



Reply to: 2520/6520

Date: JUL 21 1989

Subject: Emergency Burn Rehabilitation Request,
Fort Robinson Fire

To: Forest Supervisor, Nebraska National Forest

Your funding request (FS 2500-8) for the Fort Robinson Fire, with a total maximum cost of \$45,250, is approved and enclosed. The work includes seeding 550 acres of critical slopes, placing water diversions on four miles of trails and five miles of non-system or intermittent-service roads for watershed protection, and installing 500 feet of slit fencing along critical stream reaches.

Use the code NFFF - FW22 when spending these funds. Expenditures are not to exceed the amount of authorization. Please provide a final accomplishment report to this office, using the 2500-8, within 30 days of project completion.

You should test your actions against criteria in FSM 2523 and FSH 2509.15 to be sure that all expenditures fully meet the intent of the authorities for use of these emergency funds.

Gary E. Cargill
GARY E. CARGILL
Regional Forester

Enclosure

cc: MSA

NEBRASKA NATIONAL FOREST
Info Action

JUL 25 1989

_____	Supervisor	_____
_____	Rec. Lnd. Fire	_____
_____	Rec. Wtr. Wildf	_____
_____	Engineer	_____
_____	Prog. Support	_____
_____	Reg. Asst.	_____
_____	Planner	_____
_____	D.S.F.	_____
_____	Sup. Serv./Res.	_____
_____	Procurement	_____
_____	Personnel	_____
_____	Asst. Eng.	_____
_____	Wildf. Biologist	_____
_____	Land Acct.	_____
_____	Acct. Tech.	_____
_____	Acc. Tech.	_____
_____	Comp. Clerk	_____
_____	Computer Syst.	_____
_____	Computer Op.	_____
_____	Env. Tech.	_____
_____	Mail. & File	_____
_____	Receipt	_____
_____	Route Sub Units	_____

m/c 4518
has been
set up for
this amount
JUL





United States	Forest	Rocky	Medicine Bow National Forest
Department of	Service	Mountain	605 Skyline Drive
Agriculture		Region	Laramie, WY 82070-6003

Reply to: 2520 Emergency Fire Rehabilitation

Date: JUL 21 1989

Subject: Fort Robinson Fire, Nebraska

To: Forest Supervisor, Nebraska National Forest

On July 11 through 14, 1989 Malcolm Edwards and Marc Wilcox (Regional Fire Rehabilitation Team) were requested to look at the Fort Robinson Fire on the Nebraska National Forest for possible post-fire rehabilitation measures. The Fort Robinson Fire burned approximately 9600 acres on NFS (Soldier Creek Mgt. Unit), 16,000 acres on State lands (State Park) and 22,900 acres private lands for a total of 48,500 acres perimeter (refer to enclosed map).

Wednesday, July 12, we met with representatives from various local agencies (see enclosed name list) at the Supervisor's Office in Chadron, NE. This morning meeting was spent discussing: (1) mission of the FS Rehabilitation Team, (2) local level co-ordination with private landowners and agencies, (3) State Park concerns, such as the Park being a high level visitor-use attraction and degradation of visual and stream quality. The remainder of the day, the group proceeded to the burn area outside of Crawford, NE, to look at burn intensities and possible impacts that could occur downstream both within NFS and State lands. We also looked at the stream (Soldier Cr.) and the Game & Parks Department ponds and Johnson Lake, which all could be impacted by increased sediment and ash from the fire. It was determined that no more than 15% of the fire perimeter had burned at a high intensity which would lead to "water repellant" watersheds, based on a sampling of soil surfaces and visual verification. Other areas (such as private lands) were also visited to determine the extent and burn damage of the area as a whole.

On Thursday morning (0600), John Williams (NRD), Craig Derickson (SCS) and Malcolm Edwards (FS) flew the fire area for 1.5 hours to map out the light, moderate and intense burn areas and the critical watersheds within the perimeter. The vast majority of the burn had a blackened appearance with a high percentage (40% + tree kill) of Ponderosa pine. The blackened appearance on the ground indicates a light to moderate burn intensity, with some grass and shrub roots remaining viable to sprout next year. Critical watersheds were noted along Soldier Creek and other lands (State & Private).

Following the gathering of field data, Edwards & Wilcox (with assistance from C. Derickson of the SCS) established recommendations in the FS form 2500-8 for submittal to the Regional Office. Approximately 550 critical watershed acres are recommended for seeding on NFS lands, 435 acres on State Park lands and 825 on private. Other items such as silt fencing, gully control, road obliteration and trails stabilization are covered within the FS-2500-8. Emergency Rehabilitation funds are applied for only on NFS lands; however, other lands are included on the form to document needs by the other respective agencies, by request, due to the fact that not all of the expertise needed by them was available from their agencies at the time.





List of Agency Participation
Fort Robinson Fire, NE July, 89
Emergency Burned Area Rehab
(from sign-in sheets)

M. Edwards	MedBow NF, Laramie, WY	307-745-8971
M. Wilcox	MedBow NF, Laramie, WY	307-745-8971
R. Moore	Panhandle RC&D	308-632-1311
L. Martinson	ASCS	308-668-2454
J. Nagaki	NE Game & Parks	308-762-5605
T. Hoffman	Upper Niobrara-White NRD	308-432-5744
J. Carnahan	Upper Niobrara-White NRD	308-432-4733
V. Rotherham	NE Game & Parks	308-665-2660
D. Cornelius	FmHA	308-432-2924
F. Reed	Nebraska NF, Chadron	308-432-3367
D. Ellis	Nebraska NF, Chadron	308-432-3367
C. Duncan	NG & PC, Lincoln	308-471-5202
H. Edwards, Chief	NE Game & Parks, Lincoln	402-471-5411
C. Derickson	SCS, Crawford	308-665-2480
G. Pennington	Chadron Record (news)	308-432-5511
J. Williams	NRD, Chadron	308-432-4733
L. John	SCS, Chadron	308-432-4938



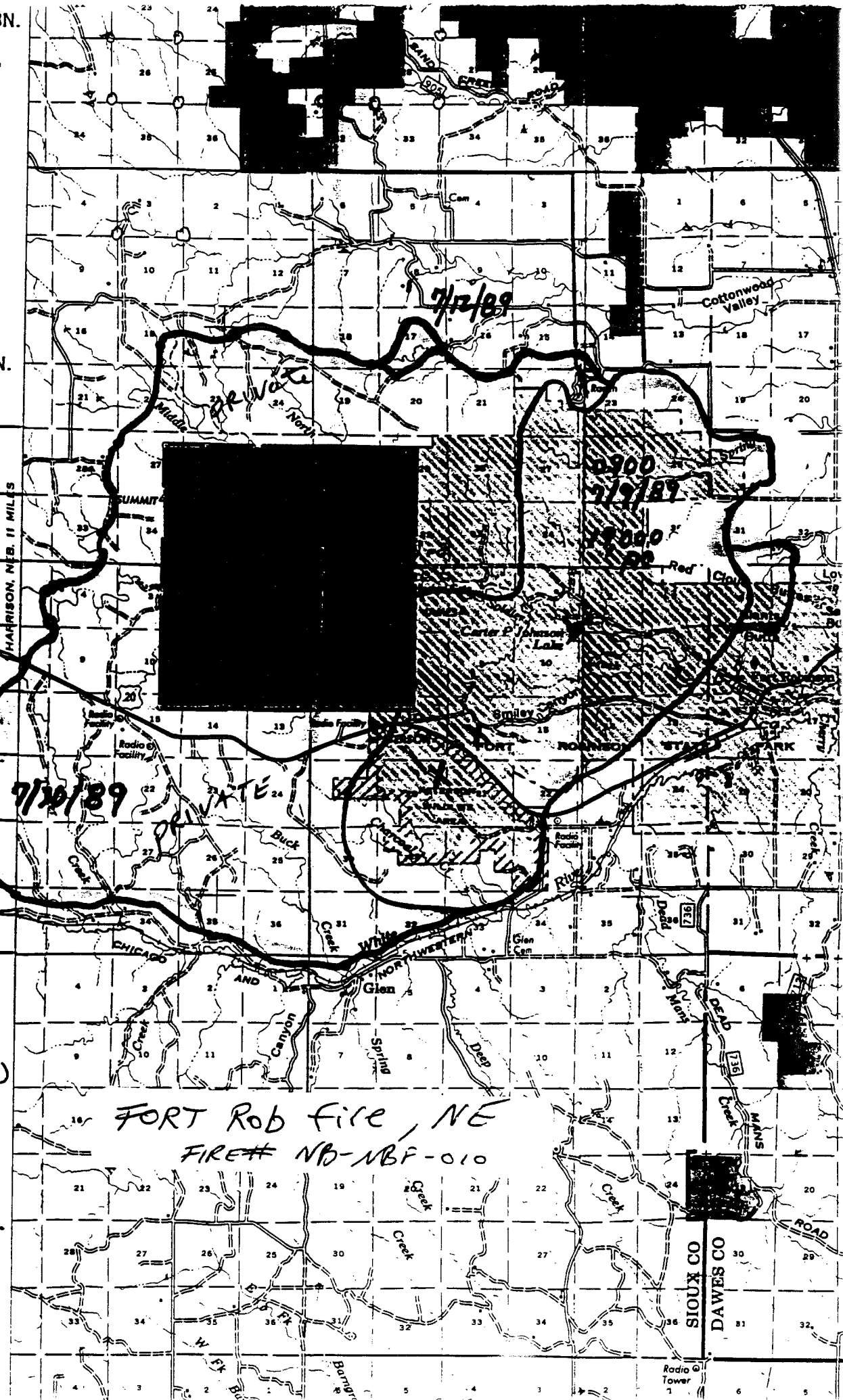
T.33N.

TS

Golden Cr. Wild.

10,240 Ac FS
Fort Rob Fire

T.32N.



7/20/89

7/12/89

7/19/89

X lightning strikes (2)
Escaped

T.30N.

FORT Rob Fire, NE
FIRE# NB-NBF-010

48,500 Ac. total
9600 NFS
16,000 State
22,900 Priv.

STOUX CO
DAWES CO

July 14, 1989

BURNED AREA REPORT
(Reference FSH 2509.13, Report FS 2500-A)

>PART I - TYPE OF REQUEST<

1. Type of Report

A. ☒ Funding (Request for estimated FFF funds)B. ☐ Accomplishment Report

2. Type of Action

A. ☒ Initial (estimated funding is first requested)B. ☐ Interima. ☐ Updating the initial funding requestb. ☐ Supplying information for accomplishments to date on emergency work underwayC. ☐ Finala. ☐ Best estimate for funds needed to complete eligible rehabilitation measureb. ☐ Following completion of funded work

>PART II - FIRE LOCATION<

1. Fire Name (From Form FS-5100-29) | 2. Forest Supervisor's Fire No. | 3. State | 4. County

Fort Robinson Fire

(From FS-5100-29)

|

|

| NB-NBF-010

| NE

| Sioux

5. Region	6. Forest	7. Ranger District	8. Date Fire	9. Date Fire	10. Estimated Suppression
02	07	Pine Ridge RD	Started	Controlled	
	Nebraska NF		7/08/89	7/14/89	\$ 225,000

11. Fire Suppression Damages Repaired with FFF 102 Funds

a. 1.75 miles (firelines waterbarred)b. 2.0 acres (firelines seeded)

c. Other (identify)

*

12. Fire Intensity

a. 35 % (low)b. 50 % (medium)c. 15 % (high)

>PART III - NATIONAL FOREST SYSTEM PROBLEM INVENTORY<

1. Watershed No. | 2. NFS Acres Burned | 3. Water Repellant Soil

42

| 9,600 acres

|

| 15 % of NFS acres burned

4. Vegetation Types

Ponderosa pine - 60%

Wheatgrass-Little bluestem GL - 40%

5. Geologic Types

| Arikarie Sandstone

6. Soil Erosion Hazard Rating *

a. 25 % (low)b. 25 % (medium)c. 50 % (high)

7. Erosion Potential *

| *

| 2560 cu.yds/sq.miles

| (6 T/Ac./Yr.)

8. Miles of Forest Stream Channels By Regional Order or Classes

42mi - 1st order

16mi - 2nd order

12mi - 3rd order

9. Miles of Forest Service

| Trails

| 16.0

10. Miles of Forest Service Roads By Maintenance Levels *

a. 11.2 miles (Level I)b. 0 miles (Level II)c. 0 miles (Level III, IV, V)

>PART IV - CALCULATED RISK AND CLIMATIC EVALUATION<

1. Estimated Design Recurrence Period (Years) 5 years	2. Chance to Success Desired By Management (Percent) 80 percent
3. Equivalent Design Recurrence Period (Years) 25 years	4. Related Design Storm Duration (Hours) 24 hours
5. Related Design Storm Magnitude (Inches) 3.6 inches	6. Related Design Flow (cfs) 81 cfs
7. Estimated Reduction In Infiltration (Percent) 15 percent	8. Adjusted Related Design Flow (cfs) 93 cfs

Previous edition of this form is obsolete. FS-2500-8 (11/82)

>PART V - SUMMARY OF SURVEY AND ANALYSIS<

1. Skills Represented on Burned Area Survey Team (x appropriate boxes)
a. ☒ Hydrology b. ☒ Soils c. ☒ Geology d. ☒ Range e. ☒ Timber f. ☐ Wildlife
g. ☒ Fire Mgmt. h. ☐ Eng. i. ☐ Contr. j. ☒ Local Mgmt. k. ☐ Research l. ☒ Other

(Other: SCS, State Game & Parks, ASCS, FMHA, Panhandle RC&D, Upper Niobrara NRD), NG&PC-Lincoln, Chadron Record (news)

2. Describe Emergency Burn area in and adjacent to State Park and Peterson Wildlife Refuge and town of Crawford water supply

3. Emergency Rehabilitation Object: Stabilize soil, decrease sedimentation in area next to those described in (2) above

4. Probability of Completing Treatment Prior to First Major Damage Producing Storm

a. 75 % (land) b. 80 % (channel) c. --- % (roads) d. 75 % (other) trails
(identify)

5. Net Environmental Quality Benefit Index a. <input checked="" type="checkbox"/> Significant b. <input type="checkbox"/> Not Significant	6. Net Social Well Being Benefit Index a. <input checked="" type="checkbox"/> Significant b. <input type="checkbox"/> Not Significant
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7. Benefit/Cost Ratio 1.26	8. Net Benefits \$11,594	9. Cost Effectiveness Index a. <input checked="" type="checkbox"/> I b. <input type="checkbox"/> II c. <input type="checkbox"/> III d. <input type="checkbox"/> IV
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>PART VI - ELIGIBLE EMERGENCY REHABILITATION MEASURES OR TREATMENTS & SOURCE OF FUNDS<

Note: Emergency rehabilitation is work done promptly following a wildfire and is not to solve watershed problems that existed prior to the wildfire.

Line Items	NFS LANDS					OTHER LANDS			ALL LANDS
	Units	Unit	No. of	FFF 092	Other \$	No. of	Private	Non-Federal	Total
	Cost	Units			Identify	Units	Lands	State	\$
(1) A. LAND	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
a. #Seeding (aerial)	Acres	50.	550ac	\$27,500			\$41,250	\$21,750	\$90,500
b.							825 ac.	435 ac.	
c.							(Private)	(Ft. Rob.)	
d.									
e.									
(1) B. CHANNELS									
a. Opening water courses	Miles								
b. Stabilizing Streambanks	Miles								
c. gulley control	EA	2000	0	0	0	25		50,000	50,000
d. silt fence	Ft.	6.50	500	3250		800		5200	8450
e.									
(1) C. ROADS & TRAILS									
a. Trail rehab	mi.	500	4.0	2000					2000
b. Road oblit.	mi.	2500	5.0	12,500		20		50,000	62,500
c.									
d.									
e.									
(1) D. MAJOR STRUCTURES									
a. Preplanned - from Forest Plans									
E. TOTAL				\$45,250			\$41,250	\$126,950	213,450

>PART VII - APPROVALS<

(Total NFS 092 is \$45,250)

1. FOREST SUPERVISOR (Signature)	2. DATE	3. REGIONAL FORESTER (Signature)
/s/ Robert L. Storch	7/14/89	*

(original Acting FS signature on file)

**EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN
EMERGENCY PROGRAM**

(Reference FSH 2509.13)

Fire Name Fort Robinson Fire	Date of Report 7/14/89
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A. ENVIRONMENTAL QUALITY BENEFIT INDEX

Environmental Factor (a)	Weight	Without Treatment		With Treatment		Difference	
	Factor	Actual	Weighted	Actual	Weighted	Actual	Weighted
	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1. Erosion and sediment *	8	2	16	1	8	1	8
2. Aesthetic land quality *	9	1	9	0	0	1	9
3. Water quality *	8	1	8	0	0	1	8
4. Site productivity *	10	1	10	0	0	1	10
5. Wildlife habitat *	5	2	10	1	5	1	5
6. Fish habitat *	5	2	10	0	0	2	10
7. Other *							
8. TOTAL *	45	////////	63	////////	13	////////	50
9. Average weighted index *	////////	////////	1.4	////////	.29	////////	1.1
10. Net environmental quality benefit index *	////////	////////	////////	////////	////////	////////	1.1

B. SOCIAL WELL-BEING BENEFIT INDEX

Social Criteria (a)	Weight	Without Treatment		With Treatment		Difference	
	Factor	Actual	Weighted	Actual	Weighted	Actual	Weighted
	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1. Life, health, safety *	4	0	0	0	0	0	0
2. Employment *	8	1	8	0	0	1	8
3. Recreational opportunity *	9	2	18	1	9	1	9
4. Economic stability *	10	2	20	1	10	1	10
5. Income distribution *	5	1	5	0	0	1	5
6. Preserve special sites *	9	1	9	1	9	0	0
7. Other *	-						
8. TOTAL *	45	////////	60	////////	28	////////	32
9. Average weighted index *	////////	////////	1.3	////////	0.6	////////	.70
10. Net social well-being benefit index *	////////	////////	////////	////////	////////	////////	.70

C. REMARKS

Above data includes consideration for entire burn area and local towns of Chadron & Crawford, NE

D. EXPECTED DAMAGE REDUCTION BENEFIT SUMMARY

Note: At current Water Resources Council interest rate 8.875 percent

Economic Benefit Indices (a)	Units of Measure (b)	Damage Expected				Expected \$ Damage Reduction (g)
		Without Treatment		With Treatment		
		No. of Units (c)	Present Value(\$) (d)	No. of Units (e)	Present Value(\$) (f)	
I. Watershed Impacts Sediments	////////	////////	////////	////////	////////	////////
1. Downstream water storage *	AF	10	16,000	5	8000	8000
2. Sediment removal *	cu.yd.	56,000	56,000	20,000	20,000	36,000
3. Fish habitat *	ponds	1	0	1	10,000	10,000
4. Water quality *	---					
II. Flood Water	////////	////////	////////	////////	////////	////////
1. Land ---						
2. Water Improvements *						
3. Subtotal, Watershed *	////////	////////		////////		
III. Resource Related Impacts	////////	////////	////////	////////	////////	////////
1. Range (\$11.54/AUM)	AUM	25	289	12.5	144	144
2. Wildlife and recreation *	RVD	180	5400	90	2700	2700
3. Timber *						
4. Subtotal, Resource Related *	////////	////////		////////		56,844
IV. Other Impacts	////////	////////	////////	////////	////////	////////
1. *						
2. Subtotal, Other *	////////	////////		////////		
V. TOTAL DOLLARS *	////////	////////		////////		56,844
E. REMARKS						

Benefit/Cost ratio = 56,844/45,250 = 1.26

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LANDOWNERSHIP
(Reference FSH 2509.13)

Fire Name
Fort Robinson Fire NB-NBF-010
Date of Report
7/14/89

Landownership	A. Acres Burned	B. Emergency Rehabilitation Needs			
		(1) Land (acres)	(2) Channel (miles)	(3) Road & Trail (miles)	(4) Other silt fencing
Federal (NFS) *	9600	550	0	4.0	500 ft.
Other (specify) *					
Subtotal (NFS) *					
Non-Federal (State & County) *	16,000	435	(?)	20	800ft.
Indian reservation *					
Private *	22,900	825			---
Subtotal (Non-Federal) *					
TOTAL *	48,500	1810		24.0	1300ft.

C. Source of Emergency Rehabilitation Funds for Needed Work (\$)

Landownership	1. FFF		2. Emergency Flood Prevention	3. FR & T	4. Other Federal (Enter fund) (Private)	5. Non- Federal (Enter fund) State	6. Total
	(a) 092	(b) 102					
Federal (NFS) *	\$45,250						
Other (specify) *							
Subtotal (NFS) *							
Non-Federal (State & County) *						\$126,950	
Indian reservation *							
Private *					\$41,250		
Subtotal (Non-Federal) *							
TOTAL *	45,250				41,250	126,950	\$213,450

D. Remarks

In part VI. State lands consist of Fort Robinson State Park; Private lands are those surrounding the NFS and State lands within the fire perimeter. These are funded from other sources than Emergency Rehab 2500-8.

(#proposed seed mix: 10 lb. western wheatgrass, 3 lb. cereal (annual) rye total per acre (13 lb./Acre))

Road obliteration in section VI: These roads are very primitive and within a wilderenss area; they were used administratively during the fire and are adjacent to a perennial stream (Middle Fork Soldier Creek): Obliteration is designed to reduce overall sediment load in the burn area, as well as disperse instead of concentrate runoff that is excessive to normal amounts expected before the fire. (refer to 2520 narrative of 18 July, 89)