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

Date of Report:7/18/2005

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

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

B. Type of Action

[X] 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

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Sedgwick

B. Fire Number: P3A4QQ

C. State: New Mexico

D. County: Cibola

E. Region: 3

F. Forest: Cibola

G. District: Mt. Taylor

H. Date Fire Started:6/12/2004

I. Date Fire Contained:6/22/2004

J. Suppression Cost:$3,500,000

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline water barred (miles):
2. Fireline seeded (miles):
3. Other (identify):

L. Watershed Number: 1302020702-Bluewater Lake

M. Total Acres Burned:
NFS Acres(**8,974**) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: Ponderosa Pine- Gambel Oak

O. Dominant Soils: Typic Eutroboralfs/ Typic Dystrochrepts

P. Geologic Types: Granites

Q. Miles of Stream Channels by Order or Class: 1st Order =23 Miles
2nd Order=9 Miles

R. Transportation System

Trails: 0 miles Roads:39.7 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 4,953 (low) 3,570 (moderate) 450 (high)

B. Water-Repellent Soil (acres): 1,000

C. Soil Erosion Hazard Rating (acres):
6,210 (low) 1,814 (moderate) 950 (high)

D. Erosion Potential: 12.4 tons/acre

E. Sediment Potential: 1,682 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 7

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

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

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.83

F. Design Flow, (cubic feet / second/ square mile): 88

G. Estimated Reduction in Infiltration, (percent): 15

H. Adjusted Design Flow, (cfs per square mile): 143

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency: The Sedgwick Fire burned 72 percent of the vegetation in the Diener Canyon Sub-watershed. Approximately 28 percent of the burned area was severely burned. That is, trees are dead, the crowns were completely burned so there are no needles to fall, and the litter layer was completely consumed. Hydrophobic conditions also developed in the soils on much of the severely burned area. Diener Canyon is a tributary to Bluewater Creek. Bluewater Creek is one of the few perennial, interrupted streams in the Zuni mountains, and flows into Bluewater Lake. The Lake provides storage for the Bluewater-Toltic Irrigation Company and recreation opportunities for Bluewater Lake State Park. Diener Canyon is also a popular location for dispersed recreation. People camp and picnic along the stream and in the riparian area.

Increased peak flows resulting from changes in hydrologic response pose a threat to recreation users of the

Canyon.

Increased sediment yields to Bluewater Creek will also have a negative impact on water quality and a cold water fishery.

Other areas burned by the Sedgwick fire are in the Pole Canyon sub-watershed. Approximately 38 percent of this sub-watershed were burned severely or moderately. Increased peak flows could damage two small stock ponds in the headwaters. If these stock ponds breach the breach flow will scour the Canyon for several miles down stream.

Other severely burned acres are on the lower elevation ponderosa pine and pinyon-juniper transition vegetation zone. These areas are found in Prop Canyon and other un-named water courses that flow out into the grasslands. The slopes in this part of the forest are gentler and the channels are intermittent or ephemeral. There are few off site values at risk. However, onsite values include site productivity and vegetation composition. The area has some invasive weeds such as musk thistle that will rapidly spread to the burned area. The severely burned areas have little native seed source available to provide competition for the weeds.

B. Emergency Treatment Objectives: Recommended emergency treatments are designed to reduce erosion and storm runoff in Diener Canyon. Protect resources such as roads from debris flows, and protect the public from flood flows in popular undeveloped recreation areas.

Treatments are also intended to reduce wind erosion in the pinyon-juniper, and provide competition for invasive weeds.

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

Land **70** % Channel **70** % Roads **70** % Other ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	95
Channel	90	90	90
Roads	90	90	90
Other			

E. Cost of No-Action (Including Loss): **$88,000**

F. Cost of Selected Alternative (Including Loss): $55,100

G. Skills Represented on Burned-Area Survey Team:

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

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H. **Treatment Narrative:**

Land Treatments:

Severely burned areas in Diener Canyon and Pole Canyon will be seeded by air with the Southwestern Region seed mix at a rate of 7.5 to 10 pounds per acre. This mix consists of cereal barley (30%), slender wheat grass (30%), mountain brome (30%), and annual rye (10%). This treatment is intended to restore vegetative ground cover to these sites as quickly as possible, minimize surface erosion and provide surface stability to the affected cultural resource sites.

Severely burned areas in the pinyon-juniper stands of Prop Canyon and other un-named canyons will be aerial seeded with a similar mix at a rate of 5 to 7.5 pounds per acre. The intend is to provide quick ground cover for soil protection, weed competition, and erosion protection for cultural resource sites.

Channel Treatments:

Temporarily remove the dams at the two small stock ponds on Pole Canyon. Removal of the dams will prevent breaching under storm conditions resulting in channel scour down stream.

Roads and Trail Treatments:

Road treatments include placing a trash rack up stream of the FSR 178 culvert on Diener Canyon to reduce the wash of debris into the culvert, and storm patrols for the next year to clear debris from smaller culverts.

Gates will also be placed at both ends of FSR 180i to restrict public access to the severely burned areas and some of the undeveloped recreation sites. Access to the riparian along Diener Canyon will be permanently blocked with rock barriers. The purpose of these closures is to protect the public from unexpected flood flows.

The entire fire area will be closed to motorized vehicles for three to four years to facilitate recovery of the watersheds.

Structures:

Warning signs will be placed along Diener Canyon to warn the public about increased flood risks.

H. **Monitoring Narrative:**

Treatment effectiveness monitoring will include vegetation transects in the seeded areas to determine seed germination success. A minimum of two 100 meter transects will be located in each treated watershed and one untreated watersheds. Vegetation will be recorded at each meter along the transect. Transects will be measured one month after planting and eleven months after planting. The presence of weeds will be noted as the transects are measured.

Road closure areas will be monitored during motor patrols to check culverts this summer and next spring.

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

			NFS Lands				Other Lands				All
Sedgwick Fire BAER		**Unit**	**# of**	**WFSU**	**Other**		**# of**	**Fed**	**# of**	**Non Fed**	**Total**
Line Items	**Units**	**Cost**	**Units**	**SULT $**	**$**		**units**	**$**	**Units**	**$**	**$**
A. Land Treatments											
Archeology	sites	$1,560	6	$9,360				$0		$0	$9,360
Seeding	acres	$17.76	1650	$29,304				$0			$29,304
				$0				$0		$0	$0
				$0				$0		$0	$0
Subtotal Land Treatments				$38,664				$0		$0	$38,664
B. Channel Treatments											
Remove stockpond	ea			$0				$0		$0	$0
not done				$0				$0		$0	$0
				$0				$0		$0	$0
				$0				$0		$0	$0
Subtotal Channel Treat.				$0				$0		$0	$0
C. Road and Trails											
Rds 180,178 & 504:				$172,734							
Road Prism	mi	6.1		$0				$0		$0	$172,734
Rolling Dips	ea	29		$0				$0		$0	$0
Outlet Ditches	lf	835		$0				$0		$0	$0
Warning Signs	ea	12		$0				$0		$0	$0
Aggregate	tons	150		$0				$0		$0	
Pipe Removal	ea	17		$0				$0		$0	
Pipe Install	ea	43		$0				$0		$0	
Subtotal Road & Trails				$172,734				$0		$0	$172,734
D. Structures											
				$0				######		#######	#VALUE!
				$0				######		#######	#VALUE!
				#NAME?				$0		$0	#NAME?
				$0				$0		$0	$0
Subtotal Structures				#NAME?				######		#######	#VALUE!
E. BAER Evaluation											
				$15,607				$0		$0	$15,607
				$2,588				$0		$0	$2,588
G. Monitoring Cost				$10,450				$0		$0	$10,450
H. Totals				**$240,043**				######		#######	**$240,043**

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PART VII - APPROVALS

1. /s/ Nancy Rose — 11/08/05
   Forest Supervisor (signature) — Date

2. _____ _____
   Regional Forester (signature) — Date