

Date of Report: 10/09/2006

JBruggink Edited 10/18/2006

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: Cuddy FireB. Fire Number: IDPAS006169C. State: IdahoD. County: IdahoE. Region: R4F. Forest: Payette NFG. District: WeiserH. Fire Incident Job Code: P4C6B1I. Date Fire Started: 09/01/2006J. Date Fire Contained: 09/30/2006K. Suppression Cost: \$750,000

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 7.0
2. Fireline seeded (miles): 0
3. Other (identify): Duff and organic litter pulled back onto fireline.

M. Watershed Number: 1705020147N. Total Acres Burned: 1203

NFS Acres (1203) Other Federal () State () Private ()

O. Vegetation Types: Bittercherry, ninebark, yarrow, lupine, balsamorhiza, wheatgrass, bunchgrass, pinegrass, Big sagebrush. Douglas Fir, ponderoas pine, white fir. Isolated patches of Aspen.P. Dominant Soils: Lithic Argixerolls, Fine Loamy, Mixed Mesic

Q. Geologic Types: Columbia River Basalt

R. Miles of Stream Channels by Order or Class: Approximately 4 miles Order 1 and 2 tributaries.

S. Transportation System

Trails: 2.2 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 601 (low) 400 (moderate) 202 (high) (BARC)

B. Water-Repellent Soil (acres): 120

C. Soil Erosion Hazard Rating (acres):
600 (low) 202 (moderate) 400 (high) (steep canyon breaks)

D. Erosion Potential: 0.11 tons/acre

E. Sediment Potential: 168.0 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3-5

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 50

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 2.6

F. Design Flow, (cubic feet / second/ square mile): 10

G. Estimated Reduction in Infiltration, (percent): 10

H. Adjusted Design Flow, (cfs per square mile): 11

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Cuddy Fire Area

The 1203 acre Cuddy Fire is located in Upper Wildhorse River 6th level HUC. Specifically the fire was located in two tributaries to the Wildhorse River: 1) Bisbee Creek, and 2) Emery Creek.

The fire burned approximately 185 acres in the 2161 acre Emery Creek subwatershed. The fire burned primarily in the upper slopes of Emery Creek on Weakly Dissected Mountain Slope Lands. The inherent erosion hazard on these lands is moderate. The lower portion of Emery Creek is Rocky Oversteepened Canyon Lands. These lands are among the most geologically unstable lands on the Council Ranger

District. Burn severity was rated moderate on only 41 acres and high on only 9 acres within the Emery Creek drainage.

The fire also burned 1,016 acres in the 1,761 acre Bisbee Creek subwatershed. In general, the fire burned an equal amount of acreage in three landtypes described as Weakly Dissected Mountain Slope Lands, Strongly Dissected Mountain Slope Lands, and Rocky Oversteepened Canyon Lands. Burn severity was rated moderate on 360 acres and high on 193 acres within the Bisbee Creek drainage.

Threats to Life and Private Property

A year-round private residence and ranch is located on the Emery Creek Alluvial Fan at the confluence with the Wildhorse River. The Forest BAER Survey Team determined there is **no threat to life or property to the Emery Creek Ranch from the Cuddy Fire Burned Area**. The fire burned less than 10 percent of the Emery Creek subwatershed. The burn severity within Emery was primarily low to moderate severity. There is an eight foot culvert on Emery Creek and the Wildhorse River Road, which should handle the normal and expected 100 year flows.

There is an old abandoned homestead located on the Bisbee Creek Alluvial Fan at the confluence with the Wildhorse River. There are two old partial collapsed sheds and an apple orchard remaining on the homestead. There is an undersized 36 inch culvert on Bisbee Creek and the Wildhorse Road. It is evident that this culvert has been blocked and overtopped in the recent past (probably the 1997 New Years Flood event). There is a large hole on the fill slope below the culvert outlet. Since this is an Adams County Road located on private property with no access to NFS lands, there are no BAER measures. The Forest will notify the County of the pre-existing problem. The County will also be informed that there is a higher risk of flooding and failure at this culvert site due to the Cuddy Fire in the Bisbee Creek drainage.

Threats to Ecosystem Integrity from Noxious Weeds

The expansion of invasive non-native plants into fire-disturbed areas from nearby source areas poses a significant threat to the integrity of the native plant communities and ecosystem processes. Noxious weeds in the surrounding area include Canada thistle, Scotch thistle, Dalmation toadflax, St. Johnswort, and field bindweed. There are 5 known noxious weed sites along the road and trail in Emery Creek drainage between the Cuddy Fire and the site used as a Spike Camp. The invasion or expansion of noxious weeds is likely to alter soil stability, nutrient cycling, wildlife habitat and fire regimes with consequences for long-term ecological diversity and stability.

The Cuddy Fire encompassed part of the Emery Creek Research Natural Area (RNA). The Emery Creek RNA contains two Columbia Plateau grassland plant communities and several Douglas-fir habitat types. The stream bottom features a relatively undisturbed riparian zone and extensive cottonwood woodland. The steep, rugged terrain of lower Emery Creek has discouraged use by livestock.

Threats to Trails and Public Safety

Assessments revealed significant hazards to users along the trails through the Bisbee Creek drainage. The fire affected approximately 1.5 miles of the #252 non-motorized trail, and 0.7 miles of the #234 two-wheeled motorized trail. High to moderate burn severity occurred along the entire #234 trail. Approximately 60 percent of the #252 trail burned at either moderate or high severity. Some sections of trails were simply blocked by downfall. On other sections water diversion structures (water bars) were burned which will also increase potential for erosion damage to the trail. Sloughing of trail tread occurred in several places. Dry ravel and rock fall which impedes proper drainage is common. It is anticipated that trail problems will worsen with increased runoff and associated erosion.

Threats to Vegetation Recovery

Revegetation of the fire area through natural processes will take 3-5 years to visually represent pre-fire conditions. Some impacted communities like the bittercherry, big sagebrush and tree canopy may take several years to re-establish back to pre-fire level.

Threats to Water Quality and Aquatic Habitat

There will be a short term increase of nutrient loading from the fire into Oxbow Reservoir the first year after the fire. Oxbow Reservoir is listed as a 303(d) water quality limited segment with nutrients identified as a pollutant. Bull Trout and ESA listed aquatic species are present upstream within the Wildhorse River Watershed. Red Band Trout are found in Bisbee Creek and Emery Creek.

B. Emergency Treatment Objectives:

Noxious Weeds

Monitor the susceptible burned areas for one year to prevent the expansion of rush skeletonweed, Scotch thistle, Canada thistle, and spotted knapweed.

Treat approximately 1 acre of weed populations within or near the fire area with mechanical methods and herbicides. The purpose of the treatment is to maintain ecosystem integrity by treating known weed infested sites to prevent invasion into the burned area. By reducing the amount of weed seed in the area and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants.

Vegetation Recovery

Allow vegetation to recover in order to facilitate: soil stability, nutrient cycling, wildlife habitat and fire regimes for long-term ecological diversity and stability. Herd cattle from the top of Emery and Bisbee Creek, resting range from livestock grazing for one to two years.

Trails

Objectives: Provide clear and safe passage **for FS work crews** along the Bisbee Creek Trail. Remove imminent safety hazards. Reestablish proper drainage and water management structures to prevent further loss to the Wilderness transportation infrastructure.

- a) Provide clear and safe passage for crews and stock along the Bisbee Creek trail. Clear trails impacted by fire of trees and rocks, repair drainage, and reconstruct tread where needed to access emergency treatment sites. **Reduce imminent hazards by felling burnt snags, removing hazardous downfall and rocks, and filling holes.**
- b) Replace and install water diversion structures to accommodate runoff and reduce potential for trail washouts prior to the spring runoff and/or summer thunderstorms.
- c) Monitor effectiveness of emergency treatments after first snowmelt runoff and end of summer convective storm season.

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

Land 90 % Channel % Roads/Trails % Protection/Safety %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): \$69,300

1. Ecosystem Integrity:

Controlling invasive noxious weeds and other non-native species following the fire; cost benefit can be evaluated by estimating control cost if invasions were left untreated for three years. New and current infestations would be expected to double in size each year, and spread, to at least, an estimated 100 acres requiring treatment, which would cost approximately \$50,000.

2. Vegetation Recovery:

Cost of not allowing livestock on the fire area is estimated at \$5,000.

3. Trail Integrity:

Cost of lost and need to redesign and locate trail system is estimated at \$10,000/mile for a total of \$22,000

$$\text{TOTAL} = [(C + D) * A] + [(C + E) * B]$$

A = 90%, probability of success of primary treatment;

B = 10%, probability of failure of primary treatment;

C = \$5,525, primary treatment cost;

D = \$ 0.00, potential resource value loss if primary treatment succeeds; and

E = \$77,000.00, potential resource value loss if primary treatment fails.

Selected Alternative = $[(5,525+0.) * .90] + [(5,525 + 77,000) * .10] = \$13,225$

No Action Alternative = $[(0+0.) * .10] + [(0+ 77,000) * .90] = \$69,300$

F. Cost of Selected Alternative (Including Loss): \$13,225

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: David Kennell

Email: dkennell@fs.fed.us

Phone: 208-634-0793

FAX: 634-0744

H. Treatment Narrative:

Noxious Weeds

Treat 5 known sites (4.45 acre) of noxious weed populations within or near the fire area with mechanical methods and herbicides. The purpose of the treatment is to maintain ecosystem integrity by treating known weed infested sites to prevent invasion into the burned area. By reducing the amount of weed seed in the area and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants.

Treatment to Protect Vegetation Recovery

Remove livestock grazing within the fire perimeter for up to two years. This would allow native vegetation to recover and prevent the spread of noxious weeds and new weed infestations. This would be accomplished by an administrative closure.

Roads and Trail Treatments:

Trails: Objectives: Provide clear and safe passage for BAER workers along the #252 and #234 Trails. Remove imminent safety hazards. Reestablish proper drainage and water management structures to prevent further loss to the trail infrastructure.

- a) Provide clear and safe passage for crews and stock along the trails.
- b) Clear trails impacted by fire of trees and rocks, repair drainage, and reconstruct tread where needed to access emergency treatment sites. Reduce imminent hazards by felling burnt snags, removing hazardous downfall and rocks, and filling holes.
- c) Replace and install water diversions structures to accommodate runoff and reduce potential for trail washouts prior to the spring runoff and/or summer thunderstorms.

I. Monitoring Narrative:

Noxious Weeds

Monitor the susceptible burned areas and two Spike Camps for one year to prevent the expansion of rush skeletonweed, Scotch thistle, Canada thistle, and spotted knapweed. If additional weeds are found, the Forest will submit Interim Request to treat the weed populations.

Vegetation Recovery

Monitor vegetation to recover in order to facilitate: soil stability, nutrient cycling, wildlife habitat and fire regimes for long-term ecological diversity and stability. Cattle will be herded from the top of Emery and Bisbee Creek resting range from livestock grazing for one to two years.

Trails

Monitor effectiveness of emergency trail treatments at the beginning and end of next field season to determine if the trail treatment measure objectives are met.

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										
NX Weed Control	acres	500	4.45	\$2,225	\$0		\$0		\$0	\$2,225
				\$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				\$2,225	\$0		\$0		\$0	\$2,225
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										
Trail	miles	1500	2.2	\$3,300	\$0		\$0		\$0	\$3,300
				\$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				\$3,300	\$0		\$0		\$0	\$3,300
D. Protection/Safety										
				\$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 Structures				\$0	\$0		\$0		\$0	\$0
E. BAER Evaluation										
BAER Survey	days	1000	3		\$3,000		\$0		\$0	\$3,000
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
Subtotal Evaluation				---	\$3,000		\$0		\$0	\$3,000
F. Monitoring										
Noxious Weeds	days	600	5	\$3,000	\$0		\$0		\$0	\$3,000
Vegetation Recov	days	600	2	\$0	\$0					
Trails	days	600	2	\$1,200	\$0					
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$4,200	\$0		\$0		\$0	\$4,200
G. Totals				\$9,725	\$3,000		\$0		\$0	\$12,725

PART VII - APPROVALS

1. /s/ Suzanne C. Rainville
Forest Supervisor (signature)

10/12/2006
Date

2. _____
Regional Forester (signature)

Date

Cuddy BAER - Burn Severity Map

