

Date of Report: 9/30/08

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

- ☐ 1. Funding request for estimated emergency stabilization funds
☒ 2. Accomplishment Report
☐ 3. No Treatment Recommendation

B. Type of Action

- ☐ 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 DESCRIPTIONA. Fire Name: AugustB. Fire Number: AZ-PNF-070609C. State: AZD. County: YavapaiE. Region: 03F. Forest: PrescottG. District: BradshawH. Fire Incident Job Code: P3DIZ0I. Date Fire Started: 10/30/07J. Date Fire Contained: 11/11/07K. Suppression Cost: \$1,100,000

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 0
2. Fireline seeded (miles): 4
3. Other (identify): approximately 2.5 miles of dozer line will be pitted and slashed. 1.5 miles of handline will also be slashed.

M. Watershed Number: Upper Hassayampa 1507010301N. Total Acres Burned:

NFS Acres(630) Other Federal (0) State (0) Private (0)

O. Vegetation Types: Ponderosa PineP. Dominant Soils: Udic Haplustalfs (TES 540)Q. Geologic Types: Metamorphic, Granite

R. Miles of Stream Channels by Order or Class: 2 miles of ephemeral 1st order

S. Transportation System

Trails: 1.3 miles Roads: 1.2 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 543 (low) 66 (moderate) 21 (high)

B. Water-Repellent Soil (acres): ~350

C. Soil Erosion Hazard Rating (acres):
0 (low) 0 (moderate) 630 (high)

D. Erosion Potential: NA tons/acre

E. Sediment Potential: NA cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

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

D. Design Storm Duration, (hours): NA

E. Design Storm Magnitude, (inches): NA

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

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

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

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Background: The August fire is located within a Ponderosa Pine ecotype and is approximately 630 acres. Site conditions include heavy tree mortality with heavy fuels on steep slopes (50% gradient).

Life and private property:

Trail. Portions of the Venezia Trail (Trail #381 – single track motorized trail) and the E Cross L Trail (Trail# 281 – non-motorized trail) are located within the fire perimeter. A potential threat to public safety occurs within the trails predominantly from hazardous trees and lesser concerns associated with projected increase of flood events, unstable soils, and falling rocks.

Roads. The Operation level of FSR 52 (Senator Highway) is level 2 which is classified as a high clearance 4X4 road not suited for passenger vehicles and not regularly maintained. The Objective level of this road is level 3 which is suitable for passenger vehicles but user comfort is not a consideration. The Senator Highway is a highly traveled route and is one of the main access points to Crown King. Portions of this road are located immediately adjacent to the fire and receive drainage from the slopes subjected to the burn. The road is also located within the Crooks Canyon floodplain. The road is expected to receive an increase of sediment yield and peak flows but the degree of this will be moderated because of the low burn severity and minimal degree of high and moderate burn severity (see soil and hydrology section). Post fire road conditions may pose a potential threat to public life and safety.

The Operation and Objective level of FSR 70 is level 2 which is classified as a high clearance 4X4 road not suited for passenger vehicles and not regularly maintained. FSR 70 is located on a ridgeline immediately adjacent to the fire perimeter and does not pose a threat to life, safety or natural resources.

All the hazardous trees adjacent to the Senator Highway were cut during the incident (personal communication with Safety Officer of incident).

Soils:

The majority of the burned area was subjected to low burn severity (86%) with some pockets of moderate (10%) and high (3%) burn severity. The following describes the conditions associated with each burn severity:

- Low burn severity sites had a mixture of strong, moderate, and weak hydrophobicity with a mixture of ground cover consumption in a mosaic pattern. Total ground cover consumption was approximately 40-50%. These sites did not experience any canopy cover loss.
- Moderate burn severity areas experienced similar conditions as the low burn severity sites with canopy cover loss of approximately 50%. These sites also normally have a slightly greater amount of hydrophobicity and ground cover loss when compared to the low burn severity but the conditions are variable.
- The high burn severity sites predominantly have strong hydrophobicity with moderate hydrophobicity patches. The majority of the vegetative ground cover and canopy cover has been consumed.

Erosion rates are expected to increase minimally within the low burn severity sites predominantly because of the hydrophobic conditions and ground cover loss. From a landscape scale the low burn severity conditions are expected to buffer the accelerated erosion rates associated with the moderate and high burn severity. There is no expected threat to the resource (soil productivity).

Mining:

The burned area partially encompasses a historic gold-silver-lead-zinc mining area. Three abandoned mine sites were identified during the assessment of the burned area:

- Copper King Prospect (SW¼ section 12, T. 12 N., R. 2 W)
- Easy-to-Get-to mine (SW¼ section 12, T. 12 N., R. 2 W)
- Venezia millsite (SE¼ section 12, T. 12 N., R. 2 W)

None of these mines are identified or potential HAZMAT sites. Field review and aerial photo analysis did not delineate significant volumes of mine waste. Because of the low burn severity in this area, these mines are not considered potential values at risk or possibly significant future sources of metals to the watershed.

An unfenced, unsigned 20 foot deep shaft was exposed by the burn in the SW¼ of section 13, T. 12 N., R. 2 W. This shaft is almost adjacent to the dozer-line on the west side of the containment area, creating a possible hazard resulting from enhanced public access. Discussions with suppression staff, however, indicate that the

dozer line will be blocked approximately 430 ft (120 m) north of this mineshaft, and subsequently reclaimed to the south. These efforts should mitigate the hazard in the short term. This mineshaft has also been referred to the Prescott N.F. mine closure program manager as a possible candidate for future closure efforts.

Numerous mining claims are posted in and along the channel of Crooks Canyon. As there are no active Plans of Operation associated with these claims, they are not considered values at risk.

Hydrology:

Drainages within the fire perimeter are first order and ephemeral. The main channel receiving drainage from the burn area is Crooks Canyon; a steep gradient, intermittent, wide channel system with a boulder/cobble substrate. The fire has impacted approximately 19% of the 3350 acre Crooks Canyon watershed from the headwaters to Palace station. Post fire flows are expected to increase within the Crooks Canyon watershed because of the hydrophobic conditions and decrease of ground cover. However, the increase of flows will be moderated because the majority of the fire was subjected to low burn severity. The general configuration of the channel, which includes a boulder/ cobble substrate and a wide channel, is expected to contain any post fire flows. Palace Station is near Crooks Canyon but is not at risk from post flow events due to its proximity to the channel and the estimated 15' free board height of the channel in relation to Palace Station.

All trail channel crossings and road crossing associated with the Senator Highway adjacent to the fire may pose a risk to human life and safety due to a potential increase of flow events.

The Crooks Canyon watershed is a tributary to the Hassayampa River. The Upper Hassayampa River is presently listed as impaired (State of Arizona draft 303(d) 2004) due to low pH, and as non-attaining for cadmium, copper and zinc. In general, the uncontrolled removal of vegetation and surface cover by fire results in accelerated runoff (see soils section), which can increase sediment delivery to drainages. For the August fire, however, most burned areas have a low burn severity rating, and thus sediment loadings are not likely to increase above expected natural variations. Possible mine wastes from abandoned mines in the burn area could erode into Crooks Canyon. However, because of small volumes, coarse particle size and low burn severity, any mine wastes are unlikely to be significant sources of metals to drainages. Water quality concerns at the August Fire, therefore, do not represent a threat to life, property or resources

Wildlife:

Basically, the entire August Incident is within a federally designated Mexican spotted owl (MSO) critical habitat (CH). 487 acres (77%) of the incident area is MSO protected activity center (PAC) habitat. 133 acres (21%) of the incident area is restricted MSO habitat. That leaves approximately 19 acres (2%) that is within CH and is neither protected nor restricted habitat.

The incident contains portions of two different MSO PACs, Palace and Venezia.

Suppression actions within MSO CH in both PACs include a dozer line through the PACs, retardant drops within the PACs, and felling of snags for firefighter safety and line integrity. An impact from the fire and burnout operations is primarily the temporary loss of prey habitat due to complete consumption of the understory litter and vegetation.

Impacts to the MSO birds themselves may not actually occur until the birds return for their breeding season at the beginning of March 2008. Impacts may include increased human disturbance from OHV use on the FR70 (used for suppression access and fire control line) and temporary decrease in prey habitat within the immediate foraging habitat near potential nest sites.

Another wildlife concern regarding impacts from the fire itself is the possible presence of Forest Service sensitive lowland leopard frogs (LLF) in Crooks Canyon. The area below the incident location has been surveyed and identified as potential habitat for LLF. Due to the majority of the incident having low burn severity, a major sediment producing event is not likely to occur and impact the habitat or LLFs.

Presently, there are no wildlife resources in immediate danger or susceptible to unacceptable resource degradation.

Heritage Resources: A total of 5 previously recorded heritage resource sites are present within the perimeter of the August Fire. One National Register Historic Site, AR-03-09-03-206, known as Palace Station, lies 0.2 miles south of the southeast corner of the fire on the Senator Highway (FSR 52). For specific details of each historic site refer to the August Fire BAER Heritage Resource Assessment. Because the majority of the fire is low burn severity post conditions does not pose an unacceptable threat of degradation to heritage resources.

Noxious Weeds: Although not inventoried, the highly traveled Senator Highway could possibly be a source of noxious weeds. During cursory recon of the incident, no known weeds were evident. The dozer line at the E+L Trailhead may provide a possibility for the expansion of noxious weeds along the disturbed trail. The risk of noxious weeds entering the burned area is minimal and therefore poses a minimal risk to critical resources.

B. Emergency Treatment Objectives:

- Natural Recovery.
- Warn the public at access points of hazardous conditions including flooding, unstable soils and hazardous trees. This is intended to mitigate the potential threat to human life and safety.

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

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

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	NA	NA	NA
Channel	NA	NA	NA
Roads/Trails	NA	NA	NA
Protection/Safety	80	80	80

E. Cost of No-Action (Including Loss): NA

F. Cost of Selected Alternative (Including Loss): NA

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input checked="" type="checkbox"/> Geology	<input type="checkbox"/> Range	<input checked="" type="checkbox"/> Recreation
<input type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology	<input type="checkbox"/>
<input type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> 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.)

Protection/Safety Treatments:

Trail: A total of four signs at two separate locations each on Trail 381 and 281 will be installed to warn the public of potential hazardous trail conditions from flooding, unstable soils, hazardous trees and falling rocks. This is intended to mitigate the potential threat to human life and safety.

Road: A total of two signs will be installed at access points on the Senator Highway (FSR 52) prior to entering the burned area impacting Crooks Canyon. The sign will warn the public of hazardous road conditions due to flooding, falling rocks, and unstable soils. Signs from previous BAER incidents will be utilized. This is intended to mitigate the potential loss of human life or limb.

FINAL REPORT:

Trail: A total of 4 signs were installed as originally prescribed. The trails are experiencing hazardous conditions, as anticipated, and it is probable that we will be requesting NFN3 restoration dollars for FY10.

Road: A total of 2 signs were installed as originally prescribed.

Wildlife: The Forest will assess the need for considering force account MSO occupancy monitoring during the upcoming breeding seasons.

FINAL REPORT: See Monitoring Section.

Noxious Weeds: The Forest will inspect the area and determine the need for force account monitoring and or treatment of noxious weeds.

FINAL REPORT: See Monitoring Section.

Land Treatments: None

Channel Treatments: None

Roads and Trail Treatments: None

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.)

Storm patrol: Channel crossings of the Senator Highway adjacent to the fire will be considered for monitoring using force account.

FINAL REPORT: Storm Patrol did not indicate emergency measures were needed. Some road crossings have experienced head cutting but other funds, rather than BAER, will be used to rectify the situation.

Wildlife: The Forest will assess the need for considering force account MSO occupancy monitoring during the upcoming breeding seasons.

FINAL REPORT: Formal monitoring occurred and no Spotted Owls were detected.

Noxious Weeds: The Forest will inspect the area and determine the need for force account monitoring and or treatment of noxious weeds.

FINAL REPORT: Observations by resource specialists does not indicate a presence of noxious weeds.

Interim #

PART VII - APPROVALS

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