USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: June 24, 2013

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report
[X] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action
[X]1. Initial Request
[ ] 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: Hathaway Fire

B. Fire Number: CA-BDF-008526

C. State: California

D. County: San Bernardino

E. Region: 05

F. Forest: San Bernardino

G. District: Front Country

H. Fire Incident Job Code: **0512-P5HJ4R**

I. Date Fire Started: June 9, 2013

J. Date Fire Controlled: Anticipated 100 percent contained 6/25/13 85% contained at the time of this report

K. Suppression Cost: Currently estimated at $12,000,000

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 11.6
2. Fireline seeded (miles): 0
3. Dozer line rehabed (miles): 12.5

M. Watershed Number:
- Headwaters San Gorgonio River (#181002010102),
- Upper San Gorgonio River (#181002010104),
- South Fork Whitewater River – Whitewater River (#181002010301),

N. Total Acres Burned:
NFS Acres 2,714 Other Federal (BIA) 257 State 0 Private 807

O. Vegetation Types: The major plant communities within the fire area are canyon live oak woodland, scrub oak woodland, mixed chaparral, and mixed coniferous forest. Jeffrey pine, white fir, incense cedar, sugar pine, Coulter pine, and bigcone Douglas-fir are all present within the coniferous communities. Black oak and coast live oak woodlands are present in relatively small amounts within the burn area.

P. Dominant Soils:

Map Unit Symbol	**Map Unit Name**	**Surface Texture**	**Maximum Erosion Hazard**	**Percent of Fire Area**
CsF2	Crafton rocky sandy loam, 25 to 50 percent slopes, eroded	Sandy loam	High	11.8%
DhG	Lithic Xerorthents-Springdale family-Rubble land association, 50 to 100 percent slopes	Very gravelly loamy sand	High to very high	17.6%
FLG	Springdale family-Lithic Xerorthents association, dry, 50 to 75 percent slopes	Gravelly loamy coarse sand	High to very high	10.7%
LrG	Lithic Xerorthents-Rock outcrop complex, 50 to 100 percent slopes	Very gravelly loamy sand	Very high	37.3%
WpG	Wapal family-Lithic Xerorthents, cool association, 50 to 75 percent slopes	Very gravelly sandy loam	High to very high	10.5%

Q. Geologic Types: Predominantly Precambrian metamorphic schist and gneiss.

R. Miles of Stream Channels by Order or Class: perennial 0 intermittent 6.8 ephemeral 0

S. Transportation System: Trails: 4.5 miles Roads: System 0.9 nonsystem 2.9

PART III - WATERSHED CONDITION

A. Burn Severity (acres): Unburned 460 low 970 moderate 1741 high 608

B. Water-Repellent Soil (acres): 608

C. Soil Erosion Hazard Rating (acres): 0(low) 214 (moderate) 1423 (high) 2142 (very high)

D. Erosion Potential: 24 tons/acre [Background models as 1-2 tons/acre]

E. Sediment Potential: _ cubic yards / square mile

Watershed	**Pre-Fire**	**Post-fire**	**multiplier pre-fire**
Headwaters San Gorgonio River	850	7520	8.9
Upper San Gorgonio River	790	2700	3.4
South Fork Whitewater River – Whitewater River	660	696	1.06
Whitewater ARTO/SWWF	122	156	1.28
Wood Canyon ARTO/SWWF	190	2400	12.7
"Bog" Area	300	2500	8.3
Morongo Residential	450	2600	5.9
Below Deer Spring	92	1580	17.1

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2 to 5

B. Design Chance of Success, (percent): 85

C. Equivalent Design Recurrence Interval, (years): 5

D. Design Storm Duration, (hours): 5.43

E. Design Storm Magnitude, (inches): 4.13

F. Design Flow, (cubic feet / second/ square mile):

Watershed	Q5
Headwaters San Gorgonio River	67
Upper San Gorgonio River	60
South Fork Whitewater River – Whitewater River	53

G. Estimated Reduction in Infiltration, (percent): 16%

H. Adjusted Design Flow, (cfs per square mile):

Watershed	Q5
Headwaters San Gorgonio River	93 (equiv. Q10)
Upper San Gorgonio River	68
South Fork Whitewater River – Whitewater River	53

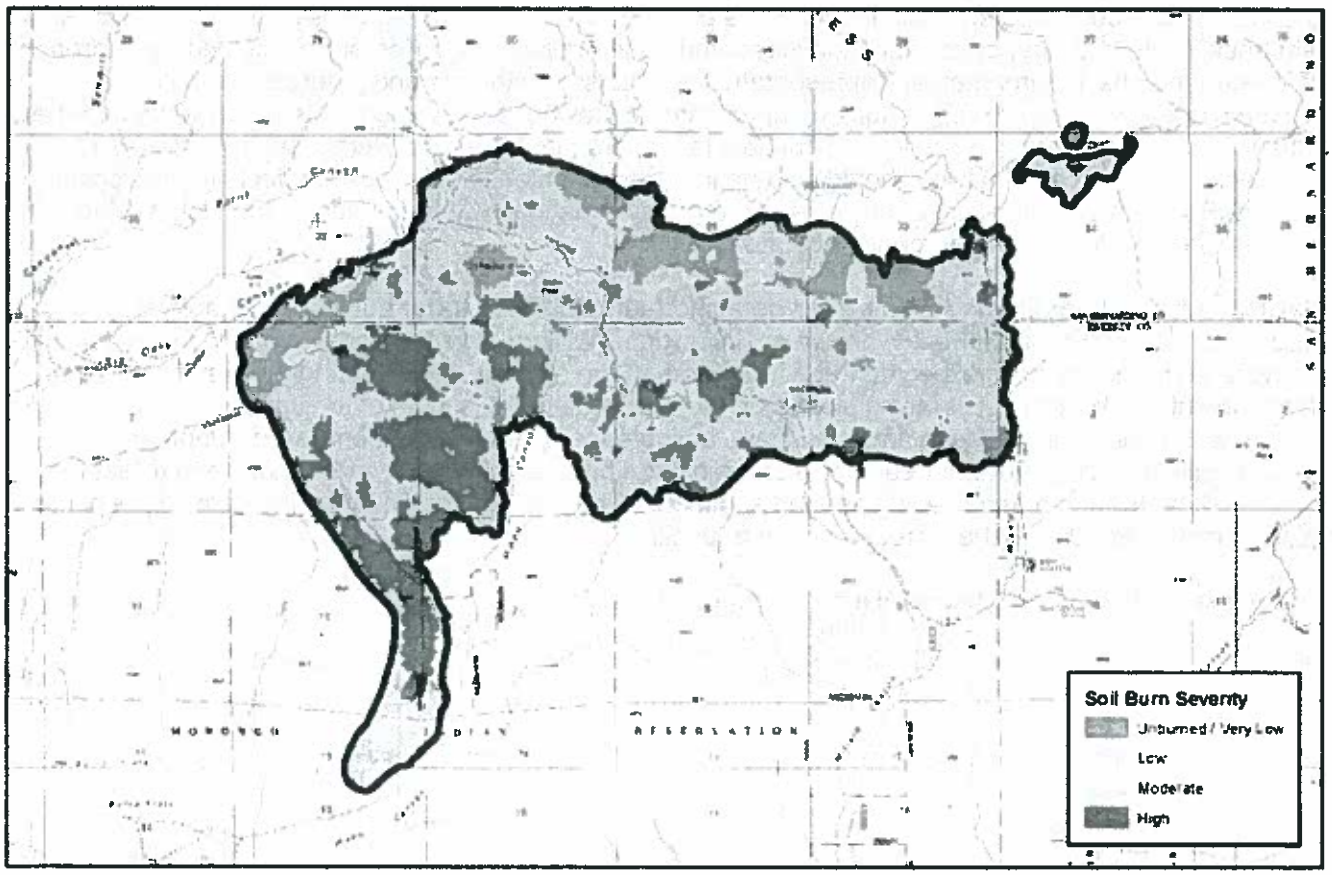

Figure 1 Hathaway Fire Soil Burn Severity Map

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency

Summary

The Hathaway Fire started just before noon on Sunday, June 9, 2013 east of Hathaway Canyon on the northern portion of the Morongo Indian Reservation. It burned on very steep, rugged terrain in the San Gorgonio Wilderness, in an area with significant tree mortality as a result of the 1999-2004 drought and bark beetle infestation. One out-building and an antenna was destroyed at Snowpeak Communication Site, but there was no damage to the communication equipment. The east edge of the Hathaway Fire burned into the western portion of the 2006 Millard Fire. Of the 3,835 total acres burned, 2,639 acres burned in the San Gorgonio Wilderness.

Threats to Human Life/Property – The Hathaway Fire burned 2,714 acres on NFS land, 257 acres of BIA/Morongo Indian Tribe land, and 807 acres of privately owned land. There are no known year-round residents within the Hathaway Fire burn perimeter. There is, however, a communication facility on Snow Peak and a seasonal residence at Raywood Flat. Human activity in and around the burned area includes travel routes such as Forest Service Road 2S01, and the Deer Springs-Raywood Flats Trail 2E07.1. Other critical values include recreational users, cultural sites, telephone lines, powerlines, a diversion dam with a pipe and ditch water conveyance system, and important cultural areas in the vicinity of Deer Spring. The threat to human life comes from the potential unstable slopes caused by the fire above the waterways, travel routes, recreation trails, telephone lines, powerlines, and water developments and the potential for rock slides and other falling debris. Potential loss of or injury to human life exists throughout the fire area due to post-fire environmental conditions primarily due to hazard trees, and rolling rocks and debris due to burned over steep slopes. The probability of damage from hazard trees and rolling debris is likely with the magnitude of consequence being major resulting in a high risk along major travel routes. A temporary closure order is recommended for the burn area and hazard warning signs are recommended to be posted at the trailheads for the Deer Creek Trail. Interagency coordination is recommended between the Forest Service and the Morongo Band of Mission Indians' Environmental Representative to discuss treatments and potential downstream effects to the Morongo Reservation. In addition, the private land owner at Raywood Flats needs to be informed of the potential consequences and programs available for watershed protection. Permittees and operators of the Snow Peak Communication facility should also be informed of potential fire caused effects to the access roads. The BAER team did not discover any other emergency situations with an unacceptable risk level to critical values that would require emergency treatment.

Potential Threats to Water Quality – There will be a short-term threat to water quality in the main stem of the downstream reaches of the South Fork Whitewater River, upper Millard Canyon, upper Wood Canyon and Big Oaks Canyon. Ash and debris is expected to be mobilized off the steeper slopes during the first significant precipitation event, such as the east facing slopes on the west side of the slopes of the upper Wood Canyon above the concrete lined ditch. These areas will have an increased potential for storm water runoff and erosion, especially downslope/downstream from areas of high burn severity. The main short-term threat to water quality will be from ash and fine, suspended sediment. There is a potential for an increase in the pH of the post-fire runoff water due to the increase of ash deposition.

Table 1. Summary of Emergency Determiniation by Values at Risk

Critical Value	Value At Risk	Probability of Damage or Loss	Magnitude of Consequences	Risk	Treatment	Notes
Natural Resource/Cultural	Deer Spring	Likely	Minor	Low	No Treatment - Treatment would be more expensive than clearing the spring of	Spring development with plastic pipe

					debris	
Property	Diversion Dam	Likely - risk from sedimentation	Minor – hand tools could remove sediment and debris	Low	No Treatment-dam already receives routine maintenance	
Property	8" PVC Pipe at diversion Dam	Unlikely	Minor	Very Low	No Treatment	
Property	Rock Ditch	Very Likely	Minor	Low	No Treatment	
Natural Resource	Water Quality of Ag/stock water	Possible	Minor	Low	No Treatment-water quality degradation will be short in duration	
Property	Snow Peak Communication Site	Unlikely	Moderate	Low	No Treatment-SCE on private land	Interagency Coordination
Property	Road to Comm. Station	Likely-Hazard Trees/Debris	Moderate	High	No Treatment-SCE on private land	Interagency Coordination
Property	Road 2S01	Possible	Moderate	Intermediate	No Treatment-SUP	Coordinate with Permute
Property	Raywood Flat Trail 2E07.2	Likely	Major	High	Installation of signs and/or closure order	Hazard Trees
Life/Property	Morongo Residential Areas	Unlikely	Major	Intermediate	No Treatment	Coordinate with BIA/Tribe
Natural Resource	Vegetation Recovery	Likely-On Dozen Lines	Moderate	High	Invasive Weed Detection Survey	
Natural Resource	CASPO	n/a	n/a	n/a	This is species is a R5 Sensitive Species and not being considered in BAER assessment	
Natural Resource	Arroyo Toad modeled habitat	Unlikely-Headwaters San Gorgonio River	Major	Intermediate	Modeling	Occurs on Morongo Indian Reservation land outside fire perimeter
Human Life & Safety	Hazard Tree Danger to Hikers	Possible in high severity burned areas with trees	Major	High	Installation of signs and/or closure order	
Human Life & Safety	Raywood Flats-Private Parcel	Unlikely	Major	Intermediate		Inform Private Land Owner
Natural Resource	Southwestern	Unlikely	Major	Intermediate	Modeling	Modeled habitat

	Willow Flycatcher modeled habitat					occurs mostly outside of fire perimeter. Only 20 acres of habitat was affected by the fire.
Natural Resource	Soil Productivity	Possible-soils are thin, low productivity and support grass and brush	Minor	Low	No Treatment-most of high burn severity is in Wilderness	
Natural Resource	Arroyo Toad modeled habitat- Wood Canyon	Possible	Moderate	Intermediate	No Treatment	
Natural Resource	Arroyo Toad modeled habitat Whitewater River	Unlikely	Moderate	Low	No Treatment	
Natural Resource	SW Willow Flycatcher modeled habitat-Wood Canyon	Possible	Moderate	Intermediate	No Treatment	
Natural Resource	SW Willow Flycatcher modeled habitat-Whitewater River	Unlikely	Moderate	Low	No Treatment	

Resource Impacts

Values at Risk by resource

Wildlife/Fish: The Hathaway Fire perimter and surrounding areas support habitat for numerous R5 Sensitive and SBNF Watchlist wildlife species. Sensitive and watchlist species include: mountain lion, mule deer, California spotted owl, northern flying squirrel and southwestern speckeled rattlesnake. Additionally, small portions of the fire perimeter (Whitewater Canyon) support modeled habitat for southwestern willow flycatcher, a Federally-listed endangered species. Areas adjacent to, but outside of the fire permiter (Wood Canyon) support arroyo toad modeled habitat (Federally-listed endangered species). Field surveys were not conducted to verify if there was species occurrence or if modeled habitats were suitable or not. Hydrologic modeling was used to determine if modeled habitat for the southwestern willow flycatcher and arroyo toad would be affected by sediment deposition and scouring activities 1 and 2 year after the Hathaway fire. Modeling showed that sediment yield would increase in the Wood Canyon area 1 year following the fire, but would decrease closer to pre-fire conditions during the second year. The Whitewater canyon area did not show detectable levels of sediement yield 1 or 2 year post-fire, when compared to the pre-fire conditions. No emergency exists for either modeled habitat for these two species. Habitat for R5 sensitive and SBNF watchlist wildlife species could be affected as a result of the Hathaway Fire. There will be a reduction in canopy cover, foraging habitat and prey base. The mixed conifer portions of the Hathaway fire will become unsuitable for California Spotted Owls and remain so until vegetative recovery will occur. It is unlikely that a fire of this smaller size will have any effect on larger species such as mountain lion. The short-term decrease in vegetative cover for species such s mule deer should not affect deer herds that use this area. The increase in new browse as a result of the fire will

increase foraging opportunities for deer, which is beneficial. Due to the smaller size of the fire, these changes should be short-term in nature. It is expected that the effects of the fire will not reduce the viability of these species, nor should they trend towards federal listing. See Hathaway Fire Wildlife BAER Assessment for additional details.

Hydrology:

Table 2. Estimated flow increases for the Hathaway Fire subwatersheds for the Q5 storm

Subwatershed Name	Drainage Area (sq.mi.)	Pre-Fire Peak Flow (Cfs)	Post Fire Peak Flow (Cfs)	Flow Increase above Normal
Headwaters San Gorgonio River	47.4	3180	4410	38%
Upper San Gorgonio River	35.8	2150	2430	13%
South Fork Whitewater River – Whitewater River	61.0	3240	3240	0
Whitewater ARTO	11.3	111	112	1%
Wood Canyon ARTO/SWWF	4.7	71	113	56%
"Bog" Area	7.5	180	240	35%
Morongo Residential	11.0	390	480	23%
Below Deer Spring	1.8	13	23	86%

Impacts to soils from erosional loss could potentially impact water quality through aggradation and deposition of sedimentation and ash. The greatest threat is from rill and gully erosion resulting from lost of infiltration and ground cover.

Watershed Condition Classification: Effects of the Hathaway Fire are too small to change the watershed condition of the 3 HUC 6s in question.

A primary watershed effect of the Hathaway Fire is "Loss of water control" or "Increased Flood Potential." The design storm (Q2) will cause the watersheds to react as if a Q5 storm was occurring. Higher return interval storms, such as the Q5, will cause the watersheds to react as if a Q10 storm was occurring. Increases in sediment potential will be 1 to 17 times normal.

B. Emergency Treatment Objectives: The primary objective of the proposed emergency rehabilitation is to take prompt actions deemed reasonable and necessary to effectively protect, reduce or minimize significant threats to property and prevent unacceptable resource degredation.

Planned Treatment Narratives

Land Treatments: Only noxious weed detection survey is proposed.

Noxious Weed Detection Surveys

Surveys will begin in 2013 during the re-sprouting and flowering periods of weed species. Completion of surveys in roads, dozer lines, staging areas, safety zones, downstream from the weed washing station, known invasive and sensitive plant populations, and habitat for the southwestern willow flycatcher will be the first priority. The second survey priorities would be along riparian areas, hand lines, drop points, and prohibited plant plantations.

Item	Unit	Unit Cost	# of Units	Cost
GS-11 Botanist	Days	$400	1	$450
2-GS-07 botanists	Each	$300	4	$1200

Vehicle Mileage	Miles	$0.40	500	$200
			Total Cost	**$1850**

Channel Treatments: No Treatments Proposed.

Road Treatments: No Treatments Proposed

Protection/Safety Treatments:

Closure Order- Due to safety concerns presented from hazard trees, a temporary closure order should be implemented for the Deer Creek trail.

Install Trail Hazard Signs – Six (6) signs warning visitors of hazards in the burned area, including loose rocks, falling trees and limbs, and impacts to trail conditions will be purchased and installed at the trailheads to the Deer Creek Trail 2E07.1, Signs will be 12"x18", poly-flex, yellow-black, non-reflective trail sign mounted on a 4"x4"x8' post at a height and distance mandated in the USFS Handbook.

Interagency Coordination: One of the primary treatments should be Interagency Coordination. During Initial Implementation, this treatment will be under the purview of the Implementation Team Leader, working with the Morongo Tribal Environmental Representative [James Payne, 951-316-0027] and the Bureau of Indian Affairs BAER Team Leader [Darryl Martinez, 505-331-3514] or other local representative. The private land owner at Raywood Flats needs to be informed of the potential consequences and programs available to help. Permittees or users of the Snow Peak Communication facility should also be informed of potential effects to the access roads. The District representative should stayed informed throughout the year of weather systems and use the National Weather Service to acquire Spot Weather Forecasts and the USGS for debris flow modeling and wildlife surveys as applicable.

Item	Unit	Unit Cost	# of Units	Cost
GS-11 Lands specialist (Closure Order)	Days	$366	4	$1464
Closure Signs	Each	450	4	$1800
GS-12Archaeologist (Interagency Coordination)	Days	$466	1	$466
Total Cost				**$3730**

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:
Land 90 % Channel N/A % Roads N/A % Other 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	90
Channel	N/A	N/A	N/A
Roads	N/A	N/A	N/A
Protection/Safety	90	90	90

E. Cost of No-Action (Including Loss): **$22,100 plus potential harm to human health and life**

F. Cost of Selected Alternative (Including Loss): **$5,580**

G. Skills Represented on Burned-Area Survey Team including non ordered specialist:

[X] Hydrology	[] Soils	[ ] Geology	[ ] Range	[] Forestry	[X] Wildlife
[ ] Engineering	[ ] Ecology	[X] Botany	[] Archaeology	[ ] Fisheries	

Hydrologist – Robert G. Taylor

Botany– Jordan Zylstra

Wildlife Biologist – Anne Poopatanapong

Team Leader: Rick Weaver, Tahoe NF Email: rweaver@fs.fed.us Phone: 530-478-6241

H. Treatment Narrative

I. Monitoring Narrative: Monitoring for new populations of noxious weeds within the fire perimeter is requested. Monitoring is proposed for one year.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

Line Items	Units	Unit Cost	NFS Lands # of Units	NFS Lands WFSU SULT $	Other $
A. Land Treatments					
None Recommended					
Subtotal Land Treatments					
B. Channel Treatments					
None Recommended					
Subtotal Channel Treatment					
C. Road and Trails					
Subtotal Road and Trail Treatments					
D. Protection/Safety					
Closure Order	days	$366	4	$1464	
Warning Signs	each	$450	4	$1800	
Interagency Coordination	days	$466	1	$466	
Subtotal Protection/Safety				**$3,730**	
E. BAER Evaluation					
Assessment team	each	$15,000	1	15,000	
Helicopter Flight	each	$1,228		$1,228	
Subtotal BAER Evaluation				**$16,228**	
G. Monitoring Cost					
noxious weed survey	each	$1850	1	$1850	
Subtotal Monitoring				**$1850**	
H. Totals				$0	
Total Request				**$21,808**	

PART VII - APPROVALS

1. Jody Noiron — Forest Supervisor (signature) — 6/24/13 — Date

2. for Barnie J. Grant — Regional Forester (signature) — 6/28/2013 — Date