USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: 7/10/06

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 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 DESCRIPTION

A. Fire Name: Bear Paw

B. Fire Number: no SAF number

C. State: NM

D. County: Sandoval & Rio Arriba

E. Region: 03

F. Forest: Santa Fe NF

G. District: Cuba & Coyote

H. Fire Incident Job Code: PNCR01 (zero-one)

I. Date Fire Started: June 24, 2006

J. Date Fire Contained: July 7, 2006

K. Suppression Cost: 2.2 million

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 10
2. Fireline seeded (miles): 10
3. Other (identify):

M. Watershed Number: HUC 5 Rio Gallina 1302010206
HUC 5 San Jose/Rio Puerco 1302020401

N. Total Acres Burned: 3,074
NFS Acres(**2,927**) Other Federal ( ) State ( ) Private (162)

O. Vegetation Types: ponderosa pine, pinyon juniper,oak, sagebrush

P. Dominant Soils: entisols & alfisols

Q. Geologic Types: faulted and highly tilted Paleozoic and Mesozoic sedimentary rock, including Pennsylvanian Madera liimestone, Permian Cutler Formation, Triassic Chinle siltstone, Cretaceous Dakota sandstone, Cretaceous Mancos Formation and Quaternary mass wasting.

R. Miles of Stream Channels by Order or Class: 8.6 intermittent

S. Transportation System

Trails : 0 miles Roads: 21.7 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 706 (low) 755 (moderate) 1,353 (high)

B. Water-Repellent Soil (acres): 1,353 moderate repellency

C. Soil Erosion Hazard Rating (acres):
0 (low) 1,857 (moderate) 1,217 (high)

D. Erosion Potential: 663 tons/acre

E. Sediment Potential: 1,315 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. Design Chance of Success, (percent): 60

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): one

E. Design Storm Magnitude, (inches): 1.71

F. Design Flow, (cubic feet / second/ square mile): 520

G. Estimated Reduction in Infiltration, (percent): 30

H. Adjusted Design Flow, (cfs per square mile): 676

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

1) Cemetary for the town of Gallina lies adjacent to Rio Gallina
2) State Highway 96 bridge, at Rio Gallina
3) FR 76, a level III arterial is impounding water behind plugged culverts

Aproximately 44% of the fire burned with high severity, most of which is on steep and very steep slopes (40-120%). Some map units have rock outcrop > 15% (TES no.s 101, 128,139,169). Many miles downstream the Rio Gallina becomes a tributary to the Rio Chama, but immediately below the burn, the Placita sub-drainage is an incised arroyo through a 72-inch culvert in FR 76, a level III road.

Sediment delivery analysis focussed on this Placita watershed. The narrow drainage is steep and has 15-20% of vertical rock face. Soil loss will likely increase from approximately 430 tons/year to approximately 3,315 tons/year. This rate exceeds tolerance and will result in loss of soil productivity. The fire has already received 25-year-size damaging precipitation at least twice. Flood waters laden with ash and household garbage have plugged the culvert and overtopped the road. Three quarters of a mile below the Bear Paw fire perimater, the Gallina river flows past the village of Gallina. The river is about 300 feet away from homes, but about 100 feet away from a cemetary.

B. Emergency Treatment Objectives:

1) Helicopter aerial seed barley on 300 acres of high severity burn in main drainage above village of Gallina,
2) Construct trash racks of welded cattle guards to position above culverts at FR76 above Gallina.
3) communicate with private landowners about concern to breach their stocktanks located below Placita drainage.

Wildlife
No emergency treatment is warranted for wildlife resources, specifically. Treatment recommended for protection of soil would suffice for wildlife concerns, however, snags greater 16" dbh that are not a safety hazard should be retained rather than salvaged.

Range
There is no emergency threat to life or structure relevant to range resources. A wooden corral burned up in Placita drainage, and stock tanks on private land below the above the village of Gallina filled with ash.

Heritage
Post-fire effects to heritage resources located within the burn perimeter of the Bear Paw fire are most likely to occur as the result of erosion or windthrow, causing the downslope movement of lithic and ceramic artifacts in those areas characterized by moderately to highly erodible soils. Twenty-one sites within the fire perimeter have been identified as being potentially at risk from post-fire effects resulting from such circumstances. Hazard trees pose significant risks to those heritage resources that contain structural components. Windthrow of burned-over timber in the vicinity of such sites may cause irreparable damage to architectural features. Additionally, the displacement of root balls, particularly in and around standing room blocks, as well as in midden areas can significantly affect their integrity. .
Areas known to have been subject to high burn severity on highly erodible soils are high potential candidates for such effects. **Seven sites** within the burn area are known to occur in these locations. As an indirect effect of fire, the denuding of the landscape exposes heritage resources that may otherwise be somewhat protected from the public eye, if not totally undetectable. Significant heritage resources that are particularly susceptible to unauthorized collection are those within the burn that are relatively accessible through the local road network. Eleven sites within the Bear Paw fire perimeter meet these criteria.

Geology

A local spelunking club has informed Forest Service personnel of caves and karst features located in the Madera limestone. The closest caves are at high elevation within Gallina Canyon east of the burn perimeter, and it is estimated that runoff will not impact them.

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

Land **50** % Channel ___ % Roads/Trails 50___ % Protection/Safety **50** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	50	90	100
Channel			
Roads/Trails			
Protection/Safety			

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

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	[X] Soils	[X] Geology	[X] Range	[ ]
[ ] Forestry	[**X**] Wildlife	[X] Fire Mgmt.	[X] Engineering	[ ]
[ ] Contracting	[ ] Ecology	[ ] Botany	[X] Archaeology	[ ]
[ ] Fisheries	[ ] Research	[ ] Landscape Arch	[X] 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:

Aerial seed 300 acres @ 15 plants/sq.ft of barley
Treat 7 heritage sites to protect against windthrow and erosion, by sawyering & hand mulching.

Channel Treatments:

Roads and Trail Treatments:

Temporary trashracks above 2 culverts on FR 76

Protection/Safety Treatments:

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.)

Range/Soil & Water

Monitor impact area for road damage, soil stabilization, rehab effectiveness and vegetation re-establishment (5-10 visits per season).

Part VI – Emergency Stabilization Treatments and Source of Funds **Interim #**

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$	units	$	Units	$	$
A. Land Treatments										
aerial seeeding	acre	50	300	$15,000	$0		$0		$0	$15,000
weed detection	mile FL			$0	$0		$0		$0	$0
Heritage site protect	each	500	7	$3,500	$0		$0		$0	$3,500
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$18,500	$0		$0		$0	$18,500
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Trash Racks	ea	3000	2	$6,000	$0		$0		$0	$6,000
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$6,000	$0		$0		$0	$6,000
D. Protection/Safety										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$0	$0		$0		$0	$0
E. BAER Evaluation										
assessment				---	$14,320		$0		$0	$14,320
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$14,320		$0		$0	$14,320
F. Monitoring										
3 people 4 visits	ea	12	220	$2,640	$0		$0		$0	$2,640
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$2,640	$0		$0		$0	$2,640
G. Totals				$27,140	$14,320		**$0**		**$0**	**$41,460**
Previously approved										
Total for this request				**$27,140**						

PART VII - APPROVALS

1. s/ Martine D. Chavez — July 10, 2006
   Forest Supervisor (signature) — Date

2. /s/ Lucia M. Turner (for) — July 12, 2006
   Regional Forester (signature) — Date