

Date of Report:

**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 DESCRIPTION**

A. Fire Name: Ojo PeakB. Fire Number: NM-CIF-132C. State: New MexicoD. County: TorrenceE. Region: SouthwesternF. Forest: CibolaG. District: MountainairH. Fire Incident Job Code: P3D2ECI. Date Fire Started: 11/19/2007J. Date Fire Contained:     K. Suppression Cost: \$753,000 (as of 11/25/2007)

## L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles):  
2. Fireline seeded (miles):       
3. Other (identify):

M. Watershed Number: Canon Barranco-Abo Arroyo (130202030501), Priest Canyon-Abo Arroyo (130202030505), Pipe Canyon (130202030506), Canon Monte Largo (130202030606), Mesteno Draw (130500011001), and Upper Arroyo de Manzano (130500011002)

N. Total Acres Burned: 6,970

NFS Acres(6,604)    Other Federal (0)    State (58)    Private (308)

O. Vegetation Types: PONDEROSA PINE; PINYON – JUNIPER; MIXED CONIFER; OAK; MTN GRASSLAND; ASPEN, DOUGLAS FIR

P. Dominant Soils: Haplustalfs, Eutrudepts, Hapludolls (TEUs 1, 16, 24, 64, 65, 178, 191, 192, 194, 284, 286, 413, 416 and 421)

Q. Geologic Types: Granite intrusion, metamorphic and igneous rocks and limestone, sandstone, siltstones and shales.

R. Miles of Stream Channels by Order or Class:  
1<sup>st</sup> - 9.5 miles, 2<sup>nd</sup> - 8.5 miles, 3<sup>rd</sup> - 3.0 miles, 4<sup>th</sup> - 1.0 miles

S. Transportation System

Trails: 12.5 miles      Roads: 28 miles

### **PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 5730 (low/moderate) 1230 (high)

B. Water-Repellent Soil (acres): High water repellency rating on 615 acres and Medium rating on 615 acres; low rating on 5730 acres

C. Soil Erosion Hazard Rating (acres):  
3758 (low) 1153 (moderate) 2059 (high)

D. Erosion Potential: 6 tons/acre

E. Sediment Potential: 224 cubic yards / square mile

### **PART IV - HYDROLOGIC DESIGN FACTORS**

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

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

C. Equivalent Design Recurrence Interval, (years): 10

D. Design Storm Duration, (hours): 1 and 6

E. Design Storm Magnitude, (inches): 1.38 and 1.86

F. Design Flow, (cubic feet / second/ square mile): 62 and 62

G. Estimated Reduction in Infiltration, (percent): 20

H. Adjusted Design Flow, (cfs per square mile): 700 and 400

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

A. Describe Critical Values/Resources and Threats:

The Ojo Peak fire burned through much of the remaining Mexican Spotted Owl PACs on the Mountainair Ranger District. As it was not the breeding season and there were no known birds in the area the loss may not be as great. Similarly though a key Northern Goshawk PFA (post-fledging area) was lost in the fire along with

much of the Goshawk's prey species habitat. To help maintain this species in the area something needs to be done to address the species needs.

Much of the area within the fire that burned at high severity is in the steeper headwaters of Ox Canyon. This stream drains onto private land where there are primary residences adjacent to the stream channel at risk of potential elevated post-fire flows. A rainstorm of approximately 1 inch in 12 hours that took place about a week after the fire moved large boulders in Ox Canyon in the headwaters, flowed over FR422 and Game Road in several places and deposited ash and debris far off Forest onto private land and into stock ponds. The post-fire storm also filled up and plugged most of the cross-drains along FR 422 along with partially blocking some of the culverts at stream crossings. The ash and debris were not of great concern as they are typical after fires, but the amount and timing of runoff was much greater than would have been expected before the fire for this system. It highlighted the need to address potential post-fire risks to roads, private property and human life and safety.

There is a private water development on the National Forest where water is diverted from Ox Canyon into an acequia. This acequia diverts the water south to a stock pond on private land just east of the National Forest land. The diversion is at risk of filling with ash and sediment and potentially carrying this along with elevated post-fire flows to this stock pond on private land.

The burn area is part of or near much of the highest recreation use areas on the District. There is a need to consider and address several different types of recreation use that can be expected to start occurring this fall and next summer after the fire. Safety and user education will be a very important issues that needs to be addressed. Along with safety of the users come protection of cultural and natural resources from both predicted post-fire effects and users. Many of the known cultural resources within the burn area have been significantly damaged by the fire. Some are at risk of erosion of soil protecting the site and others are at greatly increased risk of collapsing.

Noxious and invasive plant species were not recorded with the burn area, but they were know to occur on adjacent NFS and private land so there is the potential for these species to spread. As the burn area provides an area with minimal competition the risk of introduction of these species is a concern.

#### B. Emergency Treatment Objectives:

Limit noxious and invasive species encroachment into the burn area – There are populations adjacent to the burn on NFS (Musk Thistle) and private (Russian knapweed). The objective is to find/detect any new populations within the burn area. If noxious or invasive plant species are found actions would be determined on a case by case basis.

Limit loss of soil productivity – much of the headwaters of Ox Canyon burned at high severity and is at risk of increased post-fire erosion rates. The objective is to limit erosion and in doing so limit loss of soil productivity.

Limit damage to roads and drainage structures – There are several NFS and private roads within or immediately downstream of the burn area. The watershed above some of these roads was burned at high severity making the potential for elevated post-fire runoff and stream flow even greater. The objective of treatments are to limit the damage to roads by physically protecting them or providing for avenues for flows to go.

Limit damage to property – private residences, strcutures and stock tanks are all downstream of the burn area and at greater risk from runoff after the fire. The objective of seeding, road work and other treatments in the headwaters is to limit the peak flow from storm events and in doing so attempt to limit damage to private property.

Provide for public safety – limiting access into the burn area and into areas at greater risk of elevated post-fire runoff along with warning users of these hazards is an attempt to ensure their safety. The objective is to at the very least make all users aware of thes hazards posed by a recent burn. Similarly downstream landowners and residents are contacted to make them aware of the potential dangers now posed by rain and runoff events.

Limit damage to and further protect the integrity of heritage resources – the burn area is rich in historic heritage sites some of which were damaged by the fire. In some cases the objective is to limit erosion of soil and protect the integrity of as of yet un analyzed heritage resources in areas where the above ground structures/sites were damaged. In one case a ahistoric structure was damaged by the fire to the point where it is in imminent danger of further damage by winter weather. The objective here is the conduct emergency stabilization of the structure to avoid additionl damage over the winter so it can be further analyzed next summer and more permanently stabilized.

Limit effect of fire on loss of goshawk habitat – much of the Northern Goshawk habitat was lost in the fire. The objective or co-objective of seeding is to provide habitat for the potential prey species of the goshawk. This is an attempt to limit the negative effects of the fire on the Regional Forester Sensitive species.

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

Land 80 % Channel     % Roads/Trails 80 % Protection/Safety 70 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	75	90	90
Channel			
Roads/Trails	80	85	85
Protection/Safety	75	85	90

E. Cost of No-Action (Including Loss): 2,260,000

F. Cost of Selected Alternative (Including Loss): 1,120,000

G. Skills Represented on Burned-Area Survey Team:

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

Land Treatments:

- 1) Seeding – hand seed approximately 310 acres of high severity burn with a broad mix of species. Seed mixes are previous mixtures purchased with habitat stamp funds intended to be broadcast on the Sedgwick Fire in the Zuni Mountains. The Mt Taylor District and Cibola NF Wildlife program are

providing the seed free of cost to the BAER effort to avoid continued storage fees and avoid potential future concerns about seed viability (seed is currently 2-3 years old).

Seed Mix 1	Seed Mix 2	Seed Mix 3
19.65% Cereal Rye	Western wheat 10.39%	Small burnet 11.73
11.39 Small burnet	Prairie junegrass .49	Western wheatgrass 10.24
8.11 Smooth Bromegrass	Sideoats grama 3.01	galleta viva 10.12
7.53 Western wheatgrass	Arizona fescue .93	Smooth brome 9.73
6.69 Fourwing saltbush	Indianrice, Paloma 5.16	Indian ricegrass 5.65
5.71 Galleta grass	Bottlebrush squirreltail .29	Blue grama lovington 4.91
5.06 indian ricegrass	blue grama 6.67	slender wheatgrass 4.38
4.22 slender wheatgrass	slender wheat 5.65	alfalfa ranger 3.68
3.90 desert globemallow	Galletta 11.18	fourwing saltbush 3.60
3.85 annual sunflower	needle and threat .45	orchardgrass paiute 2.57
3.81 palmer penstemon	sand dropseed .84	white dutch clover 2.50
3.05 alfalfa	smooth brome 10.08	purple prairie clover 2.42
2.24 orchardgrass	orchardgrass 2.63	annual sunflower 2.38
1.68 true mountain mahogany	annual sunflower 1.68	sideoats grama 2.14
1.16 winterfat	annual sunflower .66	winterfat 2.05
1.06 wax currant	western yarrow .56	arizona fescue .89
.81 needle and thread grass	Purple prairie clover 3.68	desert globemallow .89
.42 woods rose	Lewis flax .43	palmer penstemon .88
.41 western yarrow	Desert globemallow 1.00	sanddropseed .88
.31 mutton grass	White clover 2.49	needle and thread .48
.25 bottlebrush squirreltail	alfalfa 3.47	lewis flax .47
	small burnett 13.80	white yarrow .41
	palmer penstemon 6.16	prairie junegrass .41
	fourwing saltbush 4.83	bottlebrush squirreltail .31
	winterfat 3.48	

Seeding will be done by hand using whirlygig hand seeders or similar equipment. Seeding rate is prescribed at 16 pounds per acre for the above mixes. Seeding will be applied as soon as possible with the intent of getting the seed on prior to snowpack setting in on the higher elevations. This would allow the seed to be protected by the snow until spring snowmelt when the seed will utilize the moisture to germinate and grow with improved survivability. The intent of the seeding is two-fold; 1) to provide for low structure habitat for Northern Goshawk prey species and 2) to provide for erosion control and stabilize the soil prior to monsoonal thunderstorms in the summer. Given the timing of the fire and potential seeding the seed should be effective and make the extra cost of mulching unjustified. This treatment is expected to limit negative effects of the fire on Northern Goshawk and their prey along with providing for emergency erosion control.

- 2) Weed detection – survey roads within the burn area, dozer lines associated with suppression of the fire, and areas where equipment is utilized for post-fire runoff control and maintenance. Survey would focus on Russian knapweed and musk thistle but the surveyor would be free to record the presence of all non-native and invasive species of concern to the Forest Service within the survey areas outlined above. This treatment is expected to catch any noxious and invasive plant species coming into the burn area and protect native plant communities and wildlife habitat.
- 3) Rest pastures in burned area – rest the Bean Fields pasture of the Barranco allotment to allow for vegetation to recover with somewhat reduced herbivory pressure. This is prescribed for a period of 2 years after the burn, but grazing may be able to resume in fall 2009 given a readiness inspection to ensure sufficient forage and adequate plant vigor. This would allow for two complete growing seasons to occur. This “treatment” is expected to protect native forage, limit soil disturbance and limit invasion of noxious and invasive species.
- 4) Cross-country motorized use closure – currently most areas on the Cibola NF are open to cross-country motorized use unless posted closed. The District is scheduled for Travel Management

collaboration and NEPA in 2008 with implementation in 2009. To limit the damage to cultural and natural resources now more accessible after the fire the District Ranger will sign a closure order for the burn area. To aid with education/enforcement of the closure signs will be posted at key areas upon entering the burn area and within the burn area (8 total). Likewise compliance monitoring will be established to determine if additional measures are needed to enforce the closure. This treatment is expected to protect cultural and natural resources within the burn area already at elevated risk of degradation.

#### Channel Treatments:

#### Roads and Trail Treatments:

- 1) Storm patrol – During the first year a “patrol” will be utilized to drive roads during or immediately after significant storm events to check for culvert plugging or other road drainage problems. Hand maintenance will be performed if possible. Backhoe or similar equipment will be ordered if needed. Road safety concerns will also be noted and recommendations on emergency road closures will be made if necessary. This treatment is expected to provide for human safety and protect road infrastructure.
- 2) High water overflow dips for culverts – these would be low areas ‘carved’ out of the road bed to direct flow over the road should a culvert be plugged or overwhelmed. This would be implemented at 8 sites along FR 422 where significant drainages intersect the road. This treatment is expected to at least save the road and avoid having the fill and culvert wash downstream should the culvert become plugged or overwhelmed.
- 3) Cleaning existing ditches and relief culverts – this would be done to allow for predicted increased in flow to carry in the ditches and through existing relief culverts. This treatment would help maintain the integrity of the road and maintain its ability to handle the next rainfall event. This would be done on a total of 3.2 miles of road.
- 4) Install rolling dips for drainage – at 2 locations install a series of rolling grade dips to remove water from the roadway and attempt to keep water from concentrating. This is intended to maintain the road surface and limit fill and downslope soil erosion during expected increased post-fire overland flow.
- 5) Install replacement signs – replace warning/safety signs along FR 422 to maintain user safety and meet regulations for maintenance level 3 roads. This treatment is intended to provide for user safety when the road can be opened in the spring.

#### Protection/Safety Treatments:

- 1) Gate – there is a relatively good system of gates in and around the burn area to help with access control to limit the potential danger to users during and after storm flows and wind events. Currently though the configuration allows access from the south up to and past a road crossing on FR422 with a tributary to Priest Canyon (at the Cottonwood Trailhead). The watershed for this tributary burned at high severity and the potential for elevated post-fire flows is high. A sign would be installed on this new gate and on 4 existing gates to inform users of the need to have the area closed during times of increased risk of after storm damage. This treatment is expected to provide for protection of Forest users at times of greater risk of following damaging flow this additional gate could be closed to control access.
- 2) Flood warning and hazard tree warning signs – install 6 new road signs to warn Forest users about the potential hazards of driving through the burn area. These signs will be large enough with large enough lettering to be read at regular driving speeds in the area. They will be installed as soon as possible and at least before spring runoff and the potential for having FR422 open for use in summer 2008. This treatment is expected to provide for human safety through public education

- 3) Trail closure and hazard warning signs – install signs at the trailheads of 5 trails within or that go into the burn area to warn users of potential hazards within the burn area. Two of the signs will be closure signs as the risks on these trails are too high to allow continued use for the time being.
- 4) Seeding heritage resource site – seed 3 sites where all of the canopy and litter layer was consumed and are at risk from increased erosion rates. The same mix and rate as prescribed for the large scale seeding will be used on these sites. This treatment is expected to limit erosion damage to the heritage resource site and the context of the resources within the soil. Utilize a mix that only includes grasses.

<u>Seed Mix:</u>	<u>#/ac:</u>
Little Bluestem	2 #/ac
Junegrass	2 #/ac
Sideoats grama	3 #/ac
Western wheatgrass, native	3 #/ac

- 5) Stabilize historic structure damaged in the fire – the fire burned wooden window jams, the lintal and wood beams in the roof of the structure. The lintal is hanging on by a few wood fibers and has dropped several inches in a few days since burning. The wall above the window is at risk of caving in. Similarly the wall itself is eroding away as is its rock and mud mortar wall. The stabilization treatment will jam up the window and keep it from falling further and large tarps will be used to cover the exposed wall to avoid additional erosion. This stabilization treatment will keep the structure intact until more long-term stabilization can be implemented in summer 2008.

#### **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.)

Implementation monitoring will be done to ensure that all treatments are implemented as planned and are in good working condition. For the vegetation implementation monitoring (seeding) plots will be used. Warning sign implementation monitoring will be done by the engineer installing the signs. All implementation monitoring will occur immediately after installation/implementation of a treatment.

Vegetation effectiveness monitoring is lined out in a separate spec sheet and utilizes fixed plots in several areas throughout the area to be seeded. The plan incorporates currently utilized vegetation monitoring methods. Cross-country closures for motorized vehicles will be monitored for effectiveness as outlined in its own spec sheet. If the closure and signs are not working adequately additional resources may be requested. Effectiveness monitoring will occur during the growing season for at least the first year and up to 3 years with annual approval.

Storm patrol is in essence monitoring of the road–stream crossing armoring and culvert cleaning treatment to ensure that the treatment stays functional. This will occur after significant rain events over the burn area.

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 \$
<b>A. Land Treatments</b>										
Seeding	ac	310	30	\$9,300	\$0		\$0		\$0	\$9,300
weed detection	ea	1220	1	\$1,220	\$0		\$0		\$0	\$1,220
x-country closure signs	ea	270	10	\$2,700	\$0		\$0		\$0	\$2,700
				\$0	\$0					
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<b>Subtotal Land Treatments</b>				\$13,220	\$0		\$0		\$0	\$13,220
<b>B. Channel Treatments</b>										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<b>Subtotal Channel Treat.</b>				\$0	\$0		\$0		\$0	\$0
<b>C. Road and Trails</b>										
storm patrol	ea	6000	1	\$6,000	\$0		\$0		\$0	\$6,000
hi water overflow dips	ea	625	8	\$5,000	\$0		\$0		\$0	\$5,000
clean ditches/culverts	miles	1000	13	\$13,000	\$0		\$0		\$0	\$13,000
ML 3 road safety signs	ea	120	10	\$1,200						
rolling dips	ea	400	7	\$2,800						
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<b>Subtotal Road &amp; Trails</b>				\$28,000	\$0		\$0		\$0	\$24,000
<b>D. Protection/Safety</b>										
flood/tree hazard signs	ea	320	10	\$3,200	\$0		\$0		\$0	\$3,200
trail closure signs	ea	110	18	\$1,980	\$0		\$0		\$0	\$1,980
heritage seeding	ea	800	3	\$2,400	\$0					
hist. structure stabilizatio	ea	4000	1	\$4,000	\$0					
gate	ea	6000	1	\$6,000	\$0		\$0		\$0	\$6,000
<b>Subtotal Structures</b>				\$17,580	\$0		\$0		\$0	\$11,180
<b>E. BAER Evaluation</b>										
				---	\$28,000		\$0		\$0	\$28,000
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<b>Subtotal Evaluation</b>				---	\$28,000		\$0		\$0	\$28,000
<b>F. Monitoring</b>										
cross-country closure	ea	1200	1	\$1,200	\$0		\$0		\$0	\$1,200
seeding effectiveness	ea	3000	1	\$3,000	\$0		\$0		\$0	\$3,000
				\$0	\$0					
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<b>Subtotal Monitoring</b>				\$4,200	\$0		\$0		\$0	\$4,200
<b>G. Totals</b>										
				\$63,000	\$28,000		\$0		\$0	\$80,600
Previously approved										
<b>Total for this request</b>				<b>\$63,000</b>						

**PART VII - APPROVALS**

1. /s/ Nancy Rose  
Forest Supervisor (signature)

12/6/07  
Date

2. /s/ Gilbert Zepeda (for)  
Regional Forester (signature)

12/10/07  
Date



