USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: July 14, 2016

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

[ ] 2. Interim Report
[ ] Updating the initial funding request based on more accurate site data or design analysis
[ ] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Pine

B. Fire Number: CA-LPF-001986

C. State: California

D. County: Ventura

E. Region: Pacific Southwest (5)

F. Forest: Los Padres

G. Districts: Mount Pinos and Ojai

H. Fire Incident Job Code: P5KC28 (0507)

I. Date Fire Started: 6/30/2016

J. Date Fire Contained: 93% as of 7/12/16

K. Suppression Cost: $14,000,000 as of 7/12/16

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 6.7 miles of dozer line water barred, approximately 19.4 miles of handline waterbarred
2. Fireline seeded (miles): 0
3. Other (identify): 2.2 miles of roadside clearing slash chipped

M. Watersheds:

Table 1. HUC 6 subwatersheds affected by the Pine Fire. Percent of watersheds burned are reported in parentheses.

Subwatershed Name	Subwatershed Acres (Percent Burned)	Soil Burn Severity Acres (Percent)			
		Unburned or Very Low	Low	Moderate	High
Alamo Creek/ Beartrap Creek	25,258 (7%)	454 (2%)	862 (3%)	288 (1%)	61 (<1%)
Sespe Creek-Hot Springs Canyon	44,994 (1%)	123 (<1%)	202 (<1%)	188 (<1%)	84 (<1%)
Piru Creek/South Fork Piru Creek	25,258 (<1%)	8.4 (<1%)	1 (<1%)	0 (0%)	0 (0%)
Sespe Creek-Howard Creek	34,318 (<1%)	21 (<1%)	7 (<1%)	1.2 (<1%)	0 (<1%)

N. Total Acres Burned: 2,304 total acres 100% on NFS Lands

O. VegetationTypes: Three types of vegetation dominate the area affected by the Pine Fire. At the upper elevations, a mixed conifer or montane conifer forest is the most common. This forest is dominated by Jeffrey pine (*Pinus jeffreyi*) with sugar pine (*P. lambertiana*), ponderosa pine (*P. ponderosa*) white fir (*Abies concolor*), and incense cedar (*Calocedrus decurrens*) as codominants. White fir and Jeffery pine dominate on the dryer south facing slopes. The understory is typically an open cover of evergreen sclerophyllous shrubs as well as perennial sub-shrubs and herbs.
Lower elevations are dominated by pinyon-juniper woodland with single-leaf pinyon (*Pinus monophylla*) as the dominate species and California juniper (*Juniperus californica*) as a codominant. Canyon live oak (*Quercus chrysolepis*) can be abundant on north facing slopes. The understory is usually made up of a mixture of desert chaparral and Great Basin shrub species.
Chaparral vegetation in the area of the fire is typically dominated by species of oak including canyon live oak (*Quercus chrysolepis*), interior live oak (*Q. wislizeni*), and Tucker's oak (*Q. john-tuckeri*). Other species present may include Pallid silktassel (*Garrya flavescens*), mountain mahogany (*Cercocarpus betuloides*), and California flannel bush (*Fremontodendron californicum*). Species of manzanita (*Arctostaphylos* spp.) and *Ceanothus* spp. are also common.

P. Dominant Soils: Morical-Greenbluff-Skalan Families. Soils within the burned area are moderately deep and deep, rolling to very steep, highly erodible very gravelly sandy loams, sandy loams, and loams on sedimentary rocks. This map unit is in the Figueroa, San Rafael, Pine and Alamo Mountain areas. Soils formed in coarse grained fractured sandstones and older alluvium/ colluvium from sandstone and conglomerate rocks. (O'Hare and Hallock, 1988 – Soil Survey of the Los Padres National Forest)

Q. Geologic Types: The fire area includes the slopes north of Pine Mountain and rocky bedrock outcrops north of Beartrap Creek. These areas are predominantly sandstone cliffs with igneous rocks occurring at the lower elevations. The crustal basement rocks of the Traverse Ranges are overlain by mostly marine sedimentary rocks (sandstones and shale) that range in age from latest - Jurassic - Cretaceous to Miocene (120-24 million years). The Pine Mountain area is composed primarily of clastic sedimentary turbidites of Eocene-Paleocene age, composed of micaceous shale, sandstone and conglomerate, interbedded. This series rests on granitic-gneissic basement near Alamo Mountain. The series is synclinally folded, with subsidiary folds developed along Pine Mountain. This folded series is uncomforably overlain by middle Tertiary marine and nonmarine formations. (Dibbledee, 1987 - Structural Evolution of the Western Transverse Ranges)

R. Miles of Stream Channels by Order or Class (withint fire perimeter):
7.5 miles intermittent streams
0.3 miles perennial streams

S. Transportation System

Trails: 22W03 – Gene Marshall Piedra Blanca National Recreation Trail (1.3 Miles within the burn), 22W04 Reyes Peak Trail (3.1 miles within the burn)

Roads: No roads are located within the fire area. Roads adjacent to the fire include NFS Road 6N06.1, Reyes Peak road on the west side of the fire and NFS road 7N03.2 Mutau Road (Grade Valley).

T. Fire Narative Summary

The Pine Fire burned completely within the Sespe Wilderness Area. The fire area is rugged backcountry terrain with steep slopes (30-60%) and jagged bedrock outcrops. The burn area sits in a pass between Beartrap Creek and Piedra Blanca Creek extending to the top of Pine Mountain to the south and into the headwaters of Alamo Creek to the North. Access is limited to the two system hiking trails leading into the burned area. The closest road access to the burn area is the Reyes Peak Trailhead, which is approximately 2 miles from the fire edge. Burn severity is predominantly low (47%) with small islands of moderate and high burn severity that occurred during the initial start of the fire.

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 2. Soil Burn Severity and Percent

Soil Burn Severity	Acres	Percent
Unburned / Very Low	606.5	26.4
Low	1,071.3	46.6
Moderate	477.4	20.7
High	145.6	6.3
Total	2,300.8	100.0

B. Water-Repellent Soil (acres): Some naturally occuring water repellancy associated with chaparal vegetation types and Jeffery pine ecosystems is expected to occur throughout the fire aera.

C. Soil Erosion Hazard Rating (acres): Low: 134 acres (6%), Moderate:615 acres (27%), High: 1555 acres (67%). The Erosion Hazard rating reflects the steep slopes in Alamo Creek/Beartrap Creek and more gentle slopes in Sespe Creek/Hotsprings Creek.

D. Erosion Potential: Prefire – 0.8 tons/acre Postfire – 25 tons/acre based on ERMiT for low severity.

E. Sediment Potential: see above erosion potential.

PART IV - HYDROLOGIC DESIGN FACTORS

Table 3. Hydrologic Design Factors

A. Estimated Vegetative Recovery Period	5 - 7 years
B. Design Chance of Success	80 %
C. Equivalent Design Recurrence Interval	2 year
D. Design Storm Duration	1 hr
E. Design Storm Magnitude	1.1 inches
F. Design Flow	25.6 cfs/mi^2
G. Estimated Reduction in Infiltration	10-40%
H. Adjusted Design Flow	30.5 cfs/mi^2

A. Summary of Watershed Response

Hydrologic Response: Localized reduction in precipitation infiltration into the soil is expected to occur on burned slopes within the fire area. Increased overland flow and elevated peak flow to small sub-catchments is likely immediately following the fire. The fire did not burn at high severity over large watershed areas, rather, a low severity underburn with pockets of high vegetation mortatilty and soil burn severity exist in headwater areas near the pass between Beartrap Creek an Piedra Blanca Creek. Large increases in downstream peakflow at the Cuyama River and/or lower Beartrap Creek or Piedra Blanca Creek are unlikely due to the limited extent of the fire and low severity.

Erosion Response: The fire area is composed of very steep slopes and highly erodible soils. The post fire condition is expected to increase localized erosion. This may affect trails within the fire area. Downstream increases in erosion are not expected due to the small size of the fire. Effects to aquatic habitat and species in Beartrap Creek and Piedra Blanca Creek will be limited to localized areas immediately downstream of the fire.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Values at Risk:
Critical values as described by FSM 2523.1 – Exhibit 01 are human life and safety, property, natural resources, and cultural and heritage resources.

Human Life and Safety
See treatments to mitigate unacceptable risks to human life and safety.

Property
System trails within the fire area may be impacted by post fire conditions but the risk is detirmined to be low.

Natural Resources
See treatments recommended to mitigate unacceptable risks to native and naturalized plant communities. Other critical natural resource values as described in FSM 2523.1 – Exhibit 01 are present within the fire area; however, the post fire risk to these values was determined to be low.

Cultural and Heritage Resources
Several documented cultural and heritage sites exist within and adjacent to the fire area. Identification of sites was ongoing during the fire suppression effort to avoid unintended impacts from fire suppression efforts. Post-fire conditions are not expected to present unacceptable risks to cultural and heritage resources that would warrant BAER treatments.

Table 4. Exhibit 02 from FSM 2523.1. This matrix was used to evaluate the risk level for each value identified during this BAER assessment. See FSM 2523.1 for additional information.

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

Category	Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	Notes
Botany / Weeds	Resources	Native plant communities within and adjacent to the fire area	Spread of invasive plants into native and sensitive plant habitats. Known species posing threat include, but not limited to Yellow starthistle, Russian Knapweed, Tocalote, Wild fennel and Spanish broom	Likely	Moderate	High	6.7 miles of dozer line and approximately 19.4 miles of hand line detection surveys and manual treatment **(L1)**	Assessing the establishment of weeds and treating small outlying populations before they expand, will prevent the weeds from becoming serious threats to the recovery of native plants and Forest Service Sensitive and Federally Listed species and protect the natural wilderness value of the Sespe Wilderness
Recreation	Life and Safety	Human Life and Safety at Haddock Trail Camp	Falling rocks and trees could injure or kill backcountry users at the campsite	Unlikely	Major	Intermediate	Administrative Closure and signage **(P1)**	One backcountry campsite, Haddock Camp, is located within the burned area and was burned with low and moderate burn severity.
Recreation	Life and Safety	Human Life and Safety in the burned area	Falling rocks and trees could injure or kill backcountry users within the burned area	Unlikely	Major	Intermediate	Trailhead safety signage **(P2)**	Five trailheads leading into the burned area provide access to the public.

Table 5. Summary of values that present unacceptable risks, threats to values, probability of damage or loss, magnitude of consequences, and the resulting level of risk within Pine Fire area. Red shaded cells are those values that rated out as "very high" or "high" risk. Yellow shaded cells rated out "intermediate" risk.

B. Emergency Treatment Objectives:

The primary objective of this Burned Area Emergency Response Report is to recommend prompt actions deemed reasonable and necessary to effectively protect, reduce or minimize significant threats to human life and property and prevent unacceptable degradation to natural and cultural resources. The application of these BAER treatments are expected to minimize on-site and downstream damages to the identified values at risk previously mentioned. The emergency treatments being recommended by the Pine BAER Team are specifically designed to achieve the following results.

Proposed Land Treatments

The objective of the land treatments are to:

1. Promote and protect native and naturalized vegetative recovery by reducing the spread of noxious weeds **(L1).**

Proposed Channel Treatments

None proposed

Proposed Road and Trail Treatments

None proposed

Proposed Protection/Safety Treatments:

The objective of the protection/safety treatments are to:

1. Protect public safety through administrative closure and enforcement **(P1).**
2. Inform backcountry users of hazards through installation of safety signs at trailheads **(P2).**

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

Land **95** % Channel **NA** % Roads/Trails **NA** % Protection/Safety **95** %

D. Probability of Treatment Success

Table 6. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	90	95	95
Channel	NA	NA	NA
Roads/Trails	NA	NA	NA
Protection/Safety	95	95	95

E. Cost of No-Action (Including Loss): Monetary costs cannot be estimated for no-action when values at risk are associated with non-monetary values such as human life and safety (**P1, P2**) and/or native plant diversity (**L1**). The implied minimum value (IMV) was calculated using the probability of loss for both the action and no action scenarios. The IMV=$26,223.

F. Cost of Selected Alternative (Including Loss): Total cost of the action alternative (including loss) is $14,112.

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	[ ] Soils	[ ] Geology	[ ] Range	[x] Recreation
[ ] Forestry	[x] Wildlife	[ ] Fire Mgmt.	[ ] Engineering	[ ] Public Information
[ ] Contracting	[ ] Ecology	[x] Botany/Invasives	[x] Archaeology	
[ ] Fisheries	[ ] Research	[ ] Landscape Arch	[x] GIS	

Team Leader: Brian Anderson – Hydrologist, Boise National Forest

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Team Members:

Patrick Lieske – Wildlife, Fisheries, Botany
Gary Oye – Recreation Trails Wilderness
Lloyd Simpson – Invasive Plants
Larry Vredenberg – GIS
Jun Kinoshita - Archeology

H. Treatment Narrative:

Land Treatments:

L1 - Invasive Weed Detection and Manual Treatment
General Description: The treatment is noxious weed detection surveys, handpulling, and weed data entry. This treatment is necessary to prevent the spread and dispersal of non-native invasive plants into newly burned and disturbed areas. Invasive weeds known to occur near those areas of concern include Yellow starthistle, Tocalote, Wild fennel, Spanish broom, Medusahead, and cheatgrass

Suitable Sites:
Invasive plant detection surveys and manual treatments are proposed to occur along approximately 6.7 miles of dozer line and 19.4 miles of hand lines on NFS lands. Additionally all roads, dozer lines, hand lines, drop points, and spike camps affected by the Pine Fire on NFS lands would be surveyed and treated with hand pulling. See Invasives report for more details.

Detailed Design/Construction Specifications:
Inspect all areas and monitor for newly established weed occurrences. Monitoring will include documentation and hand pulling small new weed occurrences at the time of inspection. New weed occurrences will be pulled to root depth, placed in sealed plastics bags, and properly disposed.

Documentation of new infestations will include:

- GPS negative and positive inspection results
- Incorporate data into GIS spatial database - NRIS
- Establish photo points
- Map perimeter of new infestation
- Estimate number of plants per square meter
- Treatment method
- Dates of treatment
- Evaluate success in subsequent inspection

Inspections and monitoring should be accomplished during March/July 2017. Based upon the first year's survey, additional surveying may be requested for up to three years. BAER funding is only requested for the first year after fire.

Table 1. **L1 Treatment Cost**

Personnel	Cost Calculation	Amount
GS –11 Botanist/Resource Officer	$465/day x 7 days =	$3,255
GS – 9 Botanist/Biologist	$291/day x 1 pay periods (10 days) =	$2,910
GS – 5 Bio Tech	$225/day x 2 pay periods (20 days) =	$4,500
Mileage:	450 miles @ 0.45/mile =	$203
	Total Cost Estimate for FY 2017 =	**$10,868**

Channel Treatments:
None proposed

Roads and Trails Treatments:
None proposed

Protection/Safety Treatments:

P1- Administrative Closure

General Description: This treatment is for an administrative closure of a designated backcountry campsite. One designated backcountry campsite, Haddock Camp, is located within the burn area. The BAER team recommends an administrative closure of this camp area.

Suitable Sites:
Locations on FS lands for burned area warning signs on major entry points are:

- Two signs at the trail entering Haddock Camp

Detailed Design/Construction Specifications:
Burned area warning signs at trailheads shall be specified by the Los Padres National Forest Recreation and Engineering Staff to be the minimum necessary for safety considerations.

Example of signs

Table 8. P1 Treatment Cost

Temporary Closure - Treatment	Materials	Labor	QTY	UOM	Total
Forest Order Preparation (GS-9 Rec)		$300	1	days	$300
Sign installation (GS-7 Rec)		$235	3	days	$705
Campsite Closure Sign Materials	$250		2	each	$500
Vehicle-GS-7 Rec Tech	0.55		300	miles	$165
Total					**$1,670**

P2- Safety Warning Signs

General Description: This treatment is for the installation of burned area warning signs. Five trailheads provide access to the burn area. The BAER team recommends placing "Caution – Burned Area" signs at the following trailheads: Reyes Creek, Reyes Peak, Piedra Blanca, Cedar Creek, and Fish Bowls.

Burned area signs warn the public identifying of the possible dangers associated with a burned area on major entry points into the burned area and recreational areas. They shall contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and flash floods.

Suitable Sites:
Locations on FS lands for burned area warning signs on major entry points are:

- Reyes Creek trailhead (near camp Scheideck)
- Reyes Peak trailhead (end of Pine Mountain Road)
- Fishbowl trailhead
- Cedar Creek trailhead
- Piedra Blanca trailhead

Detailed Design/Construction Specifications:
Burned area warning signs at trailheads shall be specified by the Los Padres National Forest Recreation and Engineering Staff to be the minimum necessary for safety considerations.

Examples of signs are:

Table 9. P2 Treatment Cost

Safety Warning Signs - Treatment	Materials	Labor	QTY	UOM	Total
Trailhead Sign Materials	$250		8	each	$2000
Sign installation (GS-7 Rec)		$235	6	days	$1410
Vehicle-GS-7 Rec Tech	0.55		300	miles	$165
Total					**$3,575**

I. Monitoring Narrative:

None proposed

PART VII - APPROVALS

1. for Kenneth E. Hoffman — Forest Supervisor (signature) — 7/15/16 — Date

2. Bernie T. Grant — Regional Forester (signature) — 8/2/16 — Date

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(L)										
L1-Invasive Survey/ Detection		$10,868.00	1	$10,868	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0			$0		$0	
		$0	0	$0			$0		$0	
		$0	0	$0	$0		$0		$0	
Subtotal Land Treatments				$10,868						
B. Channel Treatments (C)										
None		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
Subtotal Channel Treat.				$0	$0		$0		$0	
C. Road and Trails (R-T)										
None		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0			$0		$0	
Subtotal Road & Trails				$0	$0				$0	
D. Protection/Safety (P)										
P1- Administrative Closure		$1,670	1	$1,670	$0		$0		$0	
P2- Safety Warning Signs	Signs	$447	8	$3,574	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
Subtotal Structures				$5,244	$0		$0		$0	
E. BAER Evaluation										
Pine BAER				$5,161	$0		$0		$0	
F. Monitoring (M)										
		$0	0	$0	$0		$0		$0	
		$0	0	$0	$0		$0		$0	
				$0	$0		$0		$0	
Subtotal Monitoring				$16,112			$0		$0	
G. Totals										
Previously approved										
Total for this request				**$16,112**						