

Black Hills
Boundary
1985
No frmt

MESSAGE DISPLAY

TO MAILROOM:R02F03A

CC G.HAGY

From: WSAHAI

Postmark: Aug 02,85 3:54 PM

Status: Certified

Subject: Boundary II Fire (Please give msg to Ted Schenk)

Message:

Your request for \$12,000 for rehabilitation of NFS lands burned in the Boundary II Fire have not been approved by the Regional Forester. A poor Benefit:Cost Ratio did not justify the request for the rehabilitation work.

-----X-----

August 2, 1985

Watershed _____
Range & Wildlife _____
Timber _____
Fire & Air _____
Engineering _____

Boundary II Fire, Black Hills National Forest

The Regional Forester must approve or disapprove this Emergency Burn Rehab fund request before the close of business today (8/2/85).

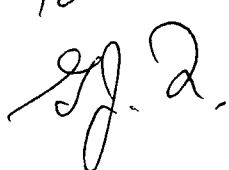
FSM 2523.21 requires that suppression damage be treated with FFF-102 funds and wildfire damage be treated with FFF-092 funds.


Ted Schenk is the Forest contact, if you have any questions.

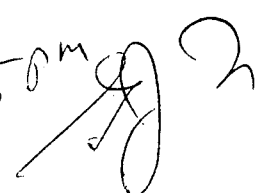
Please supply WSMAM (George Nagy) with your comments, suggestions, and recommendations regarding approval or disapproval of the request for funds by 1 p.m. today (8/2/85).


GEORGE NAGY

GJN:ls

9:00 AM
Hand delivered to all units except
Fire and Air 

2:45 PM
All returned to me by 2:45 PM


No approval by Hanks
3:25 PM 

8/2/85

George,

Can't evaluate based on information given. However, based on geologic + vegetative information given, I think natural revegetation probabilities are good and I don't know if simply seeding will enhance the revegetation process. Five percent repellent soils only near 60 acres likely in dire need of some work.

David L. Smith
Regional Soil Scientist

George -

Recommend consideration (if not already) of sediment capture structures in drainage (intermittent) ways. plus in the 1.5 miles of class I stream - to capture sediment and create plunge pool for fish.

JCC

8/2/85

Received 2:45 PM
JCC

RWF&E	
Rec'd: 8-2	
Info	Action
Momma	
Winterborn	
Whiteland	
Free	
Hendzel	
Johnston	
Wills	
Capp	
Malespin	
Colletzi	
Wolf	
Andrus	
Breggin	
CC	
CC	

Date of Report: 1 AUG 85

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. Interim
☐ Updating the initial funding request.
☐ Supplying information for accomplishments to date on emergency work underway.
☐ C. Final
☐ Best estimate for funds needed to complete eligible rehabilitation measure.
☐ Following completion of funded work.

PART II - FIRE LOCATION

1. Fire Name (from Form FS-5100-29): Boundary II
2. Forest Supervisor's Fire No. (from Form FS-5100-29): 172
3. State: South Dakota/Wyoming
4. County: Lawrence/Crook
5. Region: 02
6. Forest: Black Hills
7. Ranger District: Spearfish
8. Date Fire Started: 27 July 85
9. Date Fire Controlled: 29 July 85
10. Estimated Suppression Costs: \$250,000
11. Fire Suppression Damages Repaired with FFF 102 Funds:

4 miles (firelines waterbarred)
12 acres (firelines seeded)
- Other (Identify)

12. Fire Intensity: 60% (low) 25% (medium) 15% (high)

PART III - NATIONAL FOREST SYSTEM PROBLEM INVENTORY

1. Watershed No.: 1012020303
2. NFS Acres Burned: 1200
3. Water Repellent Soil: 5% of NFS acres burned

4. Vegetation Types: Pine-Oak/Chokecherry-Snowberry
5. Geologic Types: Sandstone, Limestone, Shale
6. Soil Erosion Hazard Rating:

10 (low) 30 (medium) 60 (high)

7. Erosion Potential: 2551 cu. yds/sq. miles
8. Miles of Stream Channels by Regional Order or Classes:
 - 1st Order - 1.5 mi.
 - 2nd Order - .5 mi.
 - All Channels within Burn Area are Intermittent
9. Miles of Forest Service Trails: 0
10. Miles of Forest Service roads by Maintenance Levels:

3.4 miles (Level I) 0 miles (Level II)
1.0 miles (Level III, IV, V)

PART IV - CALCULATED RISK AND CLIMATIC EVALUATION

1. Estimated Vegetative Recovery Period: 5 years.
2. Chance of Success Desired by Management: 50%.
3. Equivalent Design Recurrence Period: 10 years.
4. Related Design Storm Duration: 30 minutes
5. Related Design Storm Magnitude: 1.4 inches.
6. Related Design Flow: 140 cfs.
7. Estimated Reduction in Infiltration: 10%.
8. Adjusted Related Design Flow: 155 cfs.

PART V - SUMMARY OF SURVEY AND ANALYSIS

1. Skills Represented on Burned Area Survey Team ("x" appropriate boxes):

<input type="checkbox"/> Hydrology	<input type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range
<input checked="" type="checkbox"/> Timber	<input checked="" type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Local Mgmt.	<input type="checkbox"/> Research	<input type="checkbox"/> Other (Identify)

2. Describe Emergency: Erosion and loss of soil productivity on 375 acres of land with high erosion hazard rating.
3. Emergency Rehabilitation Objective: Maintain soil productivity by meeting soil loss tolerance limits within 4 years. Maintain vegetative productivity on all slope classes. Maintain water quality to State water quality standards.
4. Probability of Completing Treatment Prior to First Major Damage Producing Storm:

Land 20 Channel 20 Roads 20 Other -
5. Net Environmental Quality Benefit Index:

☒ Significant ☐ Not Significant

6. Net Social Well Being Benefit Index:

☐ Significant☒ Not Significant

7. Benefit/Cost Ratio: .92:1

8. Net Benefits: \$10,752

9. Cost Effectiveness Index: ☐ I. ☐ II. ☒ III. ☐ IV.

PART VI - ELIGIBLE EMERGENCY REHABILITATION MEASURES OR TREATMENTS
AND 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 (1)	NFS Lands					Other Lands			All Land
	/Units/	Unit/	No. of/	FFF 092/	Other \$/	No. of/	Federal \$/	Non-Federal \$/	
	/Cost/	Units/	/ \$	/	/	/Units/	/	/ \$	
	/	/	/	/	/	/	/	/	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
A. LAND	/	/	/	/	/	/	/	/	/
a. Seeding	/Acres/	\$22 /	375	/12,000	/	/	/	/	/ 12,000
b.	/	/	/	/	/	/	/	/	/
c.	/	/	/	/	/	/	/	/	/
d.	/	/	/	/	/	/	/	/	/
e.	/	/	/	/	/	/	/	/	/
B. CHANNELS	/	/	/	/	/	/	/	/	/
a. Opening water courses	/Miles/	/	/	/	/	/	/	/	/
b. Stabilizing streambanks	/Miles/	/	/	/	/	/	/	/	/
c.	/	/	/	/	/	/	/	/	/
d.	/	/	/	/	/	/	/	/	/
e.	/	/	/	/	/	/	/	/	/
C. ROADS AND TRAILS	/	/	/	/	/	/	/	/	/
a.	/	/	/	/	/	/	/	/	/
b.	/	/	/	/	/	/	/	/	/
c.	/	/	/	/	/	/	/	/	/
D. MAJOR STRUCTURES	/	/	/	/	/	/	/	/	/
a. Preplanned-	/	/	/	/	/	/	/	/	/
from Forest	/	/	/	/	/	/	/	/	/
Plans	/	/	/	/	/	/	/	/	/
E. TOTAL	/	/	/	/ \$12,000/	/ \$	/ \$	/ \$	/ \$	/ \$12,000

PART VII - APPROVALS

/S/ JAMES R. MATHERS
Forest Supervisor (Signature)

8/1/85
Date

/S/
Forest Supervisor (Signature)

Date

BOUNDARY 11 FIRE
BLACK HILLS NATIONAL FOREST

The Boundary 11 Fire is located in Sections 19, 30, and 31, T6N, R1E in South Dakota and Sections 4, 5, 8, and 9, T51N, R60W, and Sections 28 and 33, T52N, R60W in Wyoming. The attached map indicates the exterior boundaries of the fire. This lightning-caused fire was entirely on National Forest land.

This area is characterized by broad timbered ridgetops which drop rather sharply into narrow valleys. The sideslopes are very steep. The area has a high site index for ponderosa pine. Understory vegetation includes oak, snowberry and Oregon grape. Valley bottoms typically have an aspen/oak overstory within a forb-grass understory.

The fire burned portions of three timber sales. Two are currently under contract and the third contract has been awarded, but is awaiting final signature.

The fire burned with highest intensity along the ridgetops and north facing slopes. Approximately 375 acres of National Forest System lands were burned with high intensity leaving few or no needles on the burned trees. The litter duff and understory were burned leaving only bare soil and charred litter which turns to ash when disturbed or compacted. The charred litter and ash will be exposed to wind and rain causing it to be blown or washed from the soil surface, effectively removing the ground cover. These slopes have a high soil erosion potential and are prone to landslides under an undisturbed situation.

The proposed rehabilitation includes seeding of 375 acres of National Forest System lands on the exposed ridges and sideslopes. These areas have only 10% effective ground cover and are subject to high potential for wind and water erosion.

The recommended seeding mixture for the exposed ridges and sideslopes is as follows:

Western wheatgrass 6 lbs./acre
Prairie sandreed 2 lbs./acre
Yellow sweetclover 2 lbs./acre

This fire burned a total of 1200 acres of National Forest System Lands on the Black Hills National Forest. The fire was entirely on NFS lands.

USDA—Forest Service BURNED AREA REPORT (Reference FSH 2509.13, Report FS-2500-A)		Date of Report 1 Aug 85
PART I — TYPE OF REQUEST		
1. Type of Report A. <input checked="" type="checkbox"/> Funding (Request for estimated FFF funds) B. <input type="checkbox"/> Accomplishment Report		
2. Type of Action A. <input checked="" type="checkbox"/> Initial (estimated funding is first requested) B. <input type="checkbox"/> Interim a. <input type="checkbox"/> Updating the initial funding request b. <input type="checkbox"/> Supplying information for accomplishments to date on emergency work underway C. <input type="checkbox"/> Final a. <input type="checkbox"/> Best estimate for funds needed to complete eligible rehabilitation measure b. <input type="checkbox"/> Following completion of funded work		
PART II — FIRE LOCATION		
1. Fire Name (From Form FS-5100-29) Boundary #2		2. Forest Supervisor's Fire No. (From FS-5100-29) 172
3. State SD/WY		4. County Lawrence/Crook
5. Region 02	6. Forest Black Hills	7. Ranger District Spearfish
8. Date Fire Started 27 July 85	9. Date Fire Controlled 29 July 85	10. Estimated Suppression \$ 250,000
11. Fire Suppression Damages Repaired with FFF 102 Funds a. <u>4</u> miles (firelines waterbarred) b. <u>12</u> acres (firelines seeded) c. Other (identify) _____		
12. Fire Intensity a. <u>60</u> % (low) b. <u>25</u> % (medium) c. <u>15</u> % (high)		
PART III — NATIONAL FOREST SYSTEM PROBLEM INVENTORY		
1. Watershed No. 1012020383	2. NFS Acres Burned 1200	3. Water Repellant Soil <u>5</u> % of NFS acres burned
4. Vegetation Types Pine - Oak/Chokecherry-Snowberry		5. Geologic Types Sandstone, Limestone, Shale
6. Soil Erosion Hazard Rating a. <u>10</u> % (low) b. <u>30</u> % (medium) c. <u>60</u> % (high)		7. Erosion Potential <u>2551</u> cu. yds/sq. miles
8. Miles of Stream Channels By Regional Order or Classes 1st Order - 1.5mi All channels w/in burn area are 2nd Order - .5mi. intermittent.		9. Miles of Forest Service Trails 0
10. Miles of Forest Service Roads By Maintenance Levels a. <u>3.4</u> miles (Level I) b. <u>0</u> miles (Level II) c. <u>1.0</u> miles (Levels III, IV, V)		
PART IV — CALCULATED RISK AND CLIMATIC EVALUATION		
1. Estimated Vegetative Recovery Period (Years) <u>5</u>		2. Chance of Success Desired By Management (Percent) <u>50</u>
3. Equivalent Design Recurrence Period (Years) <u>10</u>		4. Related Design Storm Duration (Hours) <u>30 min.</u>
5. Related Design Storm Magnitude (Inches) <u>1.4</u>		6. Related Design Flow (cfsm) <u>140</u>
7. Estimated Reduction in Infiltration (Percent) <u>10%</u>		8. Adjusted Related Design Flow (cfsm) <u>155</u>

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. ☒ Engineering i. ☐ Contracting j. ☒ Local Mgmt. k. ☐ Research l. ☐ Other _____
(Identify)

2. Describe Emergency

Erosion & loss of soil productivity on 375 acres of land w/high erosion hazard rating.

3. Emergency Rehabilitation Objective

Maintain soil productivity by meeting soil loss tolerance limits w/in 4 years.
 Maintain vegetative productivity on all slope classes.
 Maintain water quality to state water quality standards.

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

a. 20 % (land) b. 20 % (channel) c. 20 % (roads) d. — % (other) _____
(Identify)

5. Net Environmental Quality Benefit Index

a. ☒ Significant b. ☐ Not Significant

6. Net Social Well Being Benefit Index

a. ☐ Significant b. ☒ Not Significant

7. Benefit/Cost Ratio

02:1

8. Net Benefits

10.752

9. Cost Effectiveness Index

a. ☐ I b. ☐ II c. ☒ III d. ☐ IV

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 (1)	Units (2)	Unit Cost (3)	NFS Lands			Other Lands			All Lands Total \$ (10)
				No. of Units (4)	FFF 092 \$ (5)	Other \$ (Identify) (6)	No. of Units (7)	Federal \$ (Identify) (8)	Non-Federal \$ (Identify) (9)	
A. LAND	a. Seeding	Acres	22.00	375	12,000					12,000
	b.									
	c.									
	d.									
	e.									
B. CHANNELS	a. Opening water courses	Miles								
	b. Stabilizing Streambanks	Miles								
	c.									
	d.									
	e.									
C. ROADS & TRAILS	a.									
	b.									
	c.									
	d.									
	e.									
D. MAJOR STRUCTURES										
a. Preplanned – from Forest Plans										
E. TOTAL					12,000					12,000

PART VII – APPROVALS

1. Forest Supervisor (Signature)

2. Date

8/1/85

3. Regional Forester (Signature)

2. Date

EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

(Reference FSH 2509.13)

Fire Name

Boundary #2

Date of Report

1 Aug 85

A. ENVIRONMENTAL QUALITY BENEFIT INDEX

Environmental Factor (a)	Weight Factor (b)	Without Treatment		With Treatment		Difference	
		Actual (c)	Weighted (d)	Actual (e)	Weighted (f)	Actual (g)	Weighted (h)
1. Erosion and sediment	5	2	10	1	5	1	5
2. Aesthetic land quality	2	1	2	1	2	0	0
3. Water quality	3	1	3	0	0	1	3
4. Site productivity	8	2	16	1	8	1	8
5. Wildlife habitat	7	1	7	0	0	1	7
6. Fish habitat	0	0	0	0	0	0	0
7. Other Range	3	1	3	0	0	1	3
8. TOTAL	28		71		15		26
9. Average weighted index			2.54		.54		.93
10. Net environmental quality benefit index							.93

B. SOCIAL WELL-BEING BENEFIT INDEX

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

C. REMARKS

D. EXPECTED DAMAGE REDUCTION BENEFIT SUMMARY

Note: At current Water Resources Council interest rate 8.125 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	N/A					
2. Sediment removal	N/A					
3. Fish habitat	N/A					
4. Water quality	N/A					
II. Flood Water						
1. Land	N/A					
2. Water Improvements	N/A					
3. Subtotal, Watershed						
III. Resource Related Impacts						
1. Range	N/A					
2. Wildlife and recreation	N/A					
3. Timber	N/A					
4. Subtotal, Resource Related						
IV. Other Impacts						
1. Soil Fertility	TONS	4547	27,282	2184	13,104	14,178
2. Subtotal, Other			27,282		13,104	
V. TOTAL DOLLARS			27,282		13,104	14,178

E. REMARKS

ON-SITE AND OFF-SITE DEVELOPMENTS SUBJECT TO HAZARDS¹

(Reference FSH 2509.13)

Fire Name Boundary Fire II			Date of Report 1 AUG 85
Line Items (a)	Type of Units (b)	Number of Units (c)	Estimated Value \$ (d)
1. Community and urban development	People	N/A	
2. Municipal and domestic water supply	People Served	N/A	
3. Transportation systems	Miles	N/A	
4. Water distribution systems (irrigation)	Miles	N/A	
5. Agricultural development (crops, facilities)	Acres	N/A	
6. Industrial development (dams, power, manufacturing)	Number	N/A	
7. Power and communication lines	Miles	N/A	
8. Recreation development	PAOT	N/A	
9. Fish habitat	Miles	N/A	
10. Other (specify) Camp trailers	Trailers	N/A	
11. Total Hazard Potential ²			
12. Narrative (Optional - If additional space is needed, attach another sheet.)			

¹ Hazards from floods, floating debris, erosion, or sediment because a watershed is impaired by wildfire. (Do not include value of resources damaged or destroyed by the fire reported on FS-5100-29.)

² Indicates values threatened by design storm. Does not enter into the B/C.

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LANDOWNERSHIP

(Reference FSH 2509.13)

N

Fire Name

Boundary II

Date of Report

1 AUG 85

Landownership	A. Acres Burned	B. Emergency Rehabilitation Needs				C. Source of Emergency Rehabilitation Funds for Needed Work (\$)						
		(1) Land (acres)	(2) Channel (miles)	(3) Road & Trail (miles)	(4) Other	1. FFF		2. Emergency Flood Prevention	3. FR & T	4. Other Federal (Enter fund)	5. Non-Federal (Enter fund)	6. Total
						(a) 092	(b) 102					
Federal (NFS)	1200	375				12,000						12,000
Other (specify												
Subtotal (NFS)												
Non-Federal (State & County)												
Indian reservation												
Private												
Subtotal (Non-Federal)												
TOTAL	1200	375				12,000						12,000

D. Remarks

BOUNDARY II FIRE

BLACK HILLS NATIONAL FOREST

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BOUNDARY FIRE VICINITY MAP

