposed.

Table 6: 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

Team Leader: John Kelley
Email: john.kelley@usda.gov **Phone(s):** office: 425 783-6031
cell: 760 660-4189

Forest BAER Coordinator:
Email:john.kelley@usda.gov **Phone(s):** Same as above

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

Skill	**Team Member Name**
Team Lead(s)	John Kelley
Soils	Chris Palardy
Hydrology	John Kelley
Engineering	
GIS	
Archaeology	
Weeds	
Recreation	
Other	

H. Treatment Narrative:
None proposed on the MBS.

I. Monitoring Narrative:
None proposed on the MBS.

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										
				$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	$3,599	1	---	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$0	$0		$0		$0	$0
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	$0		**$0**		**$0**	**$0**
Previously approved										
Total for this request				**$0**						

PART VII - APPROVALS

1. JODY WEIL Digitally signed by JODY WEIL Date: 2023.11.13 11:38:32 -08'00'

Forest Supervisor Date