Date of Report: 11/06/2019

MIDDLE 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: Middle Fire

B. Fire Number: CA-SHF-001196

C. State: California

D. County: Trinity

E. Region: R5

F. Forest: SHF

G. District: Trinity River

H. Fire Incident Job Code: P5MR5H19

I. Date Fire Started: 9/7/2019

J. Date Fire Contained: Pending at 96%

K. Suppression Cost: $2.2 million

L. Fire Suppression Damage Repaired with Suppression Funds (estimates): Click here to enter text.

1. **Fireline repaired (miles):** 2.43 miles
2. **Other (identify):** 2 drop points, 3 helispots, 2 sling sites, and 1 water source

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
7	Stuart Fork	88,164.36	43.80	0.05
7	Ripstein Gulch-Little East Fork	9,604.17	1,294.76	13.48
7	Owens Creek-Upper Stuart Fork	6,267.61	43.80	0.70
7	Big East Fork	4,793.14	0.01	0.01

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	1,338.53
OTHER FEDERAL (LIST AGENCY AND ACRES)	
STATE	
PRIVATE	
TOTAL	1,339

O. Vegetation Types: P. Pine, D. Fir, Chaparral

P. Dominant Soils: Chawanakee-rock outcrop

Q. Geologic Types: metamorphic gneiss and granite

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERRENIAL	1.74
INTERMITTENT	1.53
EPHEMERAL	2.84
OTHER (DEFINE)	

S. **Transportation System:**
Trails: *National Forest (miles):* 4.48 *Other (miles):*
Roads: *National Forest (miles):* 0.66 *Other (miles):*

PART III - WATERSHED CONDITION

A. Soil Burn Severity:

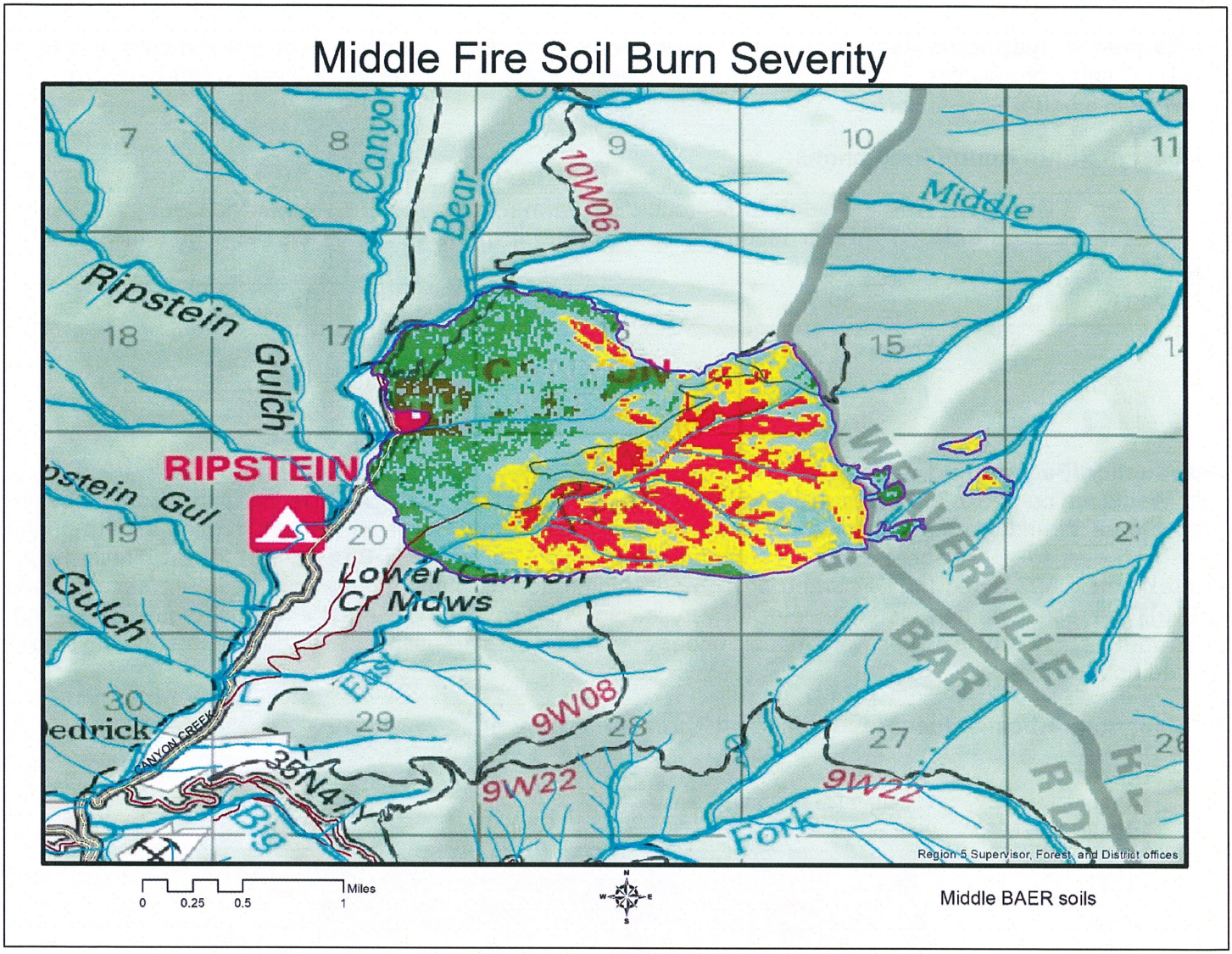


Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (BLM)	State	Private	Total	% within the Fire Perimeter
Unburned	285.21	0.0	0.0	0.0	1,347.44	21.17
Low	423.53	0.0	0.0	0.0	1,347.44	31.43
Moderate	380.31	0.0	0.0	0.0	1,347.44	28.22
High	226.72	0.0	0.0	0.0	1,347.44	16.83
N/A	31.66	0.0	0.0	0.0	1,347.44	2.35
Total	1,347.44	0.0	0.0	0.0	1,347.44	100

B. Water-Repellent Soil (acres): Water repellency is not present in significant continuous areas. Some low to moderate repellency was noted in scattered areas of high soil burn severity, but was generally very patchy and not typical of any particular soil types.

C. Soil Erosion Hazard Rating: 300 acres low, 340 acres moderate, 707 acres high

D. **Erosion Potential:** An average winter has the potential to produce 20 tons per acre of hillslope erosion, ranging from 15 to 35 tons per acre across the fires as a whole. Erosion potential was modeled using

FSWEPP-ERMiT. **Sediment Potential:** Hillslope erosion was determined to have a 32% chance of sediment delivery potential.

F. Estimated Vegetative Recovery Period (years): 7

G. Estimated Hydrologic Response (brief description): Estimated Vegetative Recovery Period is 30 years; Design Chance of Success is 80 percent; Equivalent Design Recurrence Interval is 2 years; Design Storm Duration is 6 hours.

H. Design Storm Runoff Predictions:

HUC5	**Design Storm Magnitude,** (inches)	**Design Flow,** (cubic feet / second/ square mile)	**Estimated Reduction in Infiltration,** (percent)	**Adjusted Design Flow,** (cfs per square mile)
Canyon Ck.	1.95	35.8	40	62.4

PART V - SUMMARY OF ANALYSIS

Introduction/Background

The Middle fire burned 1,339 acres due a lighting strike that ignited on Sept. 7th, 2019 in Trinity County. The fire started on a mid-ridgeline and initially slowly backed down the ridges untill a wind event pushed the fire up the ridge and over to an adjacent canyon burning it out and spoting over into Stuarts Fork of the Trinity River. Approximately 607 acres (45%) burned at high and moderate soil burn severity (see soil burn severity map above). The rest of the fires were either low or very low soil burn severity. General trends are forested areas that were north or east-facing slopes were mosaic under-burns. Forested areas that were south or west-facing slopes burned hotter.

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):**
   a. Public safety on roads and trails in the burned area due to falling trees and rolling rocks with likely probability and moderate consequences causing high risks to the public.
2. **Property (P):**Wilderness trails suffered hillslope failures with possible probability of damage with moderate magnitude causing intermediate risk to trails. Damage to Canyon Creek Road was detected in three locations compromising road-fill and causing failures.
3. **Natural Resources (NR):**Spread of invasive weeds is low since known infestation areas creating high risks for infestation of weeds into the wilderness were downstream of fire.

   b. TESP aquatic species for Canyon Creek watershed which is expected to have noticeable effects on aquatic habitat. This watershed provides Critical Habitat for Coho salmon listed under the Endangered Species Act within the fire perimeter. This watershed has Critical Habitat which is expected to receive a strong sediment pulse.**Cultural and Heritage Resources:**No values at risk detected.

B. **Emergency Treatment Objectives:**

Land Treatments: This was a wilderness fire so MIST tactics used and all known populations were outside of fire activity (see Appendix A).

Road and Trail Treatments: none necessary for trails since they intersected only low to very low soil burned areas. Canyon Creek road suffered 3 areas of road-fill burnouts from buried stumps and roots. These areas will need to be repaired so road is passable again.

Safety Treatments: Inform the public of the risks of entering a burned area due to falling trees and rolling rocks.

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

Land - **Channel** -
Roads/Trails - **Protection/Safety** 90%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	*3 years after treatment*	*5 years after treatment*
Land	-	-	-
Channel	-	-	-
Roads/Trails	95	90	85
Protection/Safety	95	90	90

E. Cost of No-Action (Including Loss): Complete road failure of main trailhead access to Canyon Creek lakes in the Trinity-Alps.

F. Cost of Selected Alternative (Including Loss): Click here to enter text.**Skills Represented on Burned-Area Survey Team:**

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

Team Leader:
Email:brad.rust@usda.gov **Phone(s)**530-226-2427

Forest BAER Coordinator:
Email:brad.rust@usda.gov **Phone(s):**530-226-2427

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

Skill	**Team Member Name**
Team Lead(s)	Brad Rust
Soils	Brad Rust
Hydrology	Christine Mai
Engineering	Alvin Sarimento
GIS	Brandon Zimmerman
Archaeology	-
Weeds	Lusetta Sims
Recreation	Mike McFaddin
Other	-

H. Treatment Narrative:

Land Treatments: none

Channel Treatments: none**Roads and Trail Treatments:** Repair of Canyon Creek road in three locations of digging out burned stumps and recompacting fill and repaving main access road to Canyon Creek trailhead. Total cost of **$5,000.**

Protection/Safety Treatments: Burn area signs need to be posted to insure the public is aware of the fire emergency and closure. Install 1 large burned area sign at Canyon Creek Trailhead warning of the hazards of falling trees, rolling rocks, debris flows and flooding on trails for a cost of **$500**.

I. Monitoring Narrative:

None necessary

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
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										
Canyon Ck. road repair	ea	1,670	3	$5,010	$0		$0		$0	$5,010
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road and Trails				$5,010	$0		$0		$0	$5,010
D. Protection/Safety										
BAER Warning Sign - larg	ea	500	1	$500	$0		$0		$0	$500
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Protection/Safety				$500	$0		$0		$0	$500
E. BAER Evaluation										
Initial Assessment	Report			---	$2,000		$0		$0	$2,000
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$0	$2,000		$0		$0	$2,000
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				$5,510	$2,000		**$0**		**$0**	**$7,510**
Previously approved										
Total for this request				**$5,510**						

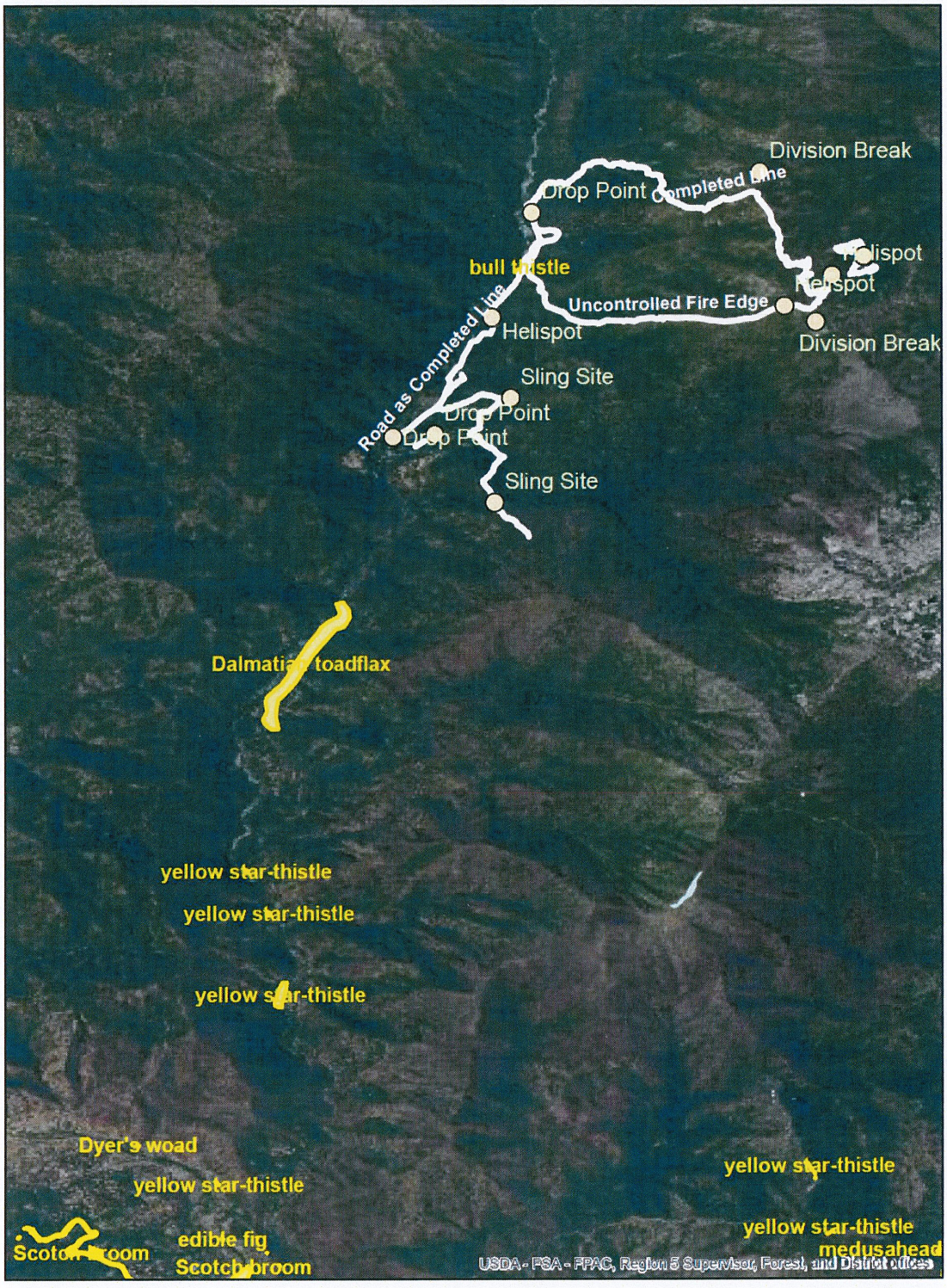
PART VII - APPROVALS

1. Terri Simonds Jackson — 11/06/2019

Forest Supervisor — Date

Appendix A: Weed Populations

Middle Fire adjacent invasive plants J. Kierstead 9-27-2019



Appendix B: Canyon Creek Road Failures