USDA Forest Service

BURNED AREA REPORT

Detailed instructions for use of this form are in the Burned-Area Emergency Rehabilitation Handbook (FSH 2509.13), Section 41.

1. Fire name	2. ☐ Request ☒ Initial ☐ Interim ☐ Final ☐ Accomplishment report ☐ FFF ☐ Other	3. Date of report
Wallace		7/13/79

4. State	5. County	6. Congressional District	7. Region	8. Forest	9. Ranger District
Arizona	Coconino	3	3	04	Flagstaff

10. Supervisor fire no.	11. Date fire started	12. Date controlled	13. Estimated suppression cost
137	7/7/79	7/8/79	$ 77,984

14. Fire suppression damages repaired with FFF 102 funds
1/2 mi. firelines waterbarred 10 acres firelines seeded

15. Fire intensity
10 % low 10 % medium 80 % high

NATIONAL FOREST SYSTEM PROBLEM INVENTORY

16. Watershed no.	17. NFS acres burned	18. Water repellant soil
116	327	5 % of NFS area burned

19. Vegetation types
Ponderosa pine with scattered pinyon-juniper

20. Geologic types
basalts, cinder cones

21. Soil erosion hazard rating	22. Erosion potential	23. Flood peak potential
100 % low % med. % high	8800 cu. yds./sq. mi.	417 cu. ft./sec./sq. mi.

24. Miles of stream channels by Regional order or classes
Order 1 - 1 mile

25. Miles of Forest Service roads and trails by maintenance levels
mi. level I rds. mi. level II rds. 1.25 mi. levels III, IV, V rds. mi. trails

CLIMATIC DATA

26. Annual precipitation	27. Design storm rainfall during 1 hour period
19 inches	0.8 inches 2 yr. frequency 1.4 inches 10 yr. frequency
28. Annual runoff	29. Maximum 30 minute intensity storm
1.5 inches	0.6 inches 2 yr. frequency 1.1 inches 10 yr. frequency

SUMMARY OF SURVEY AND ANALYSIS

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

31. Describe emergency The high intensity of this fire killed approximately 80% to 90% of all vegetation. Resultant denuded area needs quick establishment of vegetative cover to best protect on-site productivity.

32. Emergency rehabilitation objective Establish a protective vegetative cover as soon as practical to minimize the loss of soil productivity.

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

34. Probability of completing treatment prior to first major damage-producing storm
Land 70 % Channel 50 % Roads % Other %

35. Net environmental quality benefit index ☒ Significant ☐ Not Significant

36. Net social wellbeing benefit index ☐ Significant ☒ Not Significant

37. Benefit/cost ratio 11:1 Net benefits $7519

38. Cost effectiveness index (check one) ☐ I ☒ II ☐ III ☐ IV

39. Forest Supervisor approval & date	Regional Forester approval & date	Date funding approved in WO
William L Holmes 7/13/79		

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 va (dollars)
40. Community and urban development	people N/A	
41. Municipal and domestic water supply	people served N/A	
42. Transportation systems	miles N/A	
43. Water distribution systems (irrigation)	miles N/A	
44. Agricultural development (crops, facilities)	acres N/A	
45. Industrial development (dams, power, manufacturing)	number N/A	
46. Power and communication lines	miles N/A	
47. Recreation development	PAOT N/A	
48. Fish habitat	miles N/A	
49. Other (specify)		
TOTAL HAZARD POTENTIAL (Indicates values threatened by design storm. Does not enter into the R/C.)		

NARRATIVE (Optional. May be left out or expanded on additional sheets as needed

Fire Name

BURNED AREA REPORT

Date of Report

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LAND OWNERSHIP

Land ownership	50. Acres burned	51. Emergency rehabilitation needs				Source of emergency rehabilitation funds for needed work (dollars)						
		Land (acres)	Channel (miles)	Road and Trail (miles)	Other	52. FFF 094	102	53. 216	54. FR&T	55. Other Federal (name)	56. Non-Federal (name)	57. Total
FEDERAL NFS	327	290	.5			6800						6800
Other (name)												
Subtotal Federal												
NON-FEDERAL State & county												
Indian reservation												
Private												
Subtotal Non-Federal												
TOTAL	327	290	.5			6800						6800

Page 3

Fire Name Date of Report

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
58. LAND									
Seeding	Acres	$20.00	290	5800					5800
59. CHANNELS									
Opening water courses	Miles								
Stabilizing streambanks	Miles	$2000.00	.5	1000					1000
60. ROADS & TRAILS									
61. MAJOR STRUCTURES									
Preplanned — from Forest Plans	Each								
		TOTAL		6800					6800

EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

62. EXPECTED DAMAGE REDUCTION BENEFIT SUMMARY
at current Water Resources Council interest rate of 6.875 percent

Economic benefit indices	Units of measure	Damage expected				Expected $ damage reduction
		Without treatment		With treatment		
		No. of units	Present value $	No. of units	Present value $	
WATERSHED IMPACTS SEDIMENTS Downstream water storage						
Sediment removal						
Fish habitat						
Water quality						
FLOOD WATER Land on site productivity	yd^3	7366	31463	5568	23944	7519
Improvements						
Subtotal watershed						
RESOURCE RELATED IMPACTS Range						
Wildlife and recreation						
Timber						
Subtotal resource related						
OTHER IMPACTS						
Subtotal other						
Total dollars			31463		23944	7519

Fire Name Date of Report

EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

63. (Table 4) ENVIRONMENTAL QUALITY BENEFIT INDEX

ENVIRONMENTAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Erosion and sediment	2	1	2	1	2	0	0
Aesthetic land quality	3	1	3	1	3	0	0
Water quality							
Site productivity	10	2	20	1	10	1	10
Wildlife habitat	1	1	1	0	0	1	1
Fish habitat							
Other							
TOTAL	16		26		15		11
Average weighted index			1.6		.9		.7
Net environmental quality benefit index							S

64. (Table 5) SOCIAL WELL-BEING BENEFIT INDEX

SOCIAL CRITERIA	Weight Factor	Without treatment		With treatment		Difference	
		Actual	Weighted	Actual	Weighted	Actual	Weighted
Life, health, safety							
Employment							
Recreational opportunity	2	0	0	0	0	0	0
Economic stability							
Income distribution							
Preserve special sites							
Other							
TOTAL	2		0		0		0
Average weighted index			0		0		0
Net social well-being benefit index							NS

SOILS OF THE WALLACE FIRE

Typically the soils of the Wallace Fire area are clayey textured derived from basalt. The fine textured clays occur at an average depth of five inches below the soils surface; although, in some areas they have already been exposed to the soils surface. These areas show very little establishment of vegetation and generally show an increase in erosion pavement.

Though the potential soils loss is 7.2 tons/acre which is very low, further erosion could either bring these clays closer to the soil surface or expose them in some areas. Consequently, soils could convert from Typic to Vertic intergrades of Eutroboralfs. Vegetational establishment could be more difficult to achieve because of this resultant decrease in soil productivity.

Finally, the Wallace Fire occurred in an area of Ponderosa Pine-Pinyon Pine. The micro climate of the soils surface has been significantly changed as a result of the complete destruction of canopy cover and vegetational ground cover. This change of becoming drier and warmer could have a severe affect on the success of Ponderosa Pine seedling establishment. A good stand of grass would improve the micro-climate by providing shade and cover at the soils surface. Also, the process of nutrient cycling can begin, thus improving soil fertility and tilth. This, in turn would improve the success of establishing Ponderosa Pine seedlings.