

(Reference FSH 2509.13)

Q. Geologic Types: Cambrian rocks, limestone, alluvial fan deposits, Bonneville shoreline deposits

R. Miles of Stream Channels by Order or Class: 0

S. Transportation System

Trails: 0 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 115 (low) 611 (moderate) 25 (high) 11 (unburned)

B. Water-Repellent Soil (acres): 10

C. Soil Erosion Hazard Rating (acres):
76 (low) 103 (moderate) 573 (high)

D. Erosion Potential: 29.5 tons/acre

E. Sediment Potential: 18,880 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. Design Chance of Success, (percent): 80

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

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1.16

F. Design Flow, (cubic feet / second/ square mile): 0.16

G. Estimated Reduction in Infiltration, (percent): 400

H. Adjusted Design Flow, (cfs per square mile): 0.60

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

On August 4th and 5th, 2008, members of the BAER team reviewed conditions on the fire. There are two defined ephemeral stream channel – Picayune Canyon Creek and Crooked Canyon Creek. Both of these drainages experienced light to moderate burn severity. The remaining drainages within the fire do not have defined channels, but have evidence of historic deposition of rock and alluvial sediment at the mouth of the steep portion of the drainages where the drainages meet the Bonneville shoreline. The conditions on the fire were almost all moderate burn severity with localized high severity burn conditions found in localized drainage bottoms on the south end of the fire and along small, break in slope areas at the Bonneville shoreline level, and in two localized areas below the shoreline coincident with dense patches of oakbrush. Critical values are the Highline irrigation canal and access road, the Spring Lake water storage tank and delivery infrastructure, several homes just east of Spring Lake, orchards, and homes adjacent to the west fire perimeter. The critical

value related to resources is soil productivity. There are no forest system road, trails, or facilities within the fire perimeter. On private land there is an ATV trail that parallels the Western US Forest Service boundary. Forest boundary signs were burned and the corner section monument post and sign were burned. Private land fences were burned in the southwest portion of the burn. The two water storage tanks were not affected by the burn and are not at risk of flooding or debris flows. Only a small portion of the drainage above the northern tank was burned. The watershed drainage above the southern tank was either not burned or lightly burned.

The homes adjacent to the western fire edge at the northern end of the fire are not considered to be at risk from fire related flooding from the fire area because the amount of burned watershed above the neighborhood is small and the burn severity is moderate and the drainage bottoms had areas of unburned vegetation. There is potential for flooding in the orchards at the northern portion of the fire, but no damage is expected besides deposition of a small amount of ash may occur.

The Highline Canal is adjacent to the western fire perimeter. The threat is that some flood flow and entrained debris has the potential to flow into the canal. There are no major drainages into the canal. Flow would consist principally of sheet flow. The risk of large amounts of debris is low. The risk of debris damming the canal is very low because the burn severity is moderate and the contributing watershed above the canal is relatively small. Therefore the canal access road located on the western side of the canal is at low risk for damage.

The soil productivity has not been compromised because the majority of the burn severity is low to moderate. The high rock content and inherent natural rock cover provides protection from raindrop impact which helps impede soil rill and gully development. It is expected that oakbrush and grass vegetation will re-vegetate next spring. Full recovery is expected in 3 to 5 years.

A few patches of noxious weeds occur on private land at the north end of the fire and appear to be remnants of *Cardaria draba* or Whitetop. Toadflax skeletons in NW1/4 of the SE1/4 of Section 29 associated with ATV use where they are highlining. Invasive/ noxious weeds are the most prominent noxious weeds and these are Puncturevine and field bindweed.

The primary area of concern for this fire is:

- The homes at the southwest edge of the fire which may be at risk from potential debris flooding originating from eastern drainages. Modeling of storm flow indicates that increased runoff may occur in the eastern drainages above these homes with some sediment load. The storm flow from these drainages are directed at these homes because of the topography. The private ATV trail that parallels the US Forest Service boundary is at risk to intercept, collect and concentrate overland flow and delivery to the northern homes located south of Picayune Canyon.

B. Emergency Treatment Objectives:

The main objective for USFS lands is for safety and protection of homeowners below the steep hillsides in the south part of the burn. It is recommended that an early warning device be installed that would contact local dispatch if a rainfall event is likely to cause a debris flood or flow.

On USFS lands no land treatments are recommended because of the low likelihood of success in controlling flood flows from the steep and narrow canyons. Surface treatments would not be effective in controlling debris floods because the steep terrain is not conducive to straw mulching and inchannel sediment detention structures. Sandy based soils are not receptive to Polyacrylamide (PAM) treatment.

On private lands the following treatments are suggested (especially during spring when soils in the drainage may be saturated and the likelihood of flood flows is greater):

- Drainage design for ATV trail such as water barring to shed water from the trail to reduce risk of direction of flows toward the homes
- Sand bagging around basement window wells and other entrances
- Deflection structures installed upslope of and around homes to divert flood water around property

- Review flood control publications such as "Homeowner's Guide for Flood, Debris and Erosion Control" produced by the Los Angeles County Department of Public Works and is found at the following website: <http://ladpw.org/wmd/HomeOwners/>

In addition, on private lands it is suggested that aggressive early detection and rapid response be taken to prevent the proliferation of weeds in the burn area.

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

Land ___ % Channel ___ % Roads/Trails ___ % Protection/Safety 80 %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): \$50,000

F. Cost of Selected Alternative (Including Loss): \$12,000

G. Skills Represented on Burned-Area Survey Team:

☒ Hydrology ☒ Soils ☐ Geology ☐ Range ☐
☐ Forestry ☐ Wildlife ☐ Fire Mgmt. ☐ Engineering ☐
☐ Contracting ☐ Ecology ☒ Botany ☐ Archaeology ☐
☐ Fisheries ☐ Research ☐ Landscape Arch ☐ GIS

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H. **Treatment Narrative:**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments: No treatments are recommended on USFS lands.

Channel Treatments: No treatments are recommended on USFS lands.

Roads and Trail Treatments: No treatments are recommended on USFS lands.

Protection/Safety Treatments:

It is recommended that an early warning device be installed that would contact local dispatch if a rainfall event is likely to cause a debris flood or flow.

I. Monitoring Narrative:

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

No monitoring is recommended.

Part VI – Emergency Stabilization Treatments and Source of Funds

Interim #

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										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$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
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Channel Treat.				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Road & Trails				\$0	\$0		\$0		\$0	\$0
D. Protection/Safety										
Early Warning Device				\$7,000	\$0		\$0		\$0	\$7,000
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Structures				\$7,000	\$0		\$0		\$0	\$7,000
E. BAER Evaluation										
Bear Team Salary				\$0	\$7,000		\$0		\$0	\$7,000
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
Subtotal Evaluation				\$0	\$7,000		\$0		\$0	\$7,000
F. Monitoring										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$0	\$0		\$0		\$0	\$0
G. Totals				\$7,000	\$7,000		\$0		\$0	\$14,000
Previously approved										
Total for this request				\$7,000						

PART VII - APPROVALS

 1. /s/Brian Ferebee
 Forest Supervisor (signature)

August 8, 2008
 Date

 2. /s/ William P. LeVere for
 Regional Forester (signature)

August 21, 2008
 Date