Date of Report: 10.18.2022

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: Patrol Point

B. Fire Number: ID-PAF-005433

C. State: Idaho

D. County: Idaho

E. Region: 4

F. Forest: Payette

G. District: Krassel

H. Fire Incident Job Code: P4PIJK

I. Date Fire Started: 08.20 2022

J. Date Fire Contained: Uncontained

K. Suppression Cost: $300,000

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

1. **Fireline repaired (miles): None**
2. **Other (identify): None**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170602070204	Cottonwood Creek	39398	429	1.09%
170602070305	McCalla Creek	26964	2000	7.42%
170602070205	Disappointment Creek	19129	5860	30.63%
170602070306	Lower Chamberlain Creek	33073	2048	6.19%
170602070206	Little Squaw Creek-Salmon River	35864	6514	18.16%

N. Total Acres Burned: 16,850

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	16850
OTHER FEDERAL (LIST AGENCY AND ACRES)	N/A
STATE	N/A
PRIVATE	N/A
TOTAL	16850

O. **Vegetation Types:** Forested vegetation types in the fire perimeter are dominated by coniferous forest consisting of Ponderosa pine and Douglas fir. Non-forested habitats are intermixed throughout the burn area and in previously burnt areas that consists of ceanothus, willow, sagebrush and meadow habitats.

P. Dominant Soils: Lithic Xeropsamments, mixed, frigid. Shallow and Moderately Deep Sandy Soils.

Q. Geologic Types: The surface geology is dominated by igneous rocks of the Idaho Batholith consisting of granite and granodiorite.

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	21.8
INTERMITTENT	22.6
EPHEMERAL	N/A
OTHER (DEFINE)	N/A

S. **Transportation System:**
Trails: *National Forest (miles):* 29.8 *Other (miles):* N/A
Roads: *National Forest (miles):* N/A *Other (miles):* N/A

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	1247	N/A	N/A	N/A	1247	7
Low	7659	N/A	N/A	N/A	7659	46
Moderate	6962	N/A	N/A	N/A	6962	41
High	982	N/A	N/A	N/A	982	6
Total	16850				16850	100

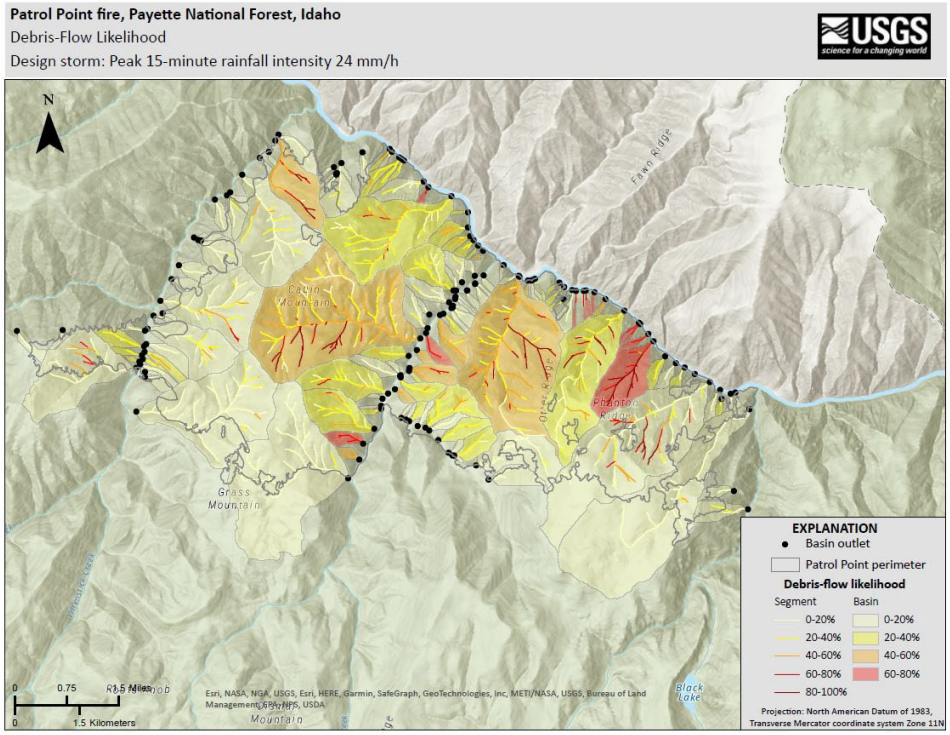
B. Water-Repellent Soil (acres): A. Undetermined (no field validation). It is estimated that the high and moderate severity burn had some degree of water repellency and will influence erosion rates.

C. Soil Erosion Hazard Rating: C. Land type-based erosion hazard ratings within the fire area: Low 1,049 acres (6%), Moderate 6,364 acres (38%), High 982 (6%) and Very High 8,456 (50%)

D. Erosion Potential: The dominant land types within the fire area includes Oversteepened Canyon Lands and moderately and strongly dissected Mountain Slope Lands. These land types have the highest natural geologic erosion rates in the Forest due to the shallow nature of the soils and the highly weathered and spalling bedrock and steep slopes. The erosion and stability hazards are high. Erosion by overland flow is

dominant and is very quickly concentrated into draws and drainages immediately adjacent to the Salmon River. Ground cover percentages are low, generally less than 50 percent although some north aspects may have 80 percent ground cover. Areas that incurred high to moderate soil burn severity have less than 30% ground cover resulting in an increased erosion potential.

USGS debris flow modeling was also performed, and the likelihood of debris flows resulting from a 24 mm/h 15 min storm on drainages within the fire perimeter ranged from unlikely to likely on the Probability of Damage or Loss scale. This modeling suggests a likely increases in erosion potential by debris flows. The modeled pour point for Tag Creek at the confluence of the Salmon River has a 40 to 60% debris flow likelihood.



E. **Sediment Potential:** Sediment potential was assessed on the Tag Creek drainage using WEPPcloud. Model results predict large increases in both hillslope erosion and sediment yield. Sediment yield from a 2 and 10-year storm events was modeled to increase by 480% and 400%, respectively, compared to pre-fire conditions.

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

G. Estimated Hydrologic Response (brief description): It is reasonable to expect increased runoff from areas of moderate to high soil burn severity, including the following drainages: Disappointment Creek, Tag Creek, Phantom Creek, Otter Creek, and other unnamed intermittent tributaries to the Salmon River.

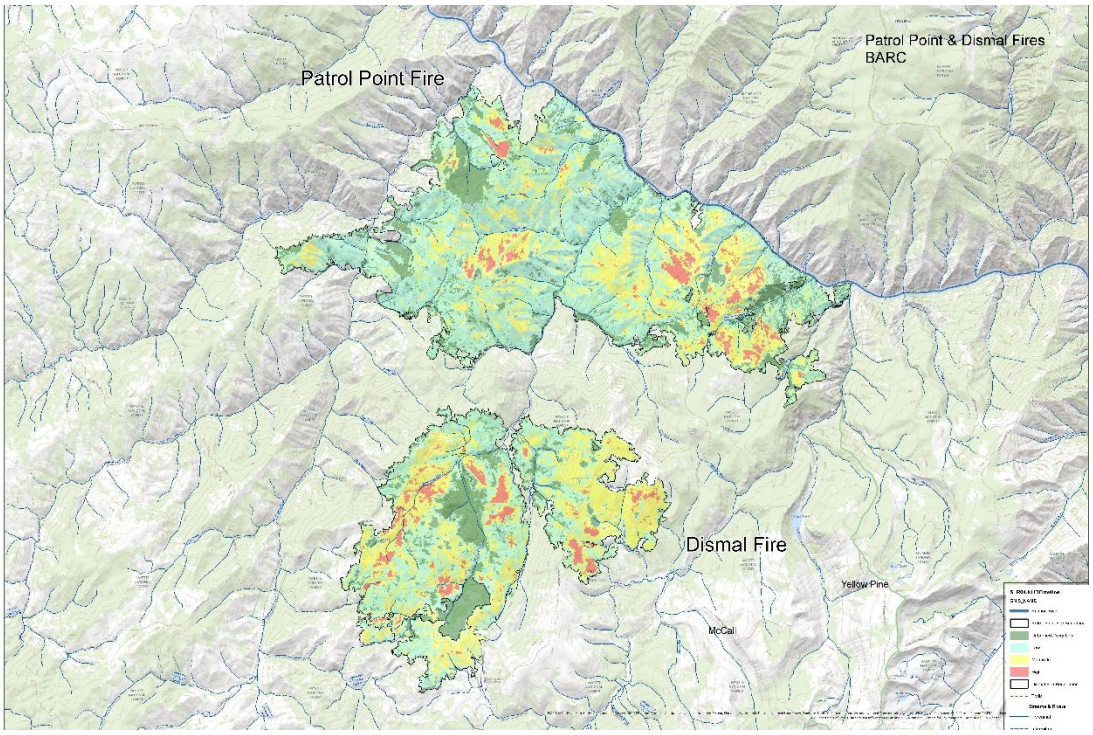
Wildcat5 and WEPPcloud models predicted 90% to 300% increases, respectively, in discharge from a ten-year storm in the Tag Creek drainage. USGS regression methods predicted 9% to 31% increases to discharge in Disappointment Creek at its confluence with the Salmon River.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

The Patrol Point Fire started on August 20th, 2022, from a weather event that produced multiple lightning strikes on the Krassel Ranger District of the Payette National Forest. The objectives of managing this fire was to maintain and enhance wilderness character by allowing naturally occurring wildfire to accomplish its ecological role within the Frank Church River of No Return Wilderness (FC-RONRW) to the extent possible where fire spread will not compromise protection objectives. Under a point/zone protection strategy, fire managers assess the terrain, fuels, and current and forecasted weather to determine options to protect the identified values at risk from fire impacts.

The BAER assessment team was limited to areial reconnaissance of the fire on October 1st, 2022, using a BAER assessment perimeter of 16,850 acres. Disappointment Creek watershed and tributaries were impacted by both the Patrol Point and Dismal Fires.



The primary values at risk identified from post-fire effects due to the Patrol Point Fire are: human life and safety, noxious weeds, soil productivity, hydrological function, ESA critical habitat, and native vegetation communities.

Critical values, resources and threats identified for emergency treatments include;

- Property: protection of Wilderness trail infrastructure property by re-establishing proper drainage and water management structures and maintaining the trail tread.
- Natrual Resources: Early Detection and Rapid Response (EDRR) of noxious weed infestations within the fire perimeter.
- Human life and safety: public awarness of the post-fire hazards and increased likelyhood of flash flooding, debris flows, and rockfall along the impacted Salmon River cooridor. Recreationists would be informed of the post-fire hazards during river user orientation. This is the recommended BAER response from the Salmon – Challis NF who manages the Salmon River cooridor.

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

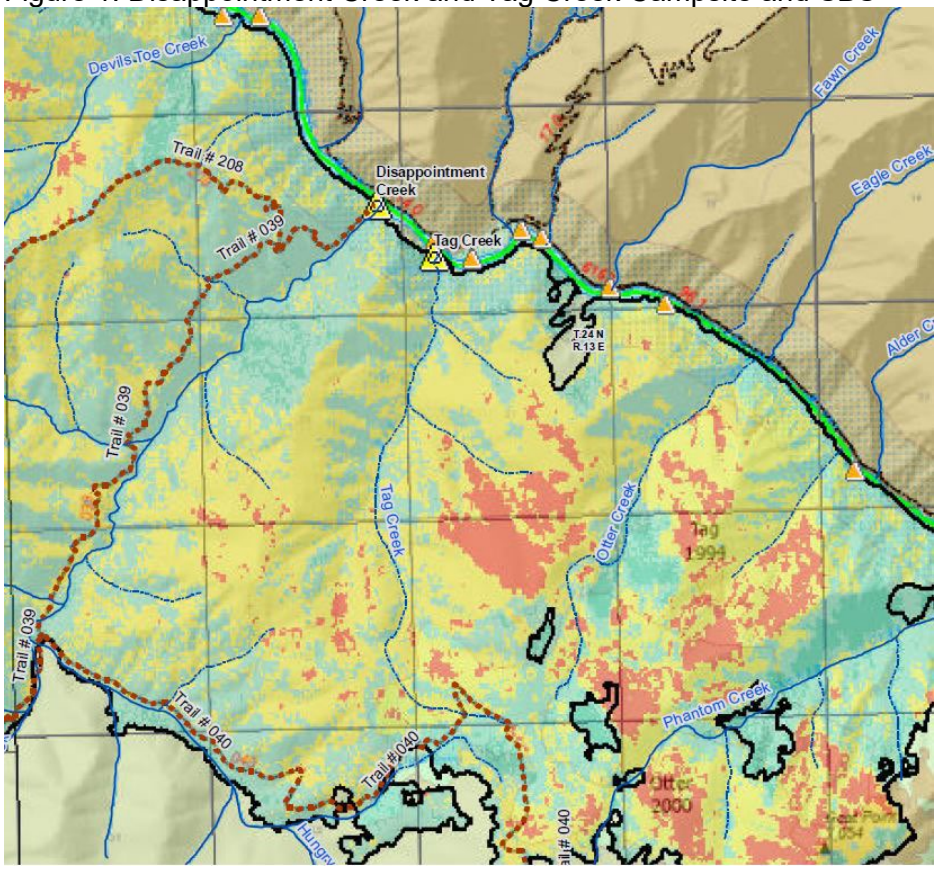
Table 5: Critical Value Matrix

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):** Inform recreating public and Forest Service employees of post fire risks within the Salmon River cooridor from debris flows, flash flooding, and rockfall. These hazards are hiegtened for a minimum of two years below drianages that have burned at a high or moderate soil Burn Severity (SBS) and in places having greater access and more frequent concentrations of people. There are two Salmon River campsites at Tag Creek and Disapointment Creek that have been identified as locations at a greater risk to post-fire hazards **(Figure 1)**. These campsites are not reservable and are described as not recieveing much use by Salmon-Challis NF personnel.

   There is **High** risk to human life and safety due to the **Possible** probability of injury or loss of life and **Major** magnitude of consequences.

   Figure 1. Disappointment Creek and Tag Creek Campsite and SBS

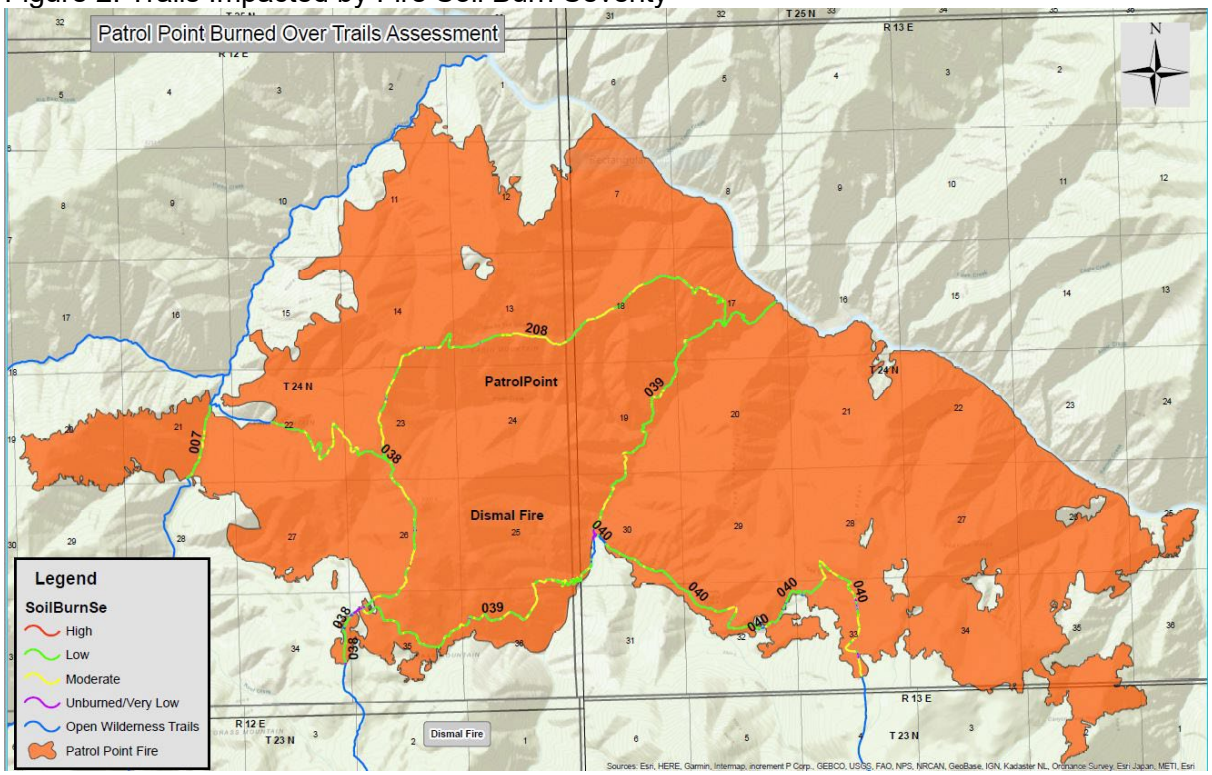


2. **Property (P):**
   Trails- Approximately 29.81 miles of trail were impacted by the Patrol Point Fire **(Figure 2).** Fire response hydrology driven by high, moderate burn severity will increase risk of damage to trail prism and existing water-bars**.** The fire has created conditions that potentially threaten the stability

and integrity of the trail across moderate and high soil burn severity classes. There is a potential for further damage to the trail system due to runoff erosion in the next several years. Most of the damage is expected to occur during the emergency period of 1 year following fire. There are opportunities to limit the extent of trail loss with fall and early spring trail treatments in the first year following fire.

For threats to trails due to post fire erosion and run-off, the probability of damage or loss is Very Likely, and the magnitude of consequence is Moderate. Therefore, the BAER risk is **Very High**. 9.26 miles of trail were burned under moderate severity and 20.25 miles under low/very low severity and a small amount of trail, 0.7 miles, fell in the high burn severity rating. Due to the frequent fire disturbance history over the last twenty years, soil erosion and runoff effects to trails would be intensified. Where the trail incurred moderate SBS the response would be as if it incurred High SBS. This gives justification for trail treatments on the 9.26 miles that intersected moderate SBS, as well as the 0.3 miles that intersected High SBS, for **a total of 9.5 miles of trail treatments**.

Figure 2: Trails Impacted by Fire Soil Burn Severity



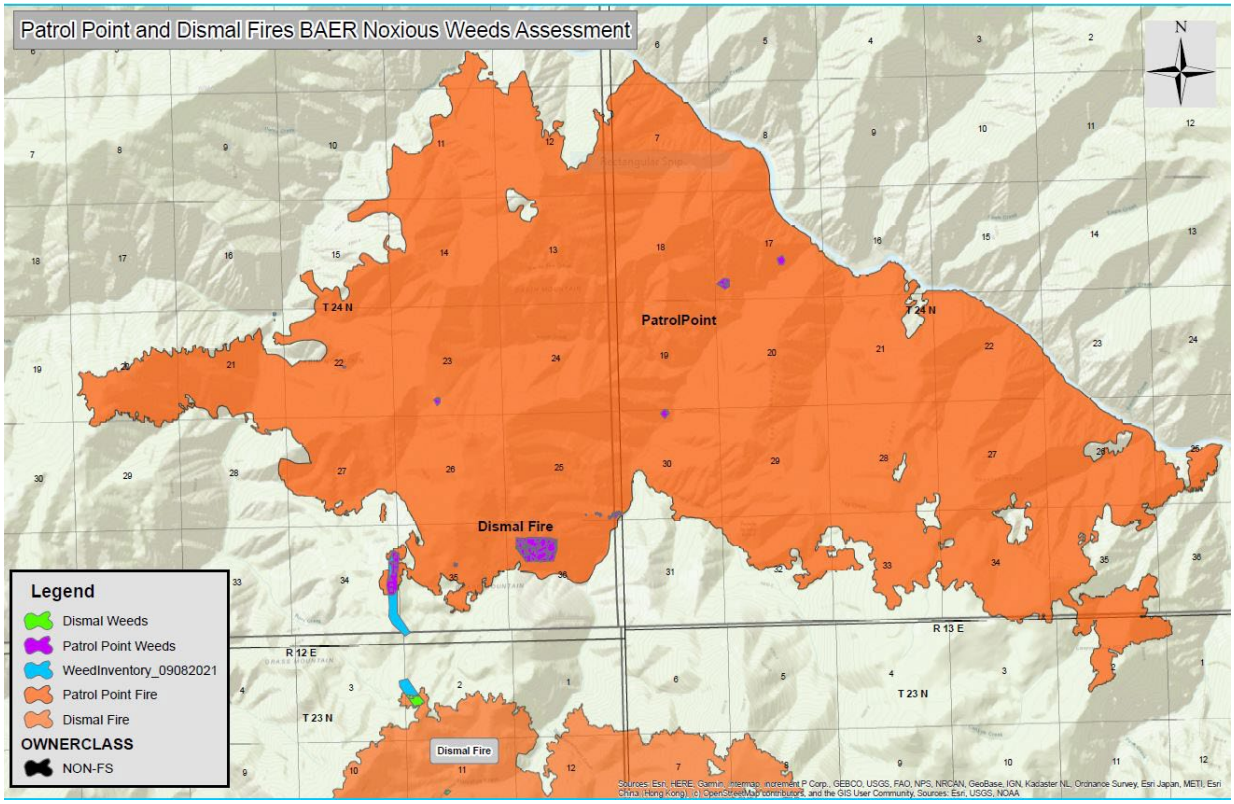
3. **Natural Resources (NR):** Rush skeleton weed (Chondrilla juncea),Russian knapweed (Acroptilon repens), spotted knapweed (*Centaurea maculosa)* and Canada thistle (*Cirsium arvense)* currently infest about 127 acres within the Patrol Point Fire perimeter. See Map. Significant threats to ecosystem integrity exist from the potential invasion of noxious weeds and invasive non- native plants within the infested drainages.

   Noxious weed invasion is expected in areas within burn areas because of the known sources along the NFS trails within the fire perimeter. Infestations which have the highest likelihood of spreading to surrounding lands include hillsides within and immediately adjacent to the fire perimeter. Even where noxious weed species do not currently occur on the landscape, the threat will persist until native plants have had a chance to recolonize burned and disturbed areas. This could take several years.

   For threats from noxious weeds, the probability of damage or loss is Very Likely, and the magnitude of consequence is Major to Moderate. Therefore, the BAER risk is **Very High.** The spread of noxious weeds would adversely affect multiple resources including native plant communities which in turn affects threatened and endangered species habitat for wildlife, fisheries and plants. In addition, noxious weeds can alter natural plant communities in eligible wild and scenic river corridors. Currently, approximately 127 acres were burned **(Figure 3)**. Early season treatment throughout the main growing season will be needed to implement a timely and effective treatment response to this threat.

Probability of Damage or Loss	**Magnitude of Consequences**		
	Major	Moderate	Minor
	RISK		
Very Likely	Rush Skeletonweed, Yellow toadflax, Canada thistle, Spotted Knapweed spread = **Very High**	Spotted Knapweed spread, Canada thistle spread = **Very High**	**Low**
Likely	**Very High**	**High**	**Low**
Possible	**High**	**Intermediate**	**Low**
Unlikely	**Intermediate**	**Low**	**Very Low**

Figure 3: Noxious Weed Population within Fire Perimeter



4. **Cultural and Heritage Resources:**Four Native American culturally modified trees (CMTs), a cultural resource superimposed on native ponderosa pines, were located within the burn perimeter. Because of the tree's natural flame resistance and the lack of associated artifacts, these cultural resources represent a low-risk value on the Values at Risk table. No treatments recommended.

B. Emergency Treatment Objectives:

Human Life and Safety (HLS): reduce the risk to human life and safety by warning recreationists of post-fire threats that includes debris flows, flash floods, and rockfall.

Trails: Remove imminent safety hazards around treatment sites. Reestablish proper drainage and water management structures to prevent further loss to the Wilderness transportation infrastructure. Emergency trail work will be accomplished next spring and early summer prior to mid and late summer thunderstorms.

Noxious Weeds: Treat noxious weed infestations with herbicides or mechanically (hand pulling or use of shovels) within the burn perimeter for one year following the fire. Treatment would occur on approximately 127 acres in and adjacent to the Patrol Point Fire perimeter. Treatment will be done with backpack sprayers using chemicals and guidelines approved in the wilderness weed treatment EIS (USDA, 1999). Treatment near waterways will require hand removal of infestations to prevent water contamination.

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

Land: 80%
Channel:
Roads/Trails: 80%
Protection/Safety: 80%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	3 years after treatment	5 years after treatment
Land	80	90	90
Channel			
Roads/Trails	80	90	90
Protection/Safety	80	80	80

E. Cost of No-Action (Including Loss): $90,000

F. Cost of Selected Alternative (Including Loss): $187,000

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: John Dixon (208-634-0639), Kelly Owens (t) (307-739-5598)
Email: jdixon@usda.gov kelly.owens@usda.gov
Forest BAER Coordinator: Kelly Owens

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

Skill	Team Member Name
Team Lead(s)	John Dixon, Kelly Owens (t)
Soils	John Dixon
Hydrology	Cameron Carsley, L. Iodko (t)
Engineering	
GIS	Mike Tari
Archaeology	Molly Eimers
Weeds	Joshua Simpson
Recreation	Joshua Simpson
Other	

H. Treatment Narrative:

HLS Protection/Safety Treatments:

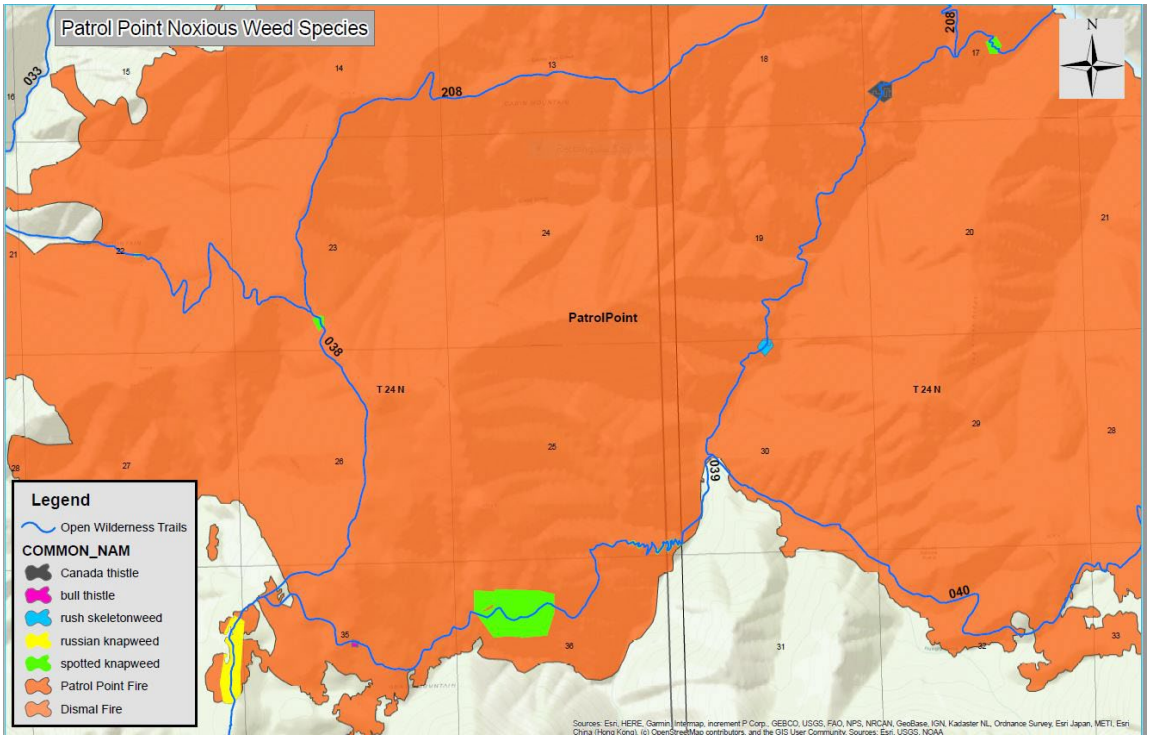
The Salmon-Challis NF would provide public safety and awarness information about post-fire hazards and the increased likelyhood of flash flooding, debris flows, and rockfall along the impacted Salmon River cooridor. Recreationists would be informed of these post-fire hazards during river user orientation. This is the recommended BAER response from the Salmon-Challis NF who manages the Salmon River cooridor.

Land Treatments:

Noxious Weeds: Herbicide Application work will utilize a Montana Conservation Corps (MCC) crew utilizing backpack sprayers and chemical herbicide mixed with water and applied to all infestations within fire perimeter. Species of concern include Rush skeletonweed, Spotted knapweed, Russian knapweed, and Canada thistle. Sulphur cinquefoil and other increaser type species of weeds are also present and could be treated depending on occurrence density. Due to the logistics involved getting resources on site within the fire perimeter the MCC crew will spend upwards of 3 hitches (30 days) covering the entire infestation and ensuring adequate treatment application is conducted. This will require multiple backcountry flights in and out of the Cold Meadows Guard Station Airstrip. Overall burned acres totaled 127 acres. Treatment will focus on the burned area.

Noxious Weeds Treatment Cost Estimate

Item	UOM	Unit Cost	# of Units	Total Cost
Weeds Treatments (Agreement w/ Montana Conservation Corps)	Hitches	$15,000	3	$45,000.00
Backcountry Flights	Flights	$1,500.00	6	$9,000.00



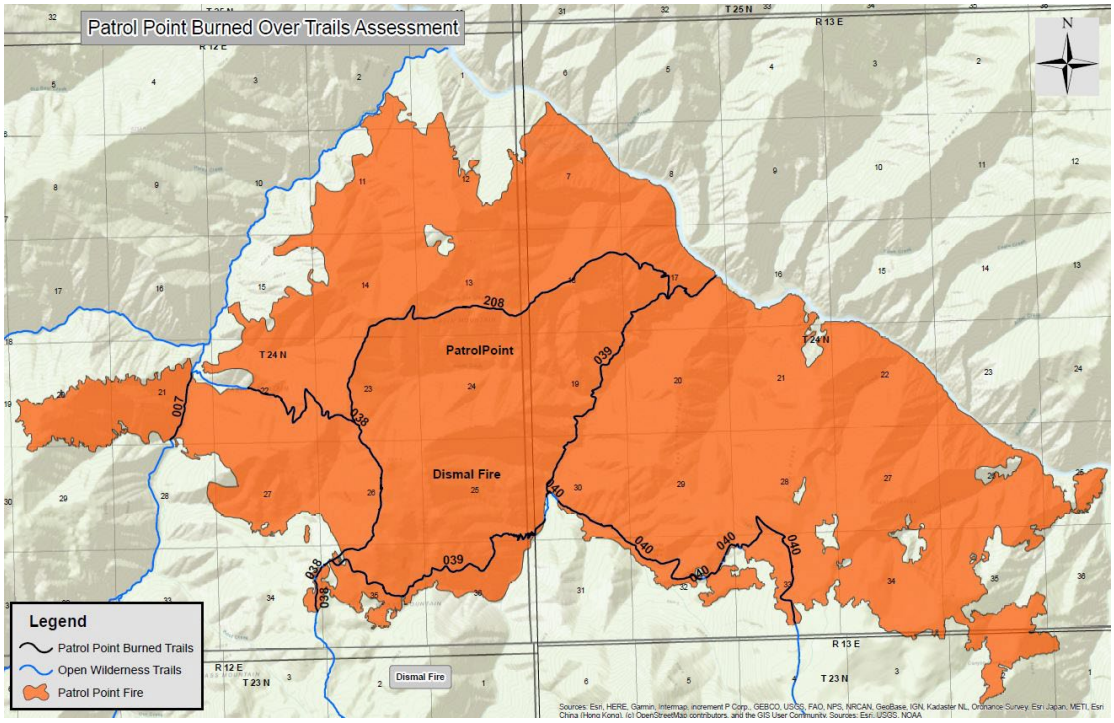
Channel Treatments: N/A

Roads and Trail Treatments:
Trail Infrastructure: Work will be conducted by one Montana Conservation Corps crew and will be in line with typical maintenance standards. All downed trees within the trail prism will be cut-out to current cut-back standards of 8' wide to accommodate stock users. All drainage structures will be evaluated for fire damage and replaced/repaired if they sustained damage. Drainage structures will receive heavy maintenance in order to adequately drain the trail tread as designed. Trail tread will be re-dug where necessary to address any slumping or tread failures associated with fire impacts. All rocks and other materials that have rolled out on to the trail or within the trail prism will be removed. Logistical considerations will require multiple backcountry flights to insert crew into the project area as well as require at least 3 hitches to adequately address the 9.5 miles of burned trails.

- Provide safe working space along the trail affected by the Fire for MCC crews when doing stationary trail work.
- Clear trails impacted by fire of trees and rocks, repair drainage, and reconstruct tread where needed to access emergency treatment sites.
- Replace and install water diversions structures to accommodate runoff and reduce potential for trail washouts prior to the spring runoff.
- Remove debris slides material from trail.
- Remove debris accumulated behind bridge structures to prevent bank erosion and sedimentation.

Trail Treatment Cost Estimate

Item	UOM	Unit Cost	# of Units	Total Cost
Trail Treatments (Agreement with Montana Conservation corps)	Hitches	$15,000	3	$45,000.00
Backcountry Flights	Flights	$1,500.00	6	$9,000.00



I. Monitoring Narrative: N/A

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

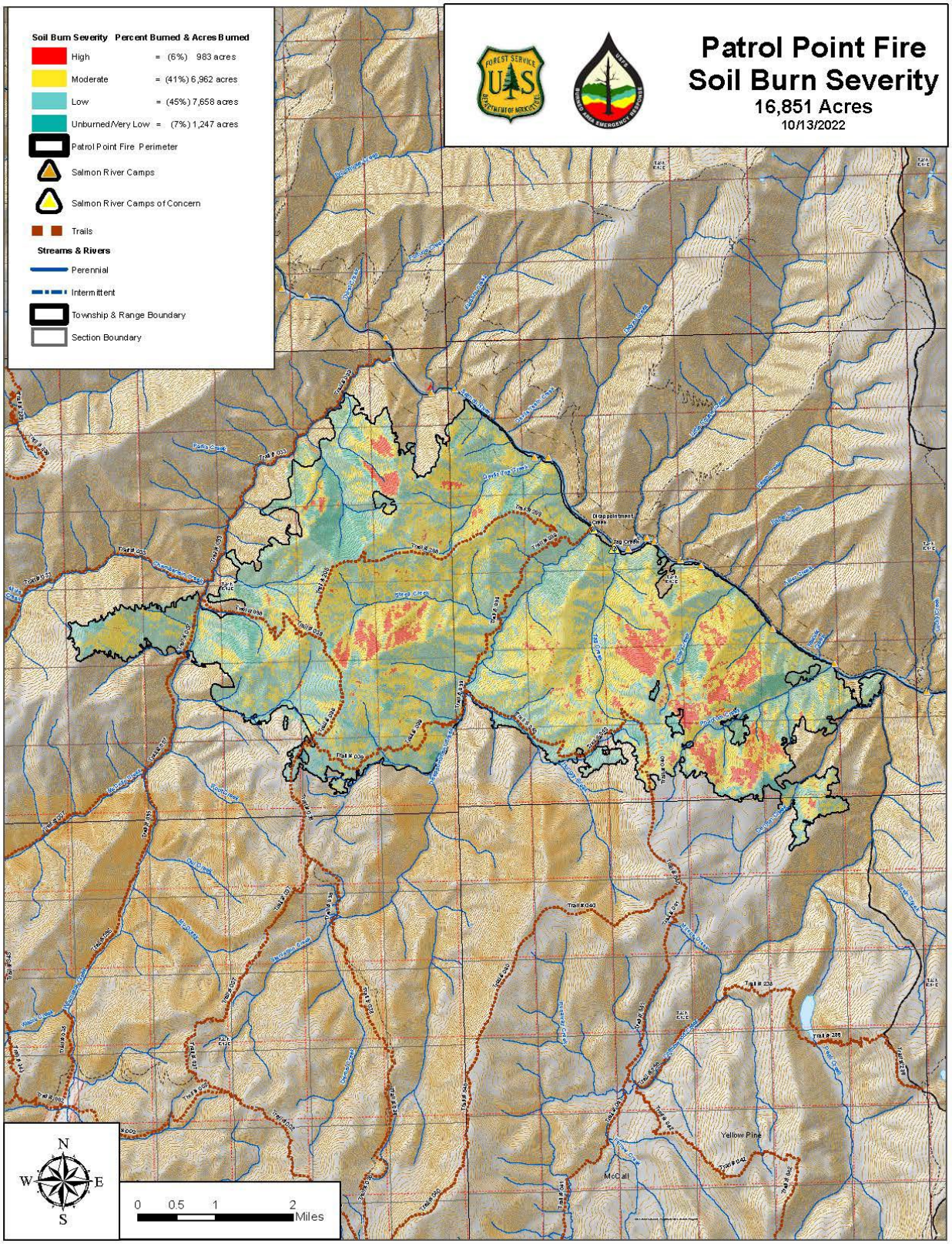
			NFS Lands				Other Lands				All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$	units	$	Units	$	$
A. Land Treatments										
Herbicide Application	Hitch	15,000	3	$45,000	$0		$0		$0	$45,000
Backcountry Flights	Flights	1,500	6	$9,000	$0		$0		$0	$9,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$54,000	$0		$0		$0	$54,000
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										
Trail Crew Hitches	Hitch	15,000	3	$45,000	$0		$0		$0	$45,000
Backcountry Flights	Flights	1,500	6	$9,000	$0		$0		$0	$9,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road and Trails				$54,000	$0		$0		$0	$54,000
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			$4,000	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$4,000	$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				$108,000	$0		**$0**		**$0**	**$108,000**
Previously approved										
Total for this request				**$108,000**						

PART VII - APPROVALS

1. LINDA JACKSON Digitally signed by LINDA JACKSON Date: 2022.10.20 21:44:58 -06'00'

Forest Supervisor Date

Patrol_Point_SBS_BAER_8x11Port_FsTopo_Ba


Soil Burn Severity Percent Burned & Acres Burned
High = (6%) 983 acres
Moderate = (41%) 6,962 acres
Low = (45%) 7,658 acres
Unburned/Very Low = (7%) 1,247 acres
Patrol Point Fire Perimeter
Salmon River Camps
Salmon River Camps of Concern
Trails
Streams & Rivers
Perennial
Intermittent
Township & Range Boundary
Section Boundary
Patrol Point Fire
Soil Burn Severity
16,851 Acres
10/13/2022
N
W
E
S
0 0.5 1 2
Miles
Yellow Pine
McCall