

Date of Report: 9/05/2023**DEEP FIRE 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: Deep

B. Fire Number: CA-SHF-000973

C. State: CA

D. County: Trinity

E. Region: 05

F. Forest: SHF

G. District: TRMU

H. Fire Incident Job Code: P5QJ7W

I. Date Fire Started: 8/15/2023

J. Date Fire Contained: 87%

K. Suppression Cost:

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

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

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
1801021104	Stuarts Fork	>30,000	4198	15

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership (as of 60% containment)

OWNERSHIP	ACRES
NFS	4198
OTHER FEDERAL (LIST AGENCY AND ACRES)	
STATE	
PRIVATE	11
TOTAL	4187

O. Vegetation Types: Mixed conifer lower slopes with oak/brush above into serpentine area.

P. Dominant Soils: Dystric Xerocepts and Lithic Cryumbrepts sandy loams.

Q. Geologic Types: Schist and Gneiss and upper slopes peridotite, chance of debris flows.

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	11
INTERMITTENT	15
EPHEMERAL	
OTHER (DEFINE)	

S. Transportation System:

Trails: National Forest (miles): 8

Other (miles):

Roads: National Forest (miles):

Other (miles):

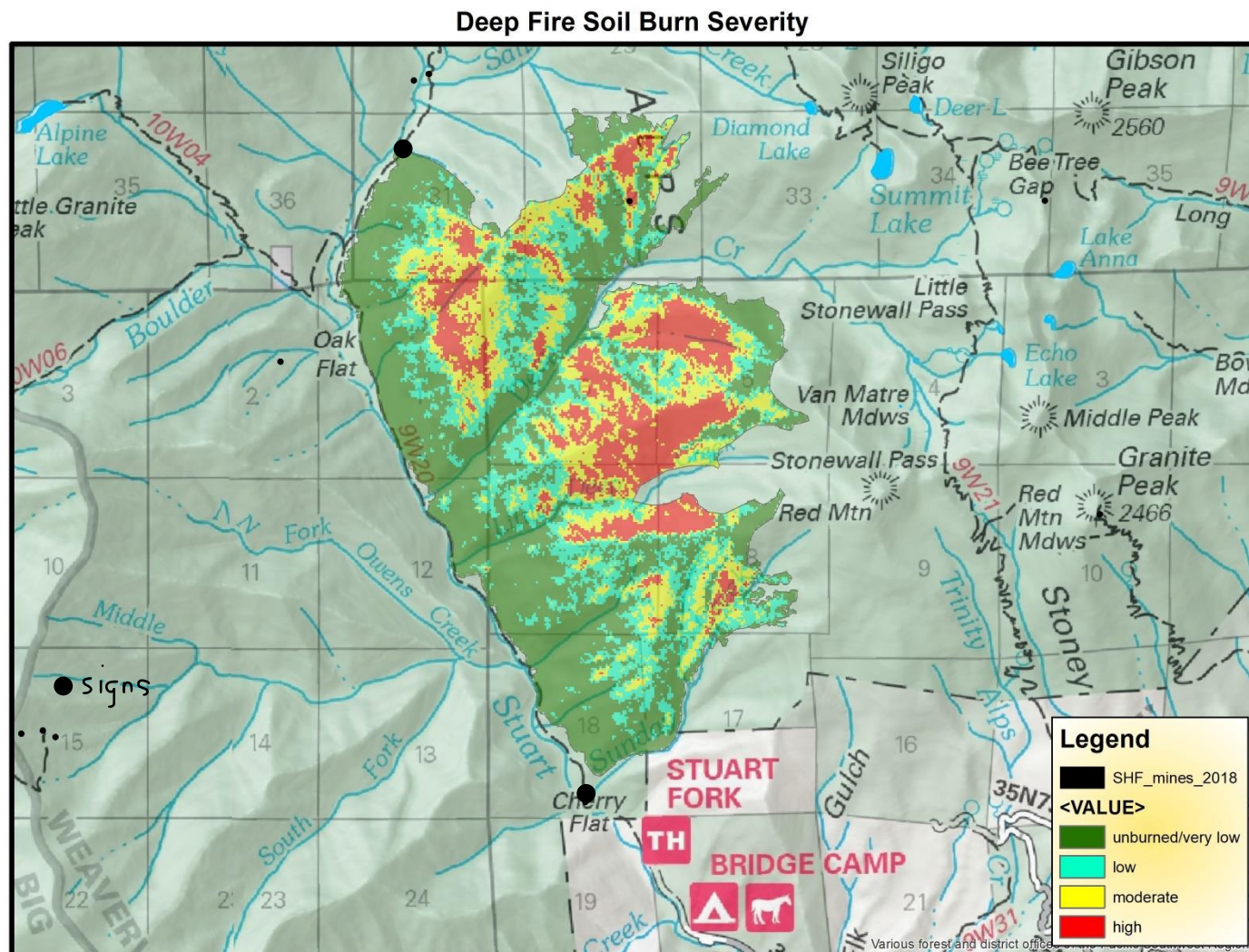
PART III - WATERSHED CONDITION**A. Burn Severity Map and Acres):**

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburn/v-low	1652			11		44
Low	1076					21
Moderate	854					20
High	593					16
Total	4186					

B. Water-Repellent Soil (acres): 30%**C. Soil Erosion Hazard Rating: moderate to high****D. Erosion Potential: 2 to 5 t/a for a 2-year storm****E. Sediment Potential: 60%****F. Estimated Vegetative Recovery Period (years): 5 years.**

G. Estimated Hydrologic Response (brief description): Rapid runoff hyper-concentrated flows from high soil-burn severity areas above funneling into Little and Deep creeks causing 2x the flows with heavy laden silt and sands muddying up Stuarts Fork into the Trinity Lake below.

PART V - SUMMARY OF ANALYSIS

Introduction/Background: The Deep Fire was started on August 15, 2023 by lightning. It is located in the Trinity Alps Wilderness west of Siligo Meadow. Cover picture shows to the right the high intensity burn.

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):** Possible/Minor = Low, (Deep Creek crossing and Little Deep Creek crossing have possible damage due to high soil burn severity above with the consequences as minor of low traffic on trail during storms and trail crossing damage eroding only Little Deep Creek crossing).
- 2. Property (P):** Trail 9W20: Possible/Moderate = Intermediate, (Little Deep Creek trail crossing has potential for possible damage for eroding or being covered with debris with moderate consequences to the trail crossing).
- 3. Natural Resources (NR):** T&E Native Plants: Likely/Moderate = High, (noxious weed populations exist near contingency lines and unwashed suppression equipment used to create dozer-lines see Appendix B).
- 4. Cultural and Heritage Resources:** Unlikely/Minor = Very Low, (Cherry Flat site low impact observed).

B. Emergency Treatment Objectives: Control the spread of noxious weeds through EDRR and public safety through posting hazard signs along trail 9W20.

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

Land: 80%

Channel:

Roads/Trails:

Protection/Safety: 95%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	3 years after treatment	5 years after treatment
Land	90	80	70
Channel			
Roads/Trails			
Protection/Safety	95	90	

E. Cost of No-Action (Including Loss): \$ 1,295,000 (see Appendix C - Cost/Benefit Analysis Spreadsheet)

F. Cost of Selected Alternative (Including Loss): \$15,100**G. Skills Represented on Burned-Area Survey Team:**

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

Team Leader: Brad Rust**Email:** brad.rust@usda.gov**Phone(s)** 530 917 0434**Forest BAER Coordinator:** Brad Rust**Email:****Phone(s):****Team Members:** Table 7: BAER Team Members by Skill

Skill	Team Member Name
Team Lead(s)	Brad Rust
Soils	Brad Rust
Hydrology	
Engineering	
GIS	
Archaeology	
Weeds	Mary Meagher
Recreation	
Other	

H. Treatment Narrative:

Land Treatments: EDRR for dozer lines, drop points, and staging areas. 3 miles of dozer lines and 3 miles of roads used fire-lines. 3 acres of spike camp, drop points, staging areas, and heli-spots. BAR funding for 2 and 3rd years will be requested (see Appendix A - Repair Map).

EDRR cost per mile is \$1,500 mile X 6 miles = \$9,000 contingency lines outside of wilderness.

EDRR cost per acre is \$1,700 acre X 3 acres = \$5,100 wilderness difficult access.

Channel Treatments: none

Roads and Trail Treatments: none, trail 9W20 will experience dry ravel needs clearing after storms and several years afterward, will apply for BAR funding. Large area of very low burn severity will disperse sediments coming off high intensity burn above except the trail crossing at Little Deep and Deep Creeks will have increased flows, sediments, and possible small debris flows coming down from high intensity burn above. Deep creek has a large bridge and will be unaffected but Little Deep Creek low-water crossing will have to be cleared after winter storms.

Protection/Safety Treatments: BAER warning signs (2ea) along trail 9W20 at beginning of fire and at end of fire (see Soil Burn Severity Map for locations for signs).

BAER warning sign with installation \$500 each X 2 signs = \$1,000 wilderness difficult access.

I. Monitoring Narrative:

none

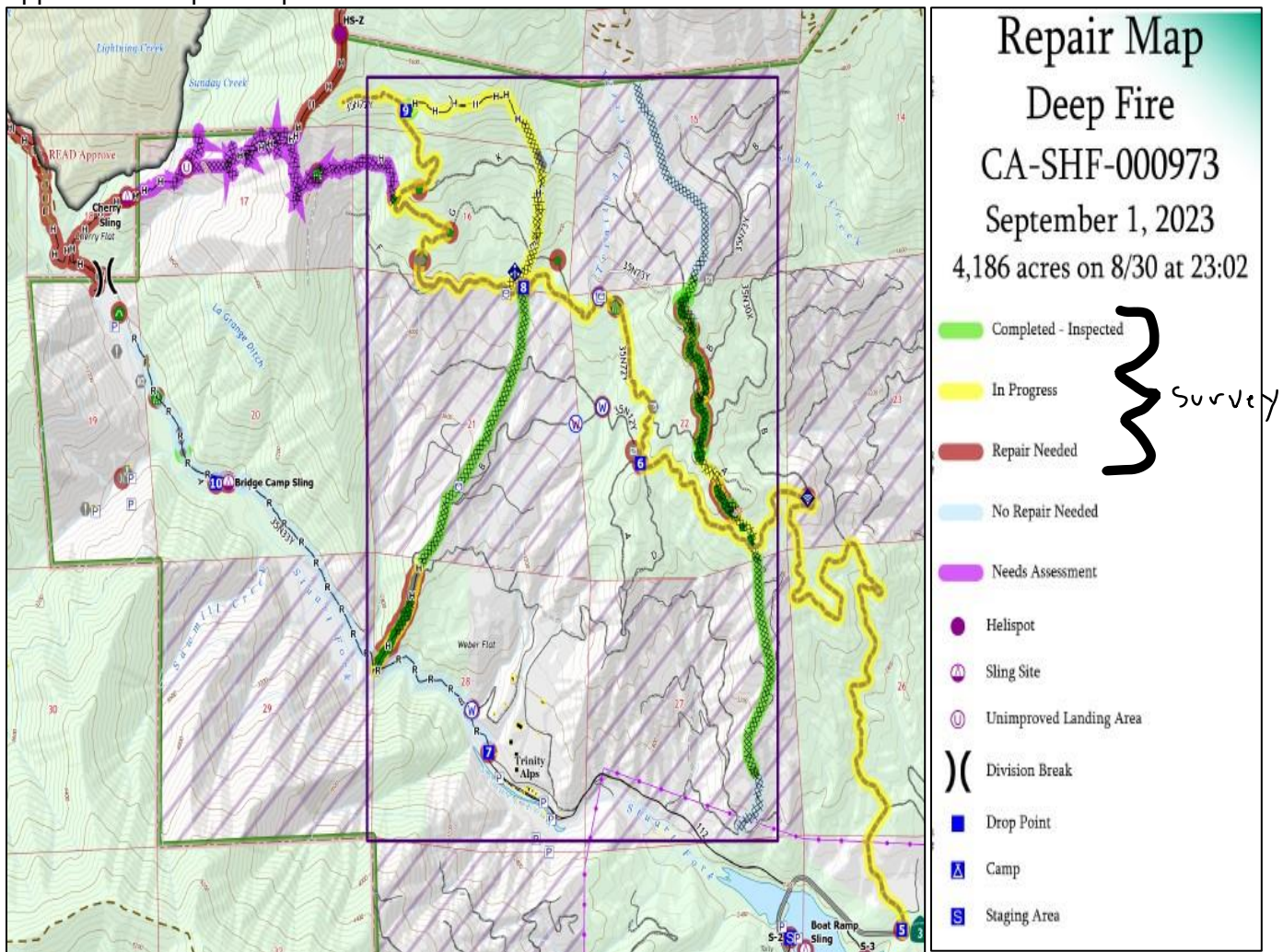
PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands				All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units	Non Fed \$	
A. Land Treatments										
EDRR - Suppression	Project	14,100	1	\$14,100	\$0		\$0		\$0	\$14,100
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$14,100	\$0		\$0		\$0	\$14,100
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treatments</i>				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road and Trails</i>				\$0	\$0		\$0		\$0	\$0
D. Protection/Safety										
BAER Warning Signs	ea	500	2	\$1,000	\$0		\$0		\$0	\$1,000
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Protection/Safety</i>				\$1,000	\$0		\$0		\$0	\$1,000
E. BAER Evaluation										
Initial Assessment	Report	\$1,000		---	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				\$0	\$0		\$0		\$0	\$0
F. Monitoring										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				\$0	\$0		\$0		\$0	\$0
G. Totals				\$15,100	\$0		\$0		\$0	\$15,100
Previously approved										
Total for this request				\$15,100						

PART VII - APPROVALS

1. _____ Date _____
Forest Supervisor

Appendix A: Repair Map



Appendix B: Weed List

Location Description	Surface type	Date Assessed	Bromus tectorum Cheat grass	Centaurea solstitialis Yellow star thistle	Cirsium altissimum Bull thistle	Gynoxys echinatus Hedgehog grass	Dactylis glomerata Orchard Grass	Elymus caput-medusae Medusahead	Hypericum perforatum Klamath Weed	Melilotus alba White sweet clover	Oenothera biennis Evening primrose	Robinia pseudoacacia Black locust	Rubus armeniacus Black berry	Spartium junceum Spanish broom	Verbascum thapsus Mullein
S-1 Osprey Point	Paved	8/26/2023	x	x				x			x		x		
S-2 Boat Ramp Parking	Paved	8/26/2023	x	x	x		x	x	x			x		x	
S-2 Boat Ramp Sling Site	Dirt	8/26/2023	x	x	x		x								
S-3 Stony Point Campgro	Paved	8/26/2023	x	x	x		x							x	
DP 5 Hwy 3 & 35N72Y	Dirt	8/26/2023	x	x					x						
Trinity Alps Rd (112)	Paved	8/26/2023	x	x				x	x						
DP 7 Trinity Camp	Paved			x											
DP 10 Bridge Camp	Dirt	8/26/2023						x				x			
South Fork TH	Dirt	8/26/2023				x	x	x				x		x	
Sect 23 Cell Spot	Dirt	8/26/2023													
DP 6 35N72Y & 35N12Y	Dirt	8/26/2023			x										
Pumpkins Sect 21	Dirt	8/26/2023													
Airport	Paved	8/26/2023	x				x					x			
Stoney Ridge TH	Dirt	8/27/2023													

Appendix C: Benefit/Cost Ratio

Deep Fire Benefit Cost Analysis:									
Total benefits of resources for whole fire FS lands:									
All Resource		Value \$							
All roads (FS)		\$80,000							
Native plants		\$50,000							
Water quality		\$20,000							
Aquatics/fisheries		\$50,000							
Soil productivity		\$75,000							
Public safety		\$1,000,000							
Heritage sites		\$20,000							
		\$1,295,000							
Proability of loss without and with treatments:									
All Resource		Proability loss no treatments:		Proability loss w/ tre		Reduction in proability of loss			
All roads (FS)		15%		15%		0%			
Native plants		65%		15%		50%			
Water quality		20%		20%		0%			
Aquatics/fisheries		20%		20%		0%			
Soil productivity		35%		35%		0%			
Public safety		50%		15%		35%			
Heritage sites		15%		15%		0%			
Total cost of treatments on Forest Service:									
Deep Fire BAER Costs	NFS Lands								Money Left Total \$
Line Items	Units	Unit Cost	# of Units	BAER \$	Spent \$	Fed \$	Units	Non Fed \$	
A. Land Treatments									
EDRR - Suppression	Project	14,100	1	\$14,100	\$0				\$14,100
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Land Treatments</i>				\$14,100	\$0				\$14,100
B. Channel Treatments									\$0
				\$0	\$0				\$0
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Channel Treatments</i>				\$0	\$0				\$0
C. Road and Trails									\$0
				\$0	\$0				\$0
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Road and Trails</i>				\$0	\$0				\$0
D. Protection/Safety									\$0
BAER Warning Signs	ea	500	2	\$1,000	\$0				\$1,000
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Protection/Safety</i>				\$1,000	\$0				\$1,000
E. BAER Evaluation									\$0
Initial Assessment	Report	\$1,000		---	\$0				\$0
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				---	\$0				\$0
<i>Subtotal Evaluation</i>				\$0	\$0				\$0
F. Monitoring									\$0
				\$0	\$0				\$0
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Monitoring</i>				\$0	\$0				\$0
G. Totals				\$15,100	\$0				\$15,100
Previously approved									
Total for this request				\$15,100					
All Resource		Benefit of treatment		Treatment B/C ratio	Justified				
All roads (FS)		\$0		\$0 none	n/a				
Native plants		\$25,000		\$14,100 1.8	yes				
Water quality		\$0		natural none	n/a				
Aquatics/fisheries		\$0		natural none	n/a				
Soil productivity		\$0		natural none	n/a				
Public safety		\$350,000		\$1,000 350.0	yes				
Heritage sites		\$0		none none	n/a				
		\$375,000		\$15,100 24.8	yes				