USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: 02-03-03

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[ ] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[ ] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)

[ ] 2. Interim Report
[ ] Updating the initial funding request based on more accurate site data or design analysis
[ ] Status of accomplishments to date

[X] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Roybal

B. Fire Number: NM SNF-101 (P-38119)

C. State: NM

D. County: San Miguel

E. Region: 03

F. Forest: Santa Fe

G. District: Pecos/Las Vegas

H. Date Fire Started: 6-13-2002

I. Date Fire Contained: 6-22-2002

J. Suppression Cost: $2.6 million

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): > 5
2. Fireline seeded (miles): >3
3. Other (identify):

L. Watershed Number: 1306000102/101

M. Total Acres Burned: 986
NFS Acres(852) Other Federal ( ) State ( ) Private (134)

N. Vegetation Types: Ponderosa pine 33%;mixed conifer 66%;grass 1%

O. Dominant Soils: Dystrochrepts, Ustorthents, Eutroboralfs, Glossoboralfs- extremely gravelly (cobbly/stony) sandy loam and loam

P. Geologic Types: granite and gneiss

Q. Miles of Stream Channels by Order or Class: 3.0 miles ephemeral; 0 miles perennial

R. Transportation System

Trails: 0 miles Roads: 6.7 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 401 (low) 377 (moderate) 208 (high)

B. Water-Repellent Soil (acres): < 100

C. Soil Erosion Hazard Rating (acres):
0 (low) 493 (moderate) 493 (high)

D. Erosion Potential: .82 tons/acre

E. Sediment Potential: 71.6 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5-1

B. Design Chance of Success, (percent): 65%

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

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1.7

F. Design Flow, (cubic feet / second/ square mile): 11.4

G. Estimated Reduction in Infiltration, (percent): 25

H. Adjusted Design Flow, (cfs per square mile): 120

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Roybal Fire burned 183 acres in the Pecos River Headwaters watershed, and 712 acres in Pecos River-Cow Creek watershed. There is no foreseeable threat to life attributable to the fire. Fish populations in Cow Creek had been effectively eradicated as a result of the Viveash Fire in 2000, and proposed reintroduction of native Rio Grande Cutthroat Trout was awaiting a return to acceptable water chemistry. Roybal Fire therefore had little effect on fisheries, except to postpone the potential reintroduction date. There are no federally listed species known to inhabit the area that was burned.

Public and private property is at risk from debris-and-ash flows damaging roads, pastures, and stream geomorphology. One known archaeological site is immediately adjacent to the burn. An early series of

storms over the burn has already caused significant ashflow and soil movement from the burned area, across the county road and private land, into the creek. Further loss of soil and destabilization of the upper watershed is now the emergency that needs to be addressed.

The ranching community along Cow Creek had already sustained a heavy impact (siltation and fishkill in the creek, loss of water quality, road damage) following Viveash. Proposed rehabilitation treatments are focused on making a visible effort to minimize further insult to these families.

B. Emergency Treatment Objectives:

Treatments are designed to decrease erosion and sedimentation associated with the fire by providing cover (mulch and/or live cover crop) as quickly as possible. The chosen seed mixture has been shown to germinate within a few days in comparable environments, given current soil moisture and temperature conditions. Areas were selected for treatment based on burn severity and contributing area of the watershed, accessibility for rehab crews and materials, and downslope values at risk.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:

Land **50** % Channel **50** % Roads ___ % Other ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	90
Channel	60	70	80
Roads	90	90	90
Other			

E. Cost of No-Action (Including Loss): **$105,000**

F. Cost of Selected Alternative (Including Loss): **$70,000**

G. Skills Represented on Burned-Area Survey Team:

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

Team members:
Tom Malecek (District Ranger)
Danielle Diehl (hydro trainee)
Alison Dean (Soil Science)
Steve McWilliams (Soil Science)
Anna Jaramillo (Hydrology)
Brent Abel (Archaeology)
Debbie Serabia (Wildlife)
Michael Lujan (Resource specialist)

With contributions from:
Leroy Jons (NRCS) Henry Gallegos (Engineering)

Team Leader:Alison Dean

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H. **Treatment Narrative:**

Land Treatments: Hand-seeding of 300 acres (the high severity along drainages and some of the moderate above private land) on slopes less than 30%,
using a PLS mix of:

30% mountain brome
30% slender wheat
30% annual rye
10% cereal barley

(Seed at $.77/lb * 15 lbs/acre * 300 acres = $ 3,465)

Straw mulch after hand seeding on 40 acres (area above private land) using convict crew.
(Straw at $4/bale * 35 bales/acre * 40 acres = $5,600)
(Convict crew at $2,900/day * 4 days = $11,600)

Place log erosion barriers along main drainages on 20 acres along main drainage on slopes between 30-50 percent where the area is too steep for straw mulching)
(Convict crew at $2,900/day * 5 days = $14,500)
Fire crews may be used if available.

Channel Treatments: Directional log-jam strainers in upper watersheds in the two main drainages with high severity burn.
($200/ea *20 +$4000—using district or detailed falling crew for one day)

Roads Treatments: Increase scheduled maintenance of drainage crossings on Forest Road 92 at perimeter of burned area. Debris removal or regrading done as needed. This treatment will be accomplished by Forest road crew using road maintenance funds.

Structures:

I. **Monitoring Narrative:**

Follow-up monitoring for treatment effectiveness and noxious weeds:
One GS-5 tech at $95/day * 2 days = $190

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

			NFS Lands				Other Lands			All
		Unit	# of	WFSU	Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT $	$	units	$	Units	$	$
A. Land Treatments										
Seeding (hand)	acres	35	300	$10,500			$0		$0	$10,500
Mulch	acres	125	40	$5,000			$0		$0	$5,000
LEB	acres	20	20	$400			$0		$0	$400
				$0			$0		$0	$0
Subtotal Land Treatments				$15,900			$0		$0	$15,900
B. Channel Treatments										
Log-jam strainers	miles	2000	2	$4,000			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Channel Treat.				$4,000			$0		$0	$0
C. Road and Trails										
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Road & Trails				$0			$0		$0	$0
D. Structures										
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
	p-days	300	12				$0		$0	$0
assessment team				$21,778			$0		$0	$21,778
F. Monitoring	days	95	2	$190			$0		$0	$190
G. Totals				**$41,868**			**$0**		**$0**	**$37,868**

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date