

Date of Report: 07/30/2020

COTTONWOOD FIRE 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: Cottonwood
- B. Fire Number: 2020-HTNF-500917
- C. State: Nevada
- D. County: Clark
- E. Region: 04 – Intermountain
- F. Forest: 17 – Humboldt-Toiyabe
- G. District: Spring Mountains NRA
- H. Fire Incident Job Code: P4M98V
- I. Date Fire Started: July 20, 2020
- J. Date Fire Contained: 07/29/2020
- K. Suppression Cost: \$5,000,000 Estimate
- L. Fire Suppression Damages Repaired with Suppression Funds (estimates):

1. Fireline repaired (miles): 0 (none installed during suppression)

2. Other (identify): Heliwell/ helispot, staging areas (general clean up, raked tracks, etc.). Repair of rock art features that were impacted by aerial retardant application.

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
160600150901	Town of Goodsprings	32,899	2,536 (FS-2,319, BLM – 206, Private – 11)	8%
150100150502	Cottonwood Valley	18,172	258 (BLM – 225, FS – 33)	1%
150100150701	Birdspring	29,612	23 (BLM – 19, FS – 4)	<1%

Commented [JWM1]: Confirm this?

**N. Total Acres Burned:**

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	2,356
Other Federal (List Agency and Acres)	450 (BLM)
State	
Private	11
Total	2,817

**O. Vegetation Types:** The Cottonwood Fire burned in the footprint of the 2005 Goodsprings Fire. The plant community had converted to a predominantly annual/ invasive grassland. Any persisting native constituents comprise predominately blackbrush and desert shrub (<15% of the land cover is represented by this community) in the lower elevations with some pinyon-juniper on the foot and backslopes of Mt. Potosi where the fire had burned.

**P. Dominant Soils:**

- 732 – Purob extremely gravelly loam, 8-30% slopes – 1027 acres (36.4%)
- 342 – Zeheme-Potosi-Rock Outcrop Association – 588 acres (20.9%)
- 840 – Potosi – Zeheme – Rock Outcrop Association – 500 acres (17.8%)
- 421 – Moentria extremely gravelly loam, 15-50% slopes – 414 acres (14.7%)
- 870 – Irongold extremely gravelly loam, 2 to 8% slopes – 151 acres (5.4%)
- 805 – Buckspring-Fletcherpeak-Seralin association – 137 acres (4.9%)

**Q. Geologic Types:** Foot and backslopes are composed of colluvium and residuum from limestone and sandstone. They transition into a limestone and sandstone derived alluvial fan.

**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	
Intermittent	
Ephemeral	7.3
Other (Define)	

**S. Transportation System:**

**Trails:** National Forest (miles): Motorized Trails – 2.01      Other (miles):  
**Roads:** National Forest (miles): Level 2 – 4.47      Other (miles):

**PART III - WATERSHED CONDITION****A. Burn Severity (acres):**

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	BLM	State	Private	Total	% within the Fire Perimeter
Unburned	98	64	0	6	168	6
Low	1,898	315	0	5	2,218	79
Moderate	345	86	0	0	431	15
High	0	0	0	0	0	0
Total	2,341	465	0	11	2,817	100

**B. Water-Repellent Soil (acres):** Not assessed

**C. Soil Erosion Hazard Rating:** Slight: 2,681 acres (95%), Moderate: 137 acres (5%).

**D. Erosion Potential:** Not assessed

**E. Sediment Potential:** Not assessed

**F. Estimated Vegetative Recovery Period (years):** It is not expected that recovery to a native community would occur. Recovery to the new potential community (i.e., dominated by invasive annual grasses and other weeds) would likely occur within three years.

**G. Estimated Hydrologic Response (brief description):** Not assessed

## **PART V - SUMMARY OF ANALYSIS**

### **Introduction/ Background**

#### **A. Describe Critical Values/ Resources and Threats (narrative):**

Table 5: Critical Value Matrix

Probability of Damage or Loss	Magnitude of Consequences		
	Major	Moderate	Minor
	<b>RISK</b>		
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):**

##### **a. People recreating within fire perimeter**

- Probability of Damage or Loss = Possible\_Numerous roads within fire perimeter. The relative flat terrain will keep the chances of flood events low in the advent of a storm. Most roads are outside of the drainages and escapes routes a plentiful.
- Magnitude of Consequences = Moderate\_Slight chance of people being caught unaware of storms.
- Risk = Intermediate

#### **2. Property (P): NFS roads within fire perimeter**

- Probability of Damage or Loss = Unlikely
- Magnitude of Consequences = Minor
- Risk = Very Low
- Roads and motorized trails within fire perimeter have not maintained. Historic events have already damaged these roads making them impassable to all but 4 wheel drive vehicles. Storms will not cause further damage to the roads. The main Cottonwood Pass road is outside of any major drainages and will not be impacted by storms.

#### **3. Natural Resources (NR):Soil productivity and hydrologic function:**

- Probability of Damage or Loss = Possible (One in ten chance of a storm that could increase flows compared to unburned response).
- Magnitude of Consequences = Moderate (Ranges from minor to major depending on precipitation. Past fires in the area have not shown evidence of significant debris flows coming from the portion that has burned. The alluvial fan spreads out downstream and tends to capture most of the sediment. WildCat was not run for this fire.)
- Risk = Intermediate.
- The fire burned in the footprint of the Goodsprings fire. That fire came back as a predominantly cheatgrass community. The fire burned through these flashy fuels resulting in a predominantly low burn severity throughout the fire. Impacts to the soil productivity and hydrologic function are low. The burned area is relatively flat away from the footslopes of Mt.

Potosi. While runoff from thunderstorm events can occur, the risk of any debris flows reaching the community downstream is low.

b. Native or Naturalized Vegetation

- Probability of Damage or Loss = Unlikely (The burned condition will make invasive plant recruitment more likely; however, much of the area already included invasive plants and the majority of the probability for loss is based on existing conditions rather than the burned condition itself).
- Magnitude of Consequences = Moderate (Complete conversion of the area to invasive plants would represent a considerable long-term effect).
- Risk = Low.
- Annual invasive grass species, Siberian thistle, and Russian knapweed were fairly prolific in the burned area before the fire. Although there is concern from local specialists and managers about the nearly complete loss of native vegetation (from habitat/ biodiversity and fire regime standpoints), it appears that the pre-existing condition precludes treatment of this resource under the BAER Program.

4. **Cultural and Heritage Resources:** Prehistoric features:

- Probability of Damage or Loss = Possible (Existing resources may be slightly more exposed to vandalism due to burned condition, but prior fires in the area didn't result in damage).
- Magnitude of Consequences = Major (Some vandalism, like graffiti, could be repaired, but physical damage would be permanent).
- Risk = High.
- The fire burned in the footprint of the Goodsprings fire. Aztec Tank, a known rock art site, exists within the burned area. This site was already impacted by aerial retardant application (repair being attempted via the P Code). Another new site with limited details available was also burned over. These resources were not damaged after exposure in 2005 by the Goodsprings Fire. There is, however, a larger population in the area now with potentially more public land use. Based on the ineffectiveness of a closure of the area and other limitations, no effective treatments have been identified aside from natural recovery.

**B. Emergency Treatment Objectives:** Reduce likelihood of injury to National Forest System land users within the Cottonwood Fire burned area while burned area hazards exist.

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

Land: N/A

Channel: N/A

Roads/ Trails: N/A

Protection/ Safety: 90%

**D. Probability of Treatment Success**

Table 6: Probability of Treatment Success

	1 year after treatment	3 years after treatment	5 years after treatment
<b>Land</b>	N/A	N/A	N/A
<b>Channel</b>	N/A	N/A	N/A
<b>Roads/ Trails</b>	N/A	N/A	N/A
<b>Protection/ Safety</b>	80%	50%	100%

**E. Cost of No-Action (Including Loss):** The cost of loss related to human life and safety cannot be calculated.

**F. Cost of Selected Alternative (Including Loss):** An estimated \$750 to make and install signage.

**G. Skills Represented on Burned-Area Survey Team:**

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

**Team Leader:** Jim Hurja  
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**Forest BAER Coordinator:** John McCann  
**Email:** [john.mccann@usda.gov](mailto:john.mccann@usda.gov) **Phone(s):** 775-355-5339

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

Skill	Team Member Name
Team Lead(s)	Jim Hurja
Soils	
Hydrology	John McCann
Engineering	
GIS	Allison Brewer
Archaeology	Chimalis Keuhn
Weeds	Dirk Netz/ Corrin Floyd (T)
Recreation	
Other	Ken Maas (AML)

**H. Treatment Narrative:**

- Land Treatments:** None proposed.
- Channel Treatments:** None proposed.
- Roads and Trail Treatments:** None proposed.
- Protection/ Safety Treatments:** Placement of bilingual (i.e., English and Spanish) warning signs on the north and south end of Cottonwood Pass Road.

**I. Monitoring Narrative:** Implementation monitoring (e.g., placement and persistence of signs) and effectiveness monitoring will be minimal and conducted as an incidental duty as part of normal land management operations.

**PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS**

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands				All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units	Non Fed \$	
<b>A. Land Treatments</b>										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$0	\$0		\$0		\$0	\$0
<b>B. Channel Treatments</b>										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treatments</i>				\$0	\$0		\$0		\$0	\$0
<b>C. Road and Trails</b>										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road and Trails</i>				\$0	\$0		\$0		\$0	\$0
<b>D. Protection/Safety</b>										
Signage	Signs	375	2	\$750	\$0		\$0		\$0	\$750
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Protection/Safety</i>				\$750	\$0		\$0		\$0	\$750
<b>E. BAER Evaluation</b>										
Initial Assessment	Report			\$1,425	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				\$1,425	\$0		\$0		\$0	\$0
<b>F. Monitoring</b>										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				\$0	\$0		\$0		\$0	\$0
<b>G. Totals</b>				\$2,175	\$0		\$0		\$0	\$750
Previously approved										
Total for this request				\$2,175						

**PART VII - APPROVALS**

1. \_\_\_\_\_  
 Forest Supervisor Date