White River Meadow + Deep Creek 1977

DEEP CREEK

I. PURPOSE

Purpose of this Burned Area Report, Form 2500-8, is to determine needs, analyze alternatives and request funds for emergency rehabilitation of the area burned by the Deep Creek Fire. It is a combined summary to meet requirements for a burned area survey report, environmental analysis report, rehabilitation plan, request for funds and accomplishment report.

The fire began Saturday, August 6, 1977, on the Rifle Ranger District, White River National Forest. It was detected Sunday, August 7, 1977, and was controlled on August 18, 1977, after burning 4,077 acres. Lightning was determined to have started the fire.

Section 2523 of the Forest Service Manual requires that rehabilitation efforts begin immediately following destruction of vegetative cover by a wildfire to minimize the loss of soil and on-site productivity, water control and quality and threats to life and property.

II. PROCEDURE

An interdisciplinary team surveyed the burn area August 14 and 16, 1977, to:

1. Assess on-the-ground conditions.
2. Identify and define the emergency.

3. Locate geographically potential treatment measures in relation to observed conditions and the existing emergency.

The team mapped the burned area into homogeneous vegetation and burn intensity areas. Long-range objectives were then determined for each area which would best complement the key values of wildlife habitat and fish habitat. Short-range objectives will be to protect the soil and water resource by establishing a good ground cover of 30 percent to 50 percent density by the end of three years where sedimentation is expected to be excessive.

The Surface Component Map shows the location of the types. Analyses for each of the nineteen types identified was done by the I.D. team.

Table I describes particular types within the fire perimeter based on vegetation and intensity of burn. Alternative treatments were developed for each of these types and are shown in Table II.

The alternatives used are defined as follows:

1. Do Nothing - This alternative implies that natural regeneration and reinvasion will meet rehabilitation needs.

2. Seed Annuals - This alternative implies that rapid cover is needed but for a short period of time. Perennial grasses, forbs, browse or trees would be needed in the future to maintain soil and watershed values.

3. Seed Perennials - This alternative implies that seeding is needed to accelerate natural processes. Perennials are expected to be long lasting and have semi-permanent soil holding properties.

4. Seed Annuals and Perennials - This alternative was developed to provide immediate and long-term soil stabilization. The annuals were proposed to establish a quick cover crop and the perennials to provide permanence.

5. Seed Short-Lived Perennials - This alternative implies that response similar to that of perennials is desired. Short-lived species were suggested for situations where long-term direction called for the establishment of non-grass cover.

6. Build Structures - This alternative implies that excessive sedimentation is imminent and that catchment structures are necessary.

Evaluation of alternatives were made through the interdisciplinary process. The best alternative was selected for each type based on minimum cost and the ability to meet both short- and long-range objectives.

Causes for the rejection of alternatives are defined as follows:

TABLE I - DESCRIPTION OF TYPES

Type	Area (Acres)	Long Range Objective	Vegetation	Slope	Aspect	Burn Intensity	Expected Response Without Treatment
I	146	Bighorn Sheep Habitat	Scattered Douglas Fir Oakbrush and Browse	70%	South	Moderate	Browse is expected to resprout. Sedimentation is expected to be similar to natural rate.
II	100	Bighorn Sheep Habitat	Douglas Fir	70%	East	Moderate	Douglas fir is not expected to readily reestablish on the site. Remnant browse plants will resprout. Based on abundance of rock, sedimentation is not expected to be a problem.
III	157	Bighorn Sheep Habitat	Oakbrush	40%	South	Extreme	Oakbrush is expected to resprout. Herbaceous vegetation is expected to reestablish itself. Sedimentation is expected to be moderate.
IV	160	Bighorn Sheep Habitat	Oakbrush	25%	South	Moderate	Same as above with slightly better response because of intensity.
V	220	Elk Cover	Douglas Fir	60%	North	Extreme	This area is not expected to revegetate within a reasonable time. Sediment and ash are expected to adversely effect Deep Creek.
VI	152	Elk Cover	Douglas Fir	60%	North	Moderate	This area is not expected to regenerate Douglas fir. Aspen will sprout to some degree. Since the burn was not intense, litter is expected to accumulate and minimize erosion. Possibly some of the mature Douglas fir was not killed.
VII	87	Elk Cover	Douglas Fir	60%	North	Extreme	This area is not expected to revegetate within a reasonable time. Sediment and ash are expected to adversely effect Deep Creek.

TABLE I - DESCRIPTION OF TYPES (CON'T.)

Type	Area (Acres)	Long Range Objective	Vegetation	Slope	Aspect	Burn Intensity	Expected Response Without Treatment
VIII	99	Habitat Diversity	Aspen	10%	Ridge-top	Light	Aspen is expected to sprout. Little potential for erosion.
IX	27	Habitat Diversity	Oakbrush	30%	South	Light	Fire was very light. Little change from pre-fire expected. Some resprouting will occur.
X	1111	Habitat Diversity	Oakbrush	50%	All Slopes	Extreme	Oakbrush will resprout as will sedges. Sediment potential is extreme.
XI	152	Habitat Diversity	Douglas Fir Oakbrush	40%	South	Light	Vegetation should remain essentially the same as pre-fire. Erosion rate will not be much greater than natural rate.
XII	88	Elk Cover	Douglas Fir	55%	North	Extreme	This area is not expected to revegetate within a reasonable time. Sediment and ash are expected to adversely effect Deep Creek.
XIII	170	Elk Cover	Douglas Fir	60%	North	Extreme	This area is not expected to revegetate within a reasonable time. Sediment and ash are expected to adversely effect Deep Creek.
XIV	151	Habitat Diversity	Douglas Fir Oakbrush	55%	East	Moderate	Erosion potential extreme. Oakbrush will resprout.
XV	446	Habitat Diversity	Oakbrush	55%	All Slopes	Moderate	Oakbrush will resprout. Unburned islands of oakbrush and grasses will remain. Erosion potential light to moderate.
XVI	56	Habitat Diversity	Oakbrush	45%	East	Extreme	Oakbrush will resprout; grasses will not. Erosion potential high.
XVII	43	Big Game Winter Range	Oakbrush	50%	West	Extreme	Oakbrush will resprout; grasses will not. Erosion potential high.

TABLE I - DESCRIPTION OF TYPES (CON'T.)

Type	Area (Acres)	Long Range Objective	Vegetation	Slope	Aspect	Burn Intensity	Expected Response Without Treatment
XVIII	140	Big Game Winter Range	Pinion/ Juniper Douglas Fir	45%	South-west	Moderate	Batches of oakbrush expected to sprout. Erosion potential high.
XIX	570	Big Game Winter Range	Pinion/ Juniper Douglas Fir	65%	East South West	Extreme	No sprouting expected. Erosion potential high.
Total	4077						

TABLE II - ALTERNATIVE TREATMENT ANALYSIS

ype	Do Nothing	Seed Annuals	Seed Perennials	Seed Annuals & Perennials	Seed Short-Lived Perennials	Build Structures
	X	A	A	A	A	B
I	X	A	A	A	A	B
II	C	C	X + Browse	E,C	D	B
V	C	C	X + Browse	E,C	D	B
	C	C	D	E,C	X	B
I	X	A	A	A	A	B
II	C	C	D	E,C	X	B
III	X	A	A	A	A	B
X	X	A	A	A	A	B
	C	C	X	E,C	C	B
I	X	A	A	A	A	B
II	C	C	D	E,C	X	B
III	C	C	D	E,C	X	B
IV	C	C	X	E,C	C	B
V	X	A	A	A	A	A
VI	C	C	X	E,C	C	B
VII	C	C	X	E,C	C	D
VIII	C	C	X + Browse	E,C	C	B
IX	C	C	X + Browse	E,C	C	D

= Selection

easons for Non-Selection:

A - Natural Revegetation Expected
B - Wilderness Study Area
C - Required Ground Cover Not Expected
D - Conflict with Long-Term Objectives
E - Unacceptable Competition

A. Natural Revegetation Is Expected - If acceptable revegetation is expected to occur naturally, cost involved for additional seeding is not justified.

B. Wilderness Study Area - If this land classification is established for a given type, it precludes the possibility to build structures.

C. Required Ground Cover Not Expected - Lack of prescribed ground cover within prescribed time period was cause for immediate rejection.

D. Conflict with Long-Term Objectives - An alternative was considered inappropriate if it hampered long-term management objectives.

E. Unacceptable Competition - This cause for rejection surfaced during the evaluation of alternatives. It pertains to the use of annuals and perennials in the same treatment. Competition between the two was considered too great to make this alternative viable.

The use of native versus introduced grass species was considered. Since much of the area is a Candidate Study Area, it was decided that native species should be used provided that they were available and would produce the desired result. However, since native species are not available in the quantities needed and immediate revegetation is paramount to the protection of soil, water and private property, non-native grasses will be used.

From this matrix analysis, three alternative courses of action were selected for benefit/cost analysis.

A. Do Nothing - This alternative implies that natural revegetation and reinvasion will meet rehabilitation needs.

B. Seed Entire Burned Area - This alternative assumes that rapid cover is needed within the entire perimeter of the burn.

C. Seed Selected Types - This alternative implies that seeding is needed to accelerate natural processes only in certain types. Both Alternatives B and C would rely on perennial grasses for the soil holding properties and longevity.

Quantitative estimates of economic, environmental and social results anticipated from the alternatives were developed (Exhibit I of the Burned Area Report). Cost/benefit analyses were run for each of the three treatments. Explanation of the rationale used in filling out Form 2500-8 is attached.

III. RECOMMENDATIONS

Alternative C was selected, because with benefit/cost ratio of 4.1/1, it best meets the short-range objectives of protecting soil and water values.

Long-term objectives are fish habitat and wildlife habitat. Fish habitat objectives will be completely met with the selected emergency treatment. Emergency treatment will need further funding to meet long-term wildlife needs.

Forest project Division of Wildlife contributed funds will be used to accomplish the long-term objectives.

The following types will be treated:

1. I, II, III and IV - Bighorn Sheep Range - Grass and browse species preferred by bighorns (see Assumption Section) will be seeded in selected portions of these types. Seed will be provided by the Division of Wildlife.

2. V, VI, XII and XIII - Elk Cover - Douglas fir will be planted in these types to improve the amount of cover for elk. Douglas fir were on these sites prior to this burn and were used extensively by elk. Forest funds will be required for all aspects of tree planting.

3. XVIII and XIX - Deer and Elk Winter Range - Browse species important to wintering big game will be seeded and planted on selected sites within these types. Division of Wildlife and Bureau of Land Management funds will be used.

Emergency Rehabilitation Funds (094)	$ 58,460
White River National Forest Funds (033)	To be developed in project work planning.
Cooperation from Colorado Division of Wildlife	2,000
Cooperation from Bureau of Land Management	15,540
Total	$ 76,000

LIST OF REFERENCES FOR SEEDING

1. "A Summary of Range Grass Seeding Trials in Colorado," Technical Bulletin 73, June, 1963, Agricultural Experiment Station, Colorado State University.

2. "Restoring Big Game Range in Utah," A. Perry Plummer, U. S. Forest Service, Intermountain Forest and Range Experiment Station, Ephraim, Utah. Publication No. 68-3.

3. "Handbook of Colorado Native Grasses," Colorado State University Extension Service Bulletin 450-A.

4. "Seeding Manual," U. S. Department of Interior, Bureau of Land Management, 7413.

5. "Planting Guide for Difficult Sites," U. S. Department of Agriculture, Soil Conservation Service, Garfield County.

6. "Advantages of Mixture Seedings," by Don Cain, Ely, Nevada, Bureau of Land Management, Technical Notes.

7. "Non-Structural Range Improvements Handbook," Chapter 200 - Seeding, U. S. Forest Service, Handbook R-3.

8. "Range Plant Handbook," U. S. Department of Agriculture, Forest Service.

9. "Manual of the Grasses of the United States," Hitchcock, U. S. Department of Agriculture, Publication No. 200.

10. "Highlights, Results and Accomplishments of Game Range Restoration Studies, State of Utah," Division of Natural Resources, Publication No. 70-3.

11. "Species Adaptability in the Piceance Basin for Revegetating Soils Disturbed by Oil Shale Development," Dr. Phillip L. Sims, U. S. Geological Survey.

RECOMMENDED SEEDING MIXTURE

	Pounds/Acre	Reason for Selection
SOD FORMING SEED MIXTURE		
Smooth Brome (Manchar)	3	Sod former. Erosion control.
Intermediate Wheatgrass (Amur)	3	Competition with oakbrush.
Hard Fescue (Duran)	3	Erosion control. Sod former.
Crested Wheat (Nordan)	2	Wildlife spring forage.
Rambler Alfalfa	1	Wildlife and nitrogen fixation.
Critana Thick Spike Wheatgrass	3	Sod former for erosion.
Total	15	
SHORT-LIVED PERENNIAL MIXTURE		
Slender Wheat	5	Short-lived bunch grass (quick cover).
Tall Oatgrass (Tualatin Variety)	5	Short-lived bunch grass (quick cover).
Timothy	5	Short-lived. Erosion control.
Dutch Sweet Clover	1	Wildlife.
Total	16	
SOD FORMING PINION-JUNIPER MIXTURE		
Duran Hard Fescue	2	Erosion control.
Crested Wheat (Nordan)	3	Wildlife spring feed.
Pubescent Wheat (Luna)	2	Erosion control.
Smooth Brome (Manchar)	3	Erosion control.
Sweet Clover (Utah)	1	Wildlife and nitrogen fixation.
Small Burnett	1	Wildlife.
Total	12	

Specific instructions for use of this form are attached. Overall instructions are in FSM 2523 and the Emergency Wildfire Rehabilitation Handbook (FSH 2509.13).

1. Fire name	2. Request [x] Initial [ ] Interim [ ] Final Accomplishment report [ ] FFF [ ] Other	3. Date of report
Deep Creek		8/20/77

4. State	5. County	6. Congressional	7. Region	8. Forest	9. Ranger District
Colorado	Garfield	District 4	02	White River	Rifle

10. Supervisor	11. Date fire started	12. Date controlled	13. Estimated suppression cost $
Fire no. 47	8/7/77	8/18/77	

14. Fire suppression damages repaired with FFF 102 funds
11 mi. firelines waterbarred 30 acres firelines seeded

15. Fuel type fire intensity
10 % light 30 % moderate 60 % extreme

NATIONAL FOREST SYSTEM PROBLEM INVENTORY

16. Watershed no.	17. NFS acres burned	18. Water repellant soil
59	3305	0 % of NFS area burned

19. Vegetation types
Oakbrush, P.J., Douglas fir

20. Geologic types
Interbedded sandstone, limestone, shale

21. Soil erosion hazard rating	22. Erosion potential	23. Storm peak potential
.47 (high)	24,000cu. yds./sq. mi.	10 cu. ft./sec./sq. mi.

24. Miles of stream channels by Regional classes
1.3 miles Deep Creek, 3.3 miles Main Elk Cr. (1st order stream), 18.6 mi. intermittent stre

25. Miles of Forest Service roads by maintenance levels
0 mi. level I 0 mi. level II 0 mi. levels III, IV, V

CLIMATIC DATA

26. Annual precipitation	27. Design storm rainfall during 6 hour period
20-30 inches	1.1 inches 2 yr. frequency 1.9 inches 10 yr. frequency
28. Annual runoff	29. Maximum 30 minute intensity storm
6 inches	.5 inches 2 yr. frequency 1.0 inches 10 yr. frequency

SUMMARY OF SURVEY AND ANALYSIS

30. Skills represented on burned area survey team (check)
[x] Hydrology [x] Soils [ ] Geology [x] Range [x] Timber [x] Wildlife [ ] Fire Management
[ ] Engineering [ ] Contracting [ ] Local Management [ ] Research

31. Describe emergency This fire burned _____ acres in a valuable and highly erodible watershed. Failure to revegetate to critical parts of this area would result in losses to watershed, fisheries, downstream diversion structures, agricultural land, and other private property.

32. Emergency rehabilitation objective To maintain soil stability which will minimize danger to downstream private property, minimize degradation of water quality in West Elk, Main Elk, and Deep Creek. Such reduction will reduce sediment for fisheries and downstream irrigation systems, protect both on and off forest values.

33. Personnel needs for rehabilitation project on NFS lands
man-years reassigned for $ man-years new hires for $

34. Probability of completing treatment prior to first major damage-producing storm
Land 60 % Channel 60 % Roads 60 % Other %

35. Net environmental quality benefit index	36. Net social well-being benefit index
[x] Significant [ ] Not Significant	[x] Significant [ ] Not Significant

37. Benefit/cost ratio	38. Cost effectiveness index (check one)
4.1/1	[x] I [ ] II [ ] III [ ] IV

39. Forest Supervisor approval & date	Regional Forester approval & date	Date Funding approved to WO
[signature] 8/24/77		

ON-SITE AND OFF-SITE DEVELOPMENTS SUBJECT TO 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 as reported on Form 5100-29.)

	No. of units	Estimated value (dollars)
40. Community and urban development	people - 0 -	- 0 -
41. Municipal water supply	people served - 0 -	- 0 -
42. Transportation systems (6 mi. trails - on site 650 mi/trail 5.8 mi. county roads - off 10,000 mi/Co. road site)	miles 12	619,000
43. Water distribution systems (irrigation)	miles 6	10,375
44. Agricultural development (crops, facilities) (200/ac. + house structures involved)	acres 1400	380,000
45. Industrial development (dams, power, manufacturing)	number - 0 -	- 0 -
46. Power and communication lines	miles - 0 -	- 0 -
47. Recreation development	PAOT - 0 -	- 0 -
48. Fish habitat (865/mi.)	miles 19	16,500
49. Other (specify)	- 0 -	- 0 -
TOTAL HAZARD POTENTIAL		1,025,875

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LAND OWNERSHIP

Land ownership	50. Acres burned	51. Emergency rehab needs: Land acres	Channel miles	Road miles	Other	Source of emergency rehabilitation funds for needed work (dollars): 52 FFF	53 216	54 FR&T	55 Other Fed. (Name)	56 Non-Fed. (Name)	57 Total
FEDERAL NFS	3305	2340	-0-	-0-	-0-	58460			(FFF 102) 5400		
Other (name) BLM	772	643	-0-	-0-	-0-				BLM 15540		
Subtotal	4077	2983	-0-	-0-	-0-						
NON-FEDERAL State and county	-0-										
Private	-0-										
Indian	-0-										
Subtotal	-0-										
TOTAL	4077	2983	-0-	-0-	-0-						79400

2300-32 (3/75)

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 Lands			Total
	Units	Unit cost	No. of units NFS	FFF 094 dollars	Other dollars (Name)	No. of units other	Federal dollars (Name)	Non-Fed. dollars (Name)	dollars all lands
3. LAND									
Seeding	Acres		3305			BLM 772			
Alternative C			2312	58460		643		15540	
plus additional seeding grasses	4077		993	24040		129		2851	
Camp and Fireline	25		25		(FFF 102) 5400				
9. CHANNELS									
Opening water courses	Miles								
Stabilizing streambanks	Miles								
10. ROADS									
Ditch cleaning	Miles								
11. MAJOR STRUCTURES									
Preplanned structures from Unit Plans	Each								
		TOTAL		82500	5400			18391	106291

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 Lands			Total dollars all lands
	Units	Unit cost	No. of units NFS	FFF 094 dollars	Other dollars (Name)	No. of units other	Federal dollars (Name)	Non-Fed. dollars (Name)	
A. LAND **									
Seeding (by mix)	Acres						BLM		
Sod forming	1678	22.10	1635	36133		43	950		37083
Short-lived perennials	567	13.60	567	7711					7711
Sod formers for pinon-juniper	710	16.40	110	1804		600	9840		11644
Application and protection				12812			4750		
B. CHANNELS - none									
[illegible]									
[illegible]									
Ramp and fireline	25		25		(FFF102) 5400				
D. ROADS									
Ditch cleaning	Miles								
F. MAJOR STRUCTURES									
Unplanned structures from Unit Plans	Each								
		TOTAL		58460	5400		15540		79400

**Long-term tree and browse planting will not be financed out of emergency funds - these will be handled on a future 1300-4.

Selected seed mixes are attached.

ALTERNATIVE B

*Benefit Cost Ratio 3.1/1

Exhibit 1 -- Continued

USDA-Forest Service
Fire Name

BURNED AREA REPORT

Date of Report

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EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

62. ECONOMIC BENEFITS SUMMARY WITH 6.125 PERCENT INTEREST RATE

ECONOMIC CRITERIA	Units of measure	Without treatment		With treatment		Difference in present value $
		No. of units	Present value $	No. of units	Present value $	
SEDIMENTATION IMPACTS						
Downstream storage	Incorporated in sediment removal					
Sediment removal first 3 years	Tons	456162	288358	164859	105374	182984
Fish habitat of fishing loss	Years	5	42137	3	26774	15363
Water quality	Incorporated in fish habitat & sediment removal					
FLOOD WATER DAMAGE						
Land	Acres	700	131921	50	9423	122498
Property Headgate damage	8/yr.		4267	1/yr	533	3734
XXXXX Homesites	S.C.S. is evaluating this now					
TOTAL DOLLARS			466683		142104	324579

63. ENVIRONMENTAL QUALITY BENEFIT INDEX

ENVIRONMENTAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Erosion and sediment	10	3	30	1	10	2	20
Aesthetic land quality	2	1	2	1	2	0	0
Water quality	7	3	21	2	14	1	7
Ecological benefits	1	1	1	1	1	0	0
Fish & wildlife habitat	8	3	24	1	8	2	16
Other							
TOTAL	28		78		35		43
Average weighted index			2.8		1.3		1.5
Net environmental quality benefit index							1.5

*Assumes successful revegetation 1 yr. after application

64. SOCIAL WELLBEING BENEFIT INDEX

SOCIAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Life, health, safety	10	3	30	1	10	2	20
Employment	1	1	1	1	1	0	0
Recreational opportunity	1	1	1	1	1	0	0
Economic stability	8	2	16	1	8	1	8
Income distribution	2	1	2	1	2	0	0
Preserve special sites							
Other							
TOTAL	23		51		23		28
Average weighted index			2.2		1.0		1.2
Net social wellbeing benefit index							1.2

R3500-8 (5/76)

ALTERNATIVE C

*Benefit Cost Ratio 4.1/1

Exhibit 1 -- Continued

USDA-Forest Service
Fire Name

BURNED AREA REPORT

Date of Report

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EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

62. ECONOMIC BENEFITS SUMMARY WITH 6.125 PERCENT INTEREST RATE

ECONOMIC CRITERIA	Units of measure	Without treatment		With treatment		Difference in present value $
		No. of units	Present value $	No. of units	Present value $	
SEDIMENTATION IMPACTS						
Downstream storage	Incorporated in sediment removal					
Sediment removal first 3 years	Tons	456162	288358	167345	97328	191030
Fish habitat	Years of fishing loss	5	42137	3	26774	15363
Water quality	Incorporated in fish habitat & sediment removal					
FLOOD WATER DAMAGE first 3 yrs.						
Land	Acres	700	131921	50	7423	122498
Property Headgate damage	8/yr.		4267	1/yr.	533	3734
~~XXXXX~~ Homesites	S.C.S. is evaluating this now					
TOTAL DOLLARS			466683		134058	332625

63. ENVIRONMENTAL QUALITY BENEFIT INDEX

ENVIRONMENTAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Erosion and sediment	10	3	30	1	10	2	20
Aesthetic land quality	2	1	2	1	2	0	0
Water quality	7	3	21	2	14	1	7
Ecological benefits	1	1	1	1	1	0	0
Fish & wildlife habitat	8	3	24	1	8	2	16
Other							
TOTAL	28		78		35		43
Average weighted index			2.8		1.3		1.5
Net environmental quality benefit index							1.5

*Assumes successful revegetation

64. SOCIAL WELLBEING BENEFIT INDEX 1 yr. after application

SOCIAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Life, health, safety	10	3	30	1	10	2	20
Employment	1	1	1	1	1	0	0
Recreational opportunity	1	1	1	1	1	0	0
Economic stability	8	2	16	1	8	1	8
Income distribution	2	1	2	1	2	0	0
Preserve special sites	1	1	1	1	1	0	0
Other							
TOTAL	23		51		23		28
Average weighted index			2.2		1.0		1.2
Net social wellbeing benefit index							1.2

2570-3 (9/75)

TOTAL REHAB. JOB [BLM + NFS]

USDA–FOREST SERVICE

PROJECT WORK PLAN

1. UNIT: WHITE RIVER
SUB-UNIT: RIFLE R.D.

2. MANPOWER (List by Name)	DAYS	DAILY RATE	PLANNED COSTS TO BE FINANCED	PLANNED COSTS CONTRIBUTED
PROJECT LEADER OR FOREMAN				
PROJECT LEADER	8	60	500	
3 MAN CREW	6	120	720	
HELIPORT MGR.	6	50	300	
2 MAN. EVAL. TEAM	4	120	480	
INTERDISCIPLINARY TEAM	4	320	1280	
FENCE CREWS	3	80	240	
COLO. DOW				100
PER DIEM, TRAVEL AND MEALS			350	

EQUIPMENT (F.S. and Rental)	MONTHS F.O.R.	HOURS OR MILES	F.O.R. OR USE RATE	
5892 3/4T PU		400	.19	80
5685 1/2T PU		400	.11	50
4408 1T STAKE		1500	.15	250
OTHER VEHICLES				100

MATERIALS AND SUPPLIES	QUANTITY TO BUY	QUANTITY ON HAND	UNIT PRICE		
GRASS SEED VARIOUS MIXES	22T			57,000	
BROWSE SEED					1400
ELEC. FENCE				500	
MISC. OTHER				500	
CONTRACT 8 HR/DY @ 6 DAYS HELICOPTER + GRASS SEED HOPPER				12000	500
TOTAL PLANNED COST	FINANCED + CONTRIBUTED 76,000			74,000	2,000

PROJECT NO.: REHAB.
FISCAL YEAR: 77

PROJECT NAME, LOCATION & DESCRIPTION

DEEP CREEK FIRE REHABILITATION

T 4S R 91W Secs. 15, 16, 20, 21, 22, 26, 27, 28, 29, 33, 34, 35

T 5S R 91W Secs. 2, 3

PROTECTION AND RESTORATION OF APPROX. 3000 ACRES OF BURNED AREA, TO PROTECT ASSOC. ON-SITE AND DOWNSTREAM VALUES INC. PRIVATE PROPERTY

BEGIN WORK:
COMPLETE WORK:

SPECIAL SKILLS NEEDED	DAYS	WHEN

4. PROPOSED BY: DATE:
STAFF REVIEW BY:
APPROVED BY: [signature] 8/25/77
FUNDS ALLOCATED BY:

3. FINANCE AND ACCOUNTING DATA

APPROPRIATION	STAT CODE	ACCOUNT OR ACTIVITY	FUNCTION MAJOR	FUNCTION SUB	SUB-UNIT	DOLLARS PLANNED AND ALLOCATED
TOTAL ALLOCATED						

5. ACCOMPLISHMENT RECORD

	DATE	INITIAL

1300-4 (1/73)

PLANT SPECIES LIST FOR DEEP CREEK FIRE

Oak Type

Western Wheat
Slender Wheatgrass
Mountain Brome
Wildrye
Fescue
Junegrass
Mutton Grass
Kentucky Blue
Columbia Needlegrass
Carex
Yarrow
Allium
Pussytoes
Aster
Paintbrush
Lupine
Death Camus
Serviceberry
Big Sage
Mountain Mahogany
Snowberry
Prickly Pear Cactus
Oakbrush

Pinion-Juniper and Douglas Fir Type

Western Wheat
Slender Wheatgrass
Wildrye
Junegrass
Mutton Grass
Kentucky Blue
Erigonum
Gilia
Ponstemon
Serviceberry
Big Sage
Mountain Mahogany
Juniper
Pinion Pine
Bitter Brush

TOTAL REHAB. JOB [COM + NFS]

USDA-FOREST SERVICE

PROJECT WORK PLAN

1. UNIT: WHITE RIVER
SUB-UNIT: RIFLE R.D.
PROJECT NO.: REHAB.
FISCAL YEAR: 77

PROJECT NAME, LOCATION & DESCRIPTION

DEEP CREEK FIRE REHABILITATION
T 45 R 91 W SECS. 15, 16, 20 21, 22, 26, 27, 28, 29, 33 34, 35
T 55 R 91 W SECS. 2, 3
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2. MANPOWER (List by Name)	DAYS	DAILY RATE	PLANNED COSTS TO BE FINANCED	PLANNED COSTS CONTRIBUTED
PROJECT LEADER OR FOREMAN — PROJECT LEADER	8	60	500	
3 MAN CREW	6	120	720	
HELIPORT MGR.	6	50	300	
2 MAN. EVAL. TEAM	4	120	480	
INTERDISCIPLINARY TEAM	4	320	1280	
FENCE CREWS	3	80	240	
COLO. DON				100
PER DIEM, TRAVEL AND MEALS			3520	

EQUIPMENT (F.S. and Rental)	MONTHS F.O.R.	HOURS OR MILES	F.O.R. OR USE RATE		
5892 3/4T PU		400	.19	80	
5635 1/2T PU		400	.11	50	
4403 1T STAKE		150	.15	250	
OTHER VEHICLES				100	

MATERIALS AND SUPPLIES	QUANTITY TO BUY	QUANTITY ON HAND	UNIT PRICE		
GRASS SEED VARIOUS MIXES	22T			57,000	
BROWSE SEED					1400
ELEC. FENCE				500	
MISC. OTHER				500	
CONTRACT 3 HRS/DY @ 6 DAYS HELICOPTER + GRASS SEED HOPPER				12000	500
TOTAL PLANNED COST	FINANCED + CONTRIBUTED 76,000			74,000	2,000

BEGIN WORK	COMPLETE WORK

SPECIAL SKILLS NEEDED	DAYS	WHEN

4. PROPOSED BY: | DATE:
STAFF REVIEW BY:
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3. FINANCE AND ACCOUNTING DATA

APPROPRIATION	STAT CODE	ACCOUNT OR ACTIVITY	FUNCTION MAJOR	FUNCTION SUB	SUB-UNIT	DOLLARS PLANNED AND ALLOCATED
TOTAL ALLOCATED						

5. ACCOMPLISHMENT RECORD	DATE	INITIAL

1300-4 (1/73)

APPENDIX

Appendix

INTERFACE

COMPUTATION SHEET

SHEET 1 OF 3

MADE BY

CHECKED BY (INITIAL) (DATE)

Soil Loss Material

Total soil loss estimates are based on the percent good ground cover expected by natural regeneration for seeding. Differences in response to natural revegetation in seeding are based on the vegetative type burned & intensity of burn.

SHEET 3 OF 3

Flea Mill or Short Division. Because portions of the Main Elk Creek watershed are devoid of any ground cover due to soil management with potential for damage to life & property is possible. The SCS has been notified that this potential exists.