Date of Report: 8/31/2021

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: Henry

B. Fire Number: CA-STF-001280

C. State: CA

D. County: Alpine

E. Region: 05 – Pacific Southwest

F. Forest: 16 - Stanislaus

G. District: 52 - Calaveras

H. Fire Incident Job Code: P5N4YF

I. Date Fire Started: June 24, 2021

J. Date Fire Contained: July 27, 2021

K. Suppression Cost: $2,200,000 (WFDSS estimate)

L. Fire Suppression Damages Repaired with Suppression Funds (estimates): Combination of handline, natural barriers (rock outcrop), and nonmotorized trail were used as fireline. Full perimeter miles listed below, but some % of fireline is natural barrier (no suppression repair needed).

1. **Fireline repaired (miles):** 6 miles
2. **Other (identify):** Nonmotorized trail used as fireline- estimate 1.8 miles.

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
180400100302	Highland Creek	39,361	1,387	4%

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	1,387
OTHER FEDERAL (LIST AGENCY AND ACRES)	
STATE	
PRIVATE	
TOTAL	1,387

O. **Vegetation Types:** Mixed conifer & red fir, montane chaparral

P. **Dominant Soils:** Rock outcrop is mapped as most common, but Gerle bouldery family is a high % second component. Andic and Entic Cryumbrepts are present in smaller amounts.

Q. Geologic Types: Granodiorite of Kinney Lakes, and small areas of Relief Peak Formation, tertiary andesitic lahar.

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	2.22
INTERMITTENT	3.8
EPHEMERAL	20.06
OTHER (DEFINE)	

S. **Transportation System:**
Trails: *National Forest (miles):* 3.2 *Other (miles):*
Roads: *National Forest (miles):* 0.0 *Other (miles):*

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	422				422	30%
Low	790				790	57%
Moderate	151.5				151.5	11%
High	23.5				23.5	2%
Total	1,387				**1387**	

B. Water-Repellent Soil (acres): 57 acres

C. Soil Erosion Hazard Rating: Very High: 7 acres (1%); High: 259 acres (37%); Moderate: 280 acres (40%); and low 154 acres (22%). EHR is slightly elevated above pre-fire levels, with moderately sloping areas of the fire that burned at high or moderate burn severity, increasing to high EHR.

D. **Erosion Potential:** Erosion modeling was not performed on this fire due to limited VARs. Based on field reports, GIS and BARC data, there is one area, approximately 90 acres in size that is expected to have noticeably increased erosion rates on a continuous patch of moderate and high burn severity, mid-slope above Weiser Creek. In the remainder of the fire, which is mainly low burn severity, erosion could be elevated above base levels, but not enough to significantly impact soil productivity.

E. **Sediment Potential:** Weiser Creek is the only mapped perennial drainage within the fire footprint. One of the intermittent tributaries within the fire footprint flows into Highland Creek, to the east of the fire. Eighty-seven percent of the fire area within the burn perimeter is unburned or low soil burn severity. This high percentage of low and unburned indicates a low sediment potential that is not expected to adversely affect beneficial uses of water in Weiser Creek or Highland Creek.

F. Estimated Vegetative Recovery Period (years): In most of the fire, 3-4 years. Very little torching of overstory canopy occurred in low burn severity, forested portions of the fire. In the moderate and high portions of the fire, 5-7 years. The small areas of higher burn severity were mostly in montane chaparral, and recovery is expected to be slower.

G. Estimated Hydrologic Response (brief description): Preliminary hydrologic modeling was performed at four locations where intermittent streams cross trails (one crossing of trail 20E04 and three crossings of 19E41) and at Weiser Creek at the downstream extent of the fire perimeter. Post-fire peak flow for a 2-year recurrence interval event is estimated to increase by 10-30% above pre-fire conditions at the trail crossings and increase by 8% above pre-fire conditions at the Weiser Creek crossing. This represents a relatively modest increase in estimated post-fire peak flow and is not expected to greatly increase the risk of hydrologic hazards such as flooding and debris flows.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

On June 24, 2021, a lightning storm ignited a fire in the Carson-Iceberg Wilderness northeast of Spicer Reservoir and southwest of Highland Lakes at the 7500 ft. elevation. Due to the remote and rugged terrain, fire managers utilized a confine/contain strategy using ridges, creeks, trails, and natural barriers where possible, and used direct suppression tactics where it was safe to do so. The fire mostly exibited low intensity fire behavior, excepting a 2-3 day period with more rapid growth, and higher intensity. Overall, the burn pattern was described as a “good mosaic” by the IC. --- Before initiating a full BAER assessment, Stanislaus resource staff were asked to identify critical values in and below the fire perimeter. Very few specific threats to resources were identified, and so a full field assessment was not done for any resource. For human life and safety, and recreation property values, conversations with the IC, wilderness staff, and other resources assigned to the fire confirmed the low burn severity in areas adjacent to recreation infrastructure (wilderness trails) presented few threats.

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):** Post-fire flood flows are not expected to be significantly higher than pre fire conditions, and there are only a handfull of stream crossings on wilderness trails below the fire. Thus, the risk of debris flows and sediment flows are not substantially elevated beyond normal levels that could be experienced in typical summer thunderstorms. ------ Hazard trees are also not expected to pose an elevated risk in this fire. The footprint is entirely in the wilderness, and where foot trails pass through the fire, the surrounding area burned at low severity, or the trails were used as fireline during supression. Thus, hazard trees are not expected to be elevated above normal levels for wilderness travel.
   Threat to HLS from hazard trees or flooding, above levels normally encountered in wilderness use. Probability: Possible, Magnitude: Moderate, Risk: **Intermediate**

2. **Property (P):**Wilderness trails are the only Forest Service property within or downstream of the fire that could be at risk. Hydrologic modeling shows very modest increases in flows predicted, especially in average storm events. Also, wilderness and supression staff report that trails were left in good condition after suppression activities were completed. Thus, we don't expect significant damage to occur to forest service trails from flooding or debris flows.
   Probability: Possible Magnitude: Minor Risk: **Low**
3. **Natural Resources (NR):**Weeds- There is very little survey data available within the Henry fire, or on areas used for suppression. Bull thistle is known in the vicinity of the fire, and likely occurs in isolated populations near the perimeter. Due to the limited amount of fireline construction, small fire acreage, and no known direct disturbance to existing weed populations, the risk of weed spread is relatively minor. No invasive weed EDRR treatment is recommended.
   b. Hydrology & Soil Productivity – As discussed in Section III, the erosion and hydrologic responses in the Henry fire are expected to be mild, with only minor increases above a pre-fire condition. Erosion and sedimentation will occur, but are not significant enough to threaten beneficial uses of water, or decrease soil productivity.
   c. Aquatics- Aquatic biologist found no known occupancy in or below the fire, only in watersheds above the footprint. Thus, no further analysis or risk assessment was needed.

   Risks to all natural resources from flooding, debris flows, or weed spread:
   Probability: Possible Magnitude: Minor Risk: **Low**
4. **Cultural and Heritage Resources:**No known cultural or heritage resources occur in the fire footprint that would be at-risk from post-fire effects. No additional analysis or risk assessment was needed.

B. Emergency Treatment Objectives: For all BAER critical values, the risk assessment has not identified a need for treatments to protect property, natural resources, or cultural and heritage resources, because risk levels were low or intermediate. Human life and safety threats were not assessed on the ground, thus it is possible some hazards exist that were not captured in this rapid assessment. However, as of 8/30/2021 Forest Order STF-16-2021-11, Henry Fire Closure Area is still in place. It is set to expire on Dec 31, 2021. If this closure remains in place until it's scheduled expiration, all life and safety concerns would likely be mitigated, because the first damaging storm is likely to occur before Jan 2022.

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

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	***3 years after treatment***	***5 years after treatment***
Land	NA		
Channel	NA		
Roads/Trails	NA		
Protection/Safety	NA		

E. Cost of No-Action (Including Loss): NA – Human life value

F. Cost of Selected Alternative (Including Loss): $0.00

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Curtis Kvamme
Email: curtis.kvamme@usda.gov **Phone(s)** 209-288-6320

Forest BAER Coordinator: Curtis Kvamme
Email: curtis.kvamme@usda.gov **Phone(s):** 209-288-6320

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

Skill	Team Member Name
Team Lead(s)	Curtis Kvamme
Soils	CK
Hydrology	Tracy Weddle
Engineering	
GIS	
Archaeology	*Allison Stevenot
Weeds	*Crispin Holland & *Carinna Robertson
Recreation	*Casey Jardine
Other	*Steve Holdeman (Aquatics); *Dawn Coultrap (Range) * indicate resources consulted, but not asked to produce specialist input, due to low VARs.

H. Treatment Narrative:

Land Treatments: None proposed

Channel Treatments: None proposed

Roads and Trail Treatments: None proposed

Protection/Safety Treatments: None proposed

I. Monitoring Narrative: None proposed

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

Line Items	Units	Unit Cost	# of Units	BAER $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
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			---	$810		$0		$0	$810
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$0	$810		$0		$0	$810
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	$810		**$0**		**$0**	**$810**
Previously approved										
Total for this request				**$0**						

PART VII - APPROVALS

1._____

Forest Supervisor Date