

Date of Report: 9/15/2023**SOUTH FORK COMPLEX 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: South Fork Complex****B. Fire Number: CA-SHF-001004****C. State: CA****D. County: Trinity****E. Region: 05****F. Forests: SHF and SRF****G. District: SFMU and MRMU****H. Fire Incident Job Code: P5QJ7W & P5QKY1****I. Date Fire Started: 8/18/2023****J. Date Fire Contained: 90%****K. Suppression Cost: \$34,500,000****L. Fire Suppression Damages Repaired with Suppression Funds (estimates): 56 miles.**

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
1801010203	Middle Mad	56,504	2,759	5
1801021205	Lower South Fork	129,206	1,170	1

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

OWNERSHIP	ACRES
NFS	2817(SRF 2,600; SHF 217)
OTHER FEDERAL (LIST AGENCY AND ACRES)	
STATE	110
PRIVATE	1,002
TOTAL	3,929

O. Vegetation Types: Mixed conifer lower slopes with dead white and red fir above (see cover pic)**P. Dominant Soils: Neuns, Marpa, Holland, and Hugo that are loams and gravelly loams****Q. Geologic Types: sedimentary, metasedimentary, and schist mélange.****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	1.5
INTERMITTENT	5
EPHEMERAL	4
OTHER (DEFINE)	

S. Transportation System:

E. Sediment Potential: 40%**F. Estimated Vegetative Recovery Period (years): 5 years.**

G. Estimated Hydrologic Response (brief description): Rapid runoff from high soil-burn severity areas could impact Pilot creek causing increased flows with heavy laden silt and sands muddying up Pilot creek into the Mad River and into Grouse creek that feeds into the South Fork of the Trinity River.

PART V - SUMMARY OF ANALYSIS

Introduction/Background: These fires started from the lightning that moved through northern California earlier this week. The South Fork Complex includes the 3-9, Sulfur, Pellitreau fire and the Pilot Fire. 3-9 Fire: 2,840 acres with 90% containment; Pellitreau Fire: 3 acres with 100% containment; Pilot Fire: 1,055 acres with 100% containment; Sulphur Fire: 31 acres with 100% containment for a total of 3,929 acres and 90% overall containment for the South Fork Complex. The 3-9 fire is a reburn of the 2015 Route complex (see cover pic).

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, (Carson Creek crossing have possible damage due to high soil burn severity above with the consequences as minor of low traffic on these roads during storms with the crossing at Carson Creek being compromised).
 2. **Property (P):**Roads: Likely/Moderate = High, (SRF 3N06 and 3N33 crossings and Carson Creek crossings have possible damage due to moderate soil burn severity above plugging culverts and overtopping causing roadfill washouts).
 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, (some sites are burned over that were already burned over and destroyed by previous Route Complex in 2015).
- A. Emergency Treatment Objectives:** Control the spread of noxious weeds through EDRR, road storm proofing, and public safety through posting hazards warning signs on roads (see soil burn map for locations).
- B. Probability of Completing Treatment Prior to Damaging Storm or Event:**
Land: 85%
Channel:
Roads/Trails: 80%
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	85	75	70
Protection/Safety	95	90	85

E. Cost of No-Action (Including Loss): \$ 1,625,000 (see Appendix C - Cost/Benefit Analysis Spreadsheet)

F. Cost of Selected Alternative (Including Loss): \$77100

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
<i>Team Lead(s)</i>	Brad Rust
<i>Soils</i>	Brad Rust
<i>Hydrology</i>	Galen Anderson
<i>Engineering</i>	
<i>GIS</i>	
<i>Archaeology</i>	
<i>Weeds</i>	Lusetta Sims
<i>Recreation</i>	
<i>Other</i>	

H. Treatment Narrative:

Land Treatments: EDRR for dozer lines, drop points, and staging areas. 22 miles of dozer lines and 13 miles of roads used fire-lines. 3 acres of safety zones, drop points, staging areas, and heli-spots. BAR noxious weeds funding for 2 and 3rd years will be requested (see Appendix A - Repair Map).

EDRR cost per mile is \$1,000 mile X 50 miles = \$50,000 contingency lines and dozer lines.

EDRR cost per acre is \$1,700 acre X 3 acres = \$5,100 for staging, drop points, safety zones.

Channel Treatments: none

Roads and Trail Treatments: storm-proofing, roads will experience dry ravel will need clearing after storms and several years afterward, will apply for BAR road funding. Large area of low burn severity will disperse sediments coming off moderate burn severity above except road crossings at road 4N20 in section 1, along 3N06, 3N33 and Carson Creek Road all on the Six-Rivers N.F. that have high burn severity above, these areas will have increased flows and sediments coming down on these road crossings. Culvert clean-out, road fill burn-out repair, and rolling dips will be needed to mitigate sediments coming down on these roads.

Protection/Safety Treatments: BAER warning signs (5 ea) along Berry Summit Road, Kerlin Creek Road at the 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 5 signs = \$2,500.

I. Monitoring Narrative:

none

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

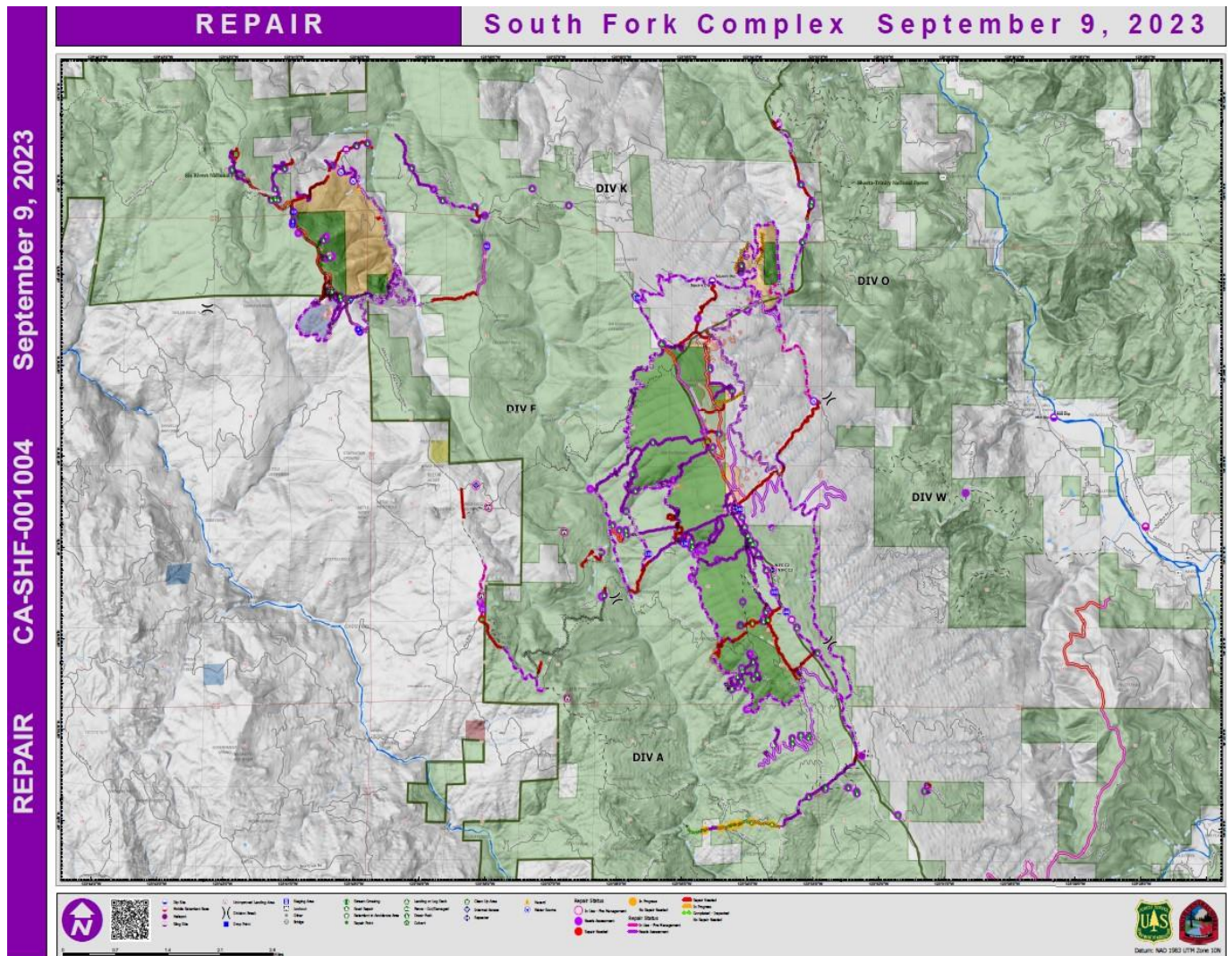
Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands				All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units	Non Fed \$	
A. Land Treatments										
EDRR - Suppression	Project	55,100	1	\$55,100	\$0		\$0		\$0	\$55,100
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$55,100	\$0		\$0		\$0	\$55,100
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										
Stormproofing	mile	6,500	3	\$19,500	\$0		\$0		\$0	\$19,500
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road and Trails</i>				\$19,500	\$0		\$0		\$0	\$19,500
D. Protection/Safety										
BAER Warning Signs	ea	500	5	\$2,500	\$0		\$0		\$0	\$2,500
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Protection/Safety</i>				\$2,500	\$0		\$0		\$0	\$2,500
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				\$77,100	\$0		\$0		\$0	\$77,100
Previously approved										
Total for this request				\$77,100						

PART VII - APPROVALS

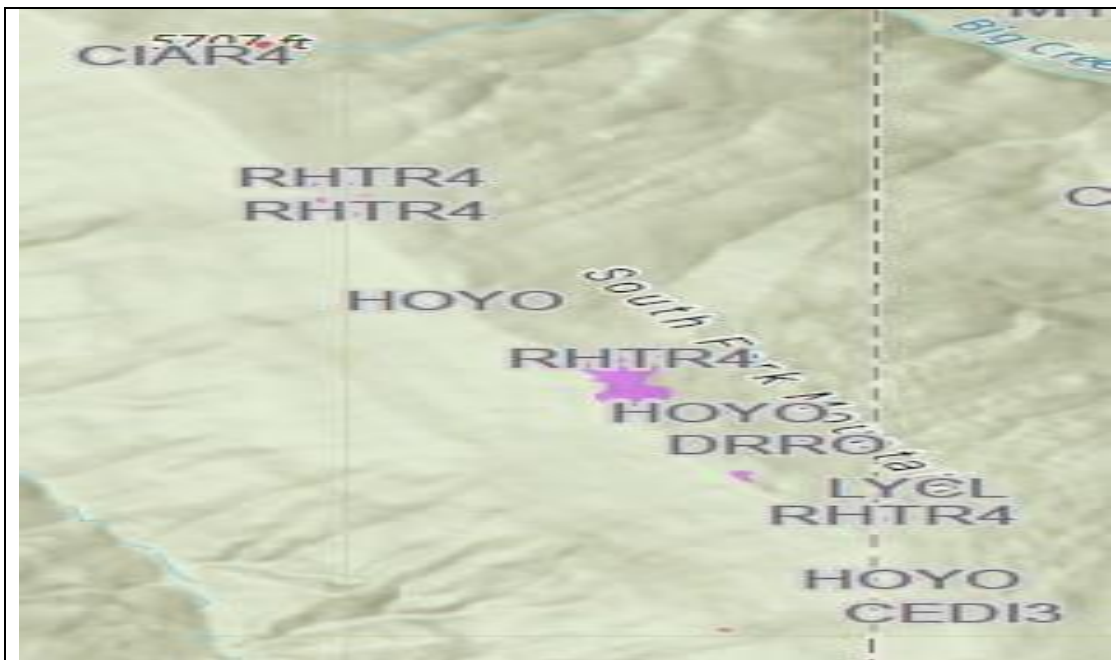
1. _____
 Forest Supervisor, Shasta-Trinity National Forest Date

2. _____
 Forest Supervisor, Six Rivers National Forest Date

Appendix A: Repair Map – Depicting potential high risk weed infestation areas



Appendix B: Weed List



Avoid impacts to areas with **Canada thistle (CIAR4)**, **star thistle (CESO3)**, **Armenian blackberry (RUDI2)** and **most importantly the Diffuse Knapweed (CEDI3)**. The last 3 are noxious weeds and will need to be documented for READ and BAER efforts. The rest are lower priority weeds and fungi less priority to mitigate impact from fire suppression activities. The HYPE or St. Johns wort has stuck to disturbed areas and doing well with biocontrol beetles release in the late 90s.

Appendix C: Benefit/Cost Ratio

SF Complex Fire Benefit Cost Analysis:									
Total benefits of resources for whole fire FS lands:									
<u>All Resource</u>		<u>Value \$</u>							
All roads (FS)		\$300,000							
Native plants		\$200,000							
Water quality		\$20,000							
Aquatics/fisheries		\$50,000							
Soil productivity		\$35,000							
Public safety		\$1,000,000							
Heritage sites		\$20,000							
		\$1,625,000							
Proability of loss without and with treatments:									
<u>All Resource</u>		<u>Proability loss no treatments:</u>		<u>Proability loss w/ tre</u>		<u>Reduction in proability of loss</u>			
All roads (FS)		35%		10%		25%			
Native plants		65%		15%		50%			
Water quality		40%		20%		20%			
Aquatics/fisheries		40%		20%		20%			
Soil productivity		20%		15%		5%			
Public safety		50%		15%		35%			
Heritage sites		10%		10%		0%			
Total cost of treatments on Forest Service:									
Deep Fire BAER Costs		NFS Lands							Money Left
Line Items	Units	Unit Cost	# of Units	BAER \$	Spent \$	Fed \$	Units	Non Fed \$	Total \$
A. Land Treatments									
EDRR - Suppression	Project	55,100	1	\$55,100	\$0				\$55,100
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Land Treatments</i>				\$55,100	\$0				\$55,100
B. Channel Treatments									
				\$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									
stormproofing	mile	6,500	3	\$19,500	\$0				\$19,500
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Road and Trails</i>				\$19,500	\$0				\$19,500
D. Protection/Safety									
BAER Warning Signs	ea	500	5	\$2,500	\$0				\$2,500
				\$0	\$0				\$0
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Protection/Safety</i>				\$2,500	\$0				\$2,500
E. BAER Evaluation									
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
<i>Insert new items above this line!</i>				\$0	\$0				\$0
<i>Subtotal Monitoring</i>				\$0	\$0				\$0
G. Totals									
Previously approved				\$77,100	\$0				\$77,100
Total for this request				\$77,100					
<u>All Resource</u>		<u>Benefit of treatment</u>		<u>Treatment B/C ratio</u>	<u>Justified</u>				
All roads (FS)		\$75,000		\$19,500	3.8	yes			
Native plants		\$100,000		\$55,100	1.8	yes			
Water quality		\$4,000		natural	none	n/a			
Aquatics/fisheries		\$10,000		natural	none	n/a			
Soil productivity		\$1,750		natural	none	n/a			
Public safety		\$350,000		\$2,500	140.0	yes			
Heritage sites		\$0		none	none	n/a			
		\$540,750		\$77,100	7.0	yes			