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

Date of Report: 03-25-03

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[x] 1. Funding request for estimated WFSU-SULT funds
[ ] 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: Olerud Fire

B. Fire Number: P10301

C. State: ND

D. County: Ransom and Richland

E. Region: 1

F. Forest: Dakota Prairie Grasslands

G. District: Sheyenne

H. Date Fire Started: 3-24-03

I. Date Fire Contained: 3-25-03

J. Suppression Cost:

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

L. Watershed Number:

M. Total Acres Burned: 1100
NFS Acres(470) Other Federal ( ) State ( ) Private (630)

N. Vegetation Types: Vegetation types include big bluestem-switchgrass prairie, prairie sandreed-blue grama sandhill prairie, wooly sedge-northern reedgrass sedge meadow, and cottonwood-willow woodlands.

O. Dominant Soils: Soils are primarily sands, loamy fine sands and loams.

P. Geologic Types: Located on a sandy glacial lake delta.

Q. Miles of Stream Channels by Order or Class:

R. Transportation System

Trails: 0 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1100 (low) ___ (moderate) ___ (high)

B. Water-Repellent Soil (acres): 0

C. Soil Erosion Hazard Rating (acres):
220 (low) 440 (moderate) 440 (high)

D. Erosion Potential: 1 tons/acre

E. Sediment Potential: negligible cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

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

D. Design Storm Duration, (hours): 4

E. Design Storm Magnitude, (inches): 5

F. Design Flow, (cubic feet / second/ square mile): 18

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

H. Adjusted Design Flow, (cfs per square mile): 27

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The wildfire burned primarily through grassland vegetation on sandy, moderately to highly erodible soils. Low sand dunes (approximately 20% of area) within the burn perimeter had light vegetation prior to the burn, and these areas have a moderate proportion of bare soil due to the burn. The rest of the burn occurred in level to gently rolling hummock and swale topography. These areas had heavy graminoid-dominated vegetation, mesic soils and at most locations exibited a high proportion of unburned litter and duff remaining on the soil surface. The fire burned numerous fence posts and may have damaged property boundary and corner markers.

The most significant impacts of the burn were the likely spread of noxious weeds and sensitive and candidate butterfly species and their habitat. The site currently contains infestations of leafy spurge, a noxious weed. The burn area also contained known and potential habitat for 4 sensitive butterfly species: regal fritillary, Dakota skipper, Arogos skipper, and Poweshiek skipper. The Dakota skipper is also a candidate species for federal listing as threatened. These prairie specialist butterflies are negatively impacted by wildfire. Wildfire results in direct mortality to Individual larvae at this time of year and the forb nectar sources these species rely on are reduced or eliminated due to the timing of the burn.

Areas within the burn contain habitat for western prairie fringed orchid, a species listed as threatened. This plant species generally responds favorably to fall and spring burns and no negative impacts are expected from this wildfire.

Threats to water quality
Threats to water quality from this burn are low. Because of the low relief of the area, relatively high infiltration rates of these coarse soils, and the capacity of the majority of the area to revegetate, there is low potential for increased runoff into adjacent streams.

Erosion and Site Productivity
Localized soil erosion due to water and wind actions is a concern for the sandy, highly erodible soils making up the dunes and hummocks of this area. This erosion may have localized effects on site productivity but will not significantly impact overall site productivity. Due to the low to moderate intensity of the burn, vegetation on the majority of the burn will revegetate on the area within 1 year. The site currently contains infestations of leafy spurge, a noxious weed. Leafy spurge response to fire will likely result in a flush of new growth and spread, especially in unvegetated sites. The Grassland has program funding to treat leafy spurge this fiscal year and does not require additional funding. However, seeding selected areas of bare soils is desirable to reduce the likelyhood of weed expansion. This treatment will also have positive effects on the butterfly populations.

B. Emergency Treatment Objectives:
Objectives for treatment are to mitigate the negative impacts by reducing the spread of noxious weeds and protecting sensitive and candidate butterfly populations and their habitat. Seeding of native forb species will increase soil productivity, reduce the likelyhood the noxious weeds will spread and provide necessary nector food source for butterflies. Butterflies will be attracted to forbs and will repopulate the burned area from surrounding populations.

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

Land **80** % Channel ___ % Roads ___ % Other ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	75	75	75
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss): $17000

F. Cost of Selected Alternative (Including Loss): $9605

G. Skills Represented on Burned-Area Survey Team:

[ ] Hydrology	[ ] Soils	[ ] Geology	[x] Range	[ ]
[ ] Forestry	[x] Wildlife	[**x**] Fire Mgmt.	[x] Engineering	[ ]
[ ] Contracting	[x] Ecology	[x] Botany	[ ] Archaeology	[ ]
[ ] Fisheries	[ ] Research	[ ] Landscape Arch	[ ] 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: Areas with bare soil will be seeded to reduce the likelyhood of noxious weed expansion and enhance habitat for sensitive and candidate butterflys. Keynative forb species will be selected for this seeding. Seed will be broadcast this spring on bare soil areas and raked in. Approximately 15 acres will be seeded. The area will be fenced to exclude cattle which will improve germination and seedling survival. The species include native forbs which are important butterfly food sources: rough blazing star, dotted blazing star, purple coneflower, yellow coneflower, black-eyed Susan, purple prairie clover, and white prairie clover. Seed will be applied at approximately 2 lbs/acre.

Channel Treatments: No treatment

Roads and Trail Treatments: No treatment

Structures: No treatment

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.)

Noxious Weeds
Area will be monitored to determine density and spread of leafy spurge to the fire to determine appropriate timing and type of treatment. This will be done by an ocular estimate of leafy spurge density in spring and summer 2003.

Butterfly Habitat Mitigation
Seeded area will be monitored to assess success of broadcast on bare soil areas within the fire. The presence or absence of seeded species will be documented during late summer of 2003 and 2004.

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	acre	367	15	$5,505	$0		$0		$0	$5,505
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$5,505	$0		$0		$0	$5,505
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										
				$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 Road & Trails				$0	$0		$0		$0	$0
D. Structures										
Fencing	0.25	4,000	0.25	$1,000	$0		$0		$0	$1,000
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$1,000	$0		$0		$0	$1,000
E. BAER Evaluation										
salaries	evaluati	1500	1	$1,500	$0		$0		$0	$1,500
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$1,500	$0		$0		$0	$1,500
F. Monitoring										
	report	900	1	$900	$0		$0		$0	$900
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$900	$0		$0		$0	$900
G. Totals				**$8,905**	**$0**		**$0**		**$0**	**$8,905**

PART VII - APPROVALS

1. /s/David Pieper — 4/3/03

Forest Supervisor (signature) — Date

2. _____ _____

Regional Forester (signature) Date