MESSAGE DISPLAY

TO R.NYGAARD

10/24/88

From: Bill Putnam
Postmark: 18 Oct 88 18:53
Status: Previously read
Subject: Forwarded: Reply to: Forwarded: Recovery Report

Comments:
From Bill Putnam:
UPDATE FOR RED BENCH FIRE

Previous comments:
From Phyllis S. Snow:
Red Bench Fire: Flathead Nat'l Forest/Private land/Glacier Nat'l Park Emergency rehab has been completed. Initial plans for long-term rehab have been made and are being reviewed for acceptance by FS/Gla Park and others. Long-term research projects are in the offing. Phyllis

Message:
From Bill Putnam:R01A:
PLEASE READ THE ATTACHED MEMO FROM THE WO AND SEND ME A COUPLE OF SENTENCES CONCERNING THE STATUS OF EACH FIRE REHAB PROJECT ON YOUR FOREST SO I CAN COMPILE THE SUMMARY TO SUBMIT. IF THE FIRE SUPRESSION REHAB IS COMPLETED OR UNDERWAY, SO STATE AND THE PROGRESS OF EACH OF THE EMERGENCY WATERSHED REHAB PROJECTS. THANKS

From Eve Lewis:W01B:
Hi all. As you are aware, the fire season is upon us. Here in the WO we are putting together a fire report summary that goes out every Tuesday (located in the public files -- Burn Rehab Update). What we need from you is a situation update per fire, what kinds of treatments are being used, problems with the weather, have treatments been completed and, last, but not least, also,an overview of the Region would be helpful -- whatever it takes to tell the story. Now the clincher is it must be in here by COB Mondays. Please send me whatever you can TODAY so I can add it to the report. THANKS FOR ALL YOUR HELP!!!

----------X--------

RED BENCH FIRE
SEPTEMBER 1988

SUMMARY OF REQUESTED BURN AREA EMERGENCY REHABILITATION FUNDING

On the afternoon of Tuesday, September 5, 1988 a fire was spotted in Section 16, T35N, R22W, about 8 miles west of Polebridge in the North Fork of the Flathead River. The fire started in the area of the Red Bench timber sale. The cause is believed to be a holdover from a lightning strike which occured during a storm about two weeks earlier, however, the exact cause is still under investigation. The day the fire broke and the next two days the area received winds of 20 to 40 miles per hour. By Wednesday afternoon the fire had moved eastward and jumped the North Fork River to begin a fire in Glacier National Park.

During the course of the wildfire, approximately 17-25 dwellings were destroyed (a definitive accounting is yet to be determined), along with numerous outbuildings and several buildings of historical significance in and around the Polebridge Ranger Station in Glacier National Park.

Numerous standing snags of lodgepole pine continue to pose serious threats to firefighters and vehicles driving on the North Fork Road and all other roads in the burn area.

Red Meadow Creek is rearing ground for Western Slope Cutthroat and Bull Trout in the lower reaches, and a spawning area in the upper reaches. It is one of the few major streams on the North Fork which is not closed to fishing as such, is a major recreational attraction. Spring, Spruce and the South Fork of Red Meadow Creek are also important fisheries in the burn area. Hot burns on the steep side slopes of these streams indicate the potential for high erosion and possible debris torrents. Emergency control measures such as waterbarring are indicated in these sensitive areas.

There has been a loss of thermal cover for wildlife, mostly on low-lying private lands and in Glacier National Park. There is also a significant loss of habitat for whitetail deer. Immediate seeding is indicated for erosion stabilization and vegetation recovery, and fire lines need to be closed as soon as possible for wildlife security. Clean-up of garbage from base and spike camps is indicated to prevent bear attraction and prevent degradation of the natural aesthetic qualities of the area.

The North Fork of the Flathead River is designated as a Wild and Scenic River and deserves special consideration in regard to the potential damages from fire suppression efforts and increased sedimentation from the tributaries located in the burn area.

The Red Bench Fire moved rapidly across the land west of the river. Most of the land involved was burned with low to moderate intensity. Only a small percentage (approximately 10%) of the area was burned intensely. The western part of the area contains moderate to steep slopes, while the eastern part is mostly flat, sitting in the valley bottom of the North Fork. Much of the area will recover in one to two years even if no rehabilitation is done, but certain

areas, i.e., where the burn was severe or the land is steep with easily eroded underlying glacial deposits, should have rehabilitation measures applied as soon as possible. The projects proposed by the Burn Area Emergency Rehabilitation Team are designed to protect the water quality of the four named creeks that flow through the burned area, into the North Fork of the Flathead River, then into the main Flathead River and eventually into Flathead Lake.

Protection of water quality is designed primarily for fisheries, which provides an estimated annual economic value of $40,000 from the Red Meadow Creek watershed alone. Protection of water quality is also a benefit to and an integral part of the Wild and Scenic River corridor, which encompasses both public recreation and private residences. Economic benefits in the burn area alone are valued at over $1,400,000 annually, not taking into consideration the beneficial downstream effects.

The following projects are proposed:

1.) Aerial seeding of 390 acres with grasses (such as annual rye) that will germinate rapidly and begin growth this fall. These grass(es) will provide excellent ground cover next spring and on through the fall. Within two years the native vegetation should sufficiently recover enough to displace the seeded non-native species.

2.) Installation of 50 sediment barriers in stream channels and dry gullies. These will be small, aesthetically inoffensive structures that will blend in with the natural environment in about two years.

3.) Replant three miles of Red Meadow Creek streambank with willows (Salix) and Redosier Dogwood (Cornus stolonifera), which may both be rapidly propagated from nearby stands. This vegetation will provide streambank stabilization and minimize sediment production. Within two growing seasons it will also provide economically important riparian habitat and wildlife forage.

4.) Installation of water barriers on 45 acres of steep slopes where severe sedimentation is certain to occur. These barriers will also help to trap eroded soils during the first year while native grasses, shrubs and forbs re-establish themselves. Barrier construction will consist of cutting burned trees and anchoring them against stumps and/or other trees. These structures will eventually decay and blend in with the natural vegetation.

We feel that these projects represent the best preference---neither too little or too much---to accomplish the task of protecting the water and soil resources both in and below the burned area.

An interdisciplinary team comprised of a hydrologist, soils scientist, fisheries biologist, wildlife biologist, silviculturist, lands specialist, and a coordinator surveyed the burn area on the ground and from the air. The goal of this initial survey was to assess the damage done by the fire and determine what steps could be taken to prevent soil loss and the deterioration of water quality. The team has also recommended rehabilitation projects that should logically be funded in accordance with the Burned Area Emergency Rehabilitation

Handbook, and considers them to be compatible with long-term rehabilitation considerations.

/s/ Phyllis Snow, Leader
Burned Area Emergency Rehabilitation Team
Red Bench Fire
September 17, 1988

BURNED AREA REPORT **DATE: 9/16/88**

PART I - TYPE OF REQUEST

1. (List as appropriate) A. Funding Request
2. A. Initial

PART II - FIRE LOCATION

1. Fire name: Red Bench
2. Supervisors Fire Number: 710098 (MT-FNF-098)
3. State: Montana
4. County: Flathead
5. Region: 1
6. Forest: Flathead
7. Ranger District:Glacier View
8. Date Started: 9/6/88
9. Date Controlled: No estimate
10. Estimated suppression costs: $4,000,000
11. Fire suppression damage repaired with FFF 102 funds:
    a. 6 miles of firelines waterbarred (on slopes steeper than 20%)
    b. 10 acres of firelines seeded
    c. 6 other (identify) Replacing berms on cat and hand lines
12. Fire intensity 35 % low 55 % medium 10 % high

PART III - NATIONAL FOREST SYSTEM PROBLEM INVENTORY

1. Watershed Number: 1701020602
2. NFS acres burned: 10200
3. Water repellant soil: 3 % NFS acres burned
4. Vegetation types:70% alpine fir/CLUN,20% alpine fir/MEFE,10% alpine fir/XETE
5. Geologic types: argillite & limestone in high areas, glacial desposits (gravels, sand and silt) in low-lying areas (glacial deposits on private land)
6. Soil erosion hazard rating: 40 % low 50 % medium 10 % high
7. Erosion potential: 1450 cu.yd./sq.mi.
8. Miles stream channel by regional order or class: Thirty (30) miles First Order, Eleven (11) miles Second Order, Thirteen (13) miles Third Order, One (1) mile Fourth Order
9. Miles FS trails: 0
10. Miles FS roads by maintenance level:
    a. --- (level I) b. 1/2 mi.(level II) c.4 1/2 mi. (level III,IV,V) in burned area and 13 mi. between fire camp and nearest paved road

PART IV - CALCULATED RISK AND CLIMATIC EVALUATION

1. Est. veg. recovery period: 2-3 years
2. Chance of success desired by management: 85%
3. Equivalent design recurrence: 10 year/6 hour
4. Related design storm duration: 6 hour
5. Related design storm magnitude: 1 1/4"
6. Related design flow:

Red Meadow Creek	32 cfsm
S. Fk. Red Meadow	70 cfsm
Spruce Creek	45 cfsm
Spring Creek	45 cfsm

7. Estimated reduction in infiltration: (burned area): 50% for 150 acres severely burned; 10% average for remainder of area; this is for the first two to three weeks after the fire.
8. Adjusted related design flow

Red Meadow	35 cfsm
S.Fk. Red Meadow	77
Spruce Creek	50
Spring Creek	50

PART V SUMMARY OF SURVEY AND ANALYSIS

1. Skills represented on burned area survey team (list as appropriate):Phyllis Snow, Hydrologist, team leader; Dean Sirucek, Soils Scientist, alternate team member; Jim VanDenberg, Silviculturist, team member. The following people were consulted for various types of information: Dennis Kennedy; Resource Assistant; Hank Dawson, Fisheries Biologist; Bruce Hird, Wildlife Biologist; Mike Conner and Harry McAllister, Lands specialists; Don Kern, Hydrology Technician; Dave Lange, Glacier National Park; Willie Colony, Glacier National Park; Doug Young, ASCS; Carlos Rodrigues, SCS; Kathy Jones, Flathead Conservation District.

2. Describe emergency: A fire that began on September 5, 1988 about 7 miles west of Polebridge became a firestorm that raced eastward over the Polebridge area and into Glacier National Park. Four streams and 10200 acres of ground on the west side of the North Fork of the Flathead River were impacted. Red Meadow Creek is rearing ground for Western Slope Cutthroat and Bull Trout in the lower reaches and a spawning area in the upper reaches. It is one of the few streams in the North Fork that is open to fishing. It has high recreational value. Permanent homes and seasonal homes and cabins are located in the burned area. About seven miles of the burn area lie in the Wild and Scenic River corridor of the North Fork River.

3. Emergency rehabilitation objective: 1) Prevent sediment from damaging the rearing habitat in Red Meadow Creek; 2) Prevent erosion and sediment deposition that would damage the homeowners properties along the North Fork River; 3) Prevent sedimentation downstream in the North Fork River, Flathead River, and Flathead Lake, 4) Prevent degradation of the wild and scenic qualities of the North Fork River from sediment from Red Meadow, South Fork of Red Meadow,

Spruce and Spring Creeks, 5) Provide security for threatened and endangered species, 6) Provide safety for land owners and forest users.

4. Probability of completing treatment prior to first major damage producing storm: 80 - 90% for all areas
   Land % Channel % Roads@tr's % Other %

5. Net Environmental-quality benefit index: 0.8 (S)

6. Net Social-well-being benefit: 0.95 (S)

7. Benefit/cost ratio: 2.5 (F)

8. Net benefits: $25190.00

9. Cost effectiveness index (choose one): a. I b. c. d.

PART VI
ELIGIBLE EMERGENCY REHABILITATION MEASURES OR TREATMENTS AND SOURCE OF FUNDS

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

		NFS LANDS				OTHER LAND			
	Units	Unit cost	units #	FFF 094 $	other $	units #	federal $	non-fed $	total $
A. LAND									
SEEDING	Acres	$9.50	390	$3705					
(log erosion terracetts)	Acres	75	45	$3375					
B. CHANNELS									
(channel barriers)		$31	50	$1550					
opening water courses	Miles								
stabilizing streambanks	Miles	$500	3		$1500				
C. ROADS & TRAILS	Miles								
D. MAJOR STRUCTURES	Each								
E. ASSESSMENT TEAM DAYS		$140	48	$6680					
G. TOTAL				$15310.00	$1500				

PART VII - APPROVALS

Forest Supervisor approval and date: /s/ EDGAR B. BRANNON, JR. 9/16/88

Regional Forester approval and date: 9/19/88