U. ED STATES DEPARTMENT OF AGRICULT.
FOREST SERVICE

CLEVELAND NF

Final Report
Mine Fire, 7/28/77
Cleveland N.F.

REPLY TO: 2520 Watershed Protection and Management

February 3, 1978

SUBJECT: Mine Fire - Emergency Rehabilitation

TO: Regional Forester

The Mine Fire started on July 28, 1977 at 12:30 p.m. in Tin Mine Canyon located approximately 3 miles southwest of Corona, California. Within 3 days the fire perimeter enclosed about 5,000 acres, although approximately 500 acres within the perimeter were not burned.

Emergency rehabilitation is complete and our attention will now be focused on long-term management of this area. An interdisciplinary team, including concerned outside agencies, will begin to lay out long-term management strategy sometime in late February or March.

Attached is our Final Burn Area Report for the Mine Fire.

Additionally, attached is a chronological summary with supportive information. It was felt that a lengthy narrative was no more valuable than the attached information. There are some items that are not brought forward in the attached supplemental information and will be outlined below.

1. Rainfall on the area since the fire has totalled 16 inches with intensities approaching 1 inch/hour. These storms have caused damage to some homes and some of this damage can be attributed to increased runoff and sediment flow from the burn area.

2. After each storm, the burn area was surveyed and debris removed from stream channels.

3. Most of the emergency rehabilitation effort was accomplished with the El Cariso Hot Shots. Much of their time was contributed and is not reflected in the Burn Area Report. An estimated $5,000 was ~~contributed~~.

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RECEIVED
FEB 10 1978
WATERSHED
MGMT. STAFF

F.S. R 5
RECEIVED
JUL 27 1978
WATERSHED
MGMT. STAFF

4. Cooperation with S.C.S. and the Resource Conservation District was outstanding. We would hope that future rehabilitation efforts will run as smoothly as the Mine Fire effort.

We are satisfied with our emergency efforts and will now proceed with programmed management to accomplish long-term objectives.

Frederik G. deHoll

FREDERIK G. deHOLL
Forest Supervisor

Enclosures

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USDA Forest Service

Exhibit 1

BURNED AREA REPORT

Specific instructions for use of this form are attached. Overall instructions are in FSM 2523 and FSH 2509.13, Burned-Area Emergency Rehabilitation Handbook.

1. ~~Fire~~ name	2. Request				3. Date of report
Mine	☐ Initial	☐ Interim	☒ Final	Accomplishment report	3 Feb. 1978
	☐ FFF	☐ Other			

4. ~~State~~	5. County	6. Congressional District	7. Region	8. Forest	9. Ranger District
Calif.	Riverside	36(40+39)	5	Cleveland	Trabuco

10. Supervisor fire no.	11. Date fire started	12. Date controlled	13. Estimated suppression cost
556	July 28, 1977	Aug. 1, 1977	$1,250.00

14. Fire suppression damages repaired with FFF 102 funds
13.8 mi. firelines waterbarred 327 acres firelines seeded

15. Fuel type fire intensity
5% light 25% moderate 70% extreme

NATIONAL FOREST SYSTEM PROBLEM INVENTORY

16. Watershed no.	17. NFS acres burned	18. Water repellant soil
18-03	2900	70% of NFS area burned

19. Vegetation types chaparral: chamise, scrub oak, coast sagebrush, California buckwheat, laurel suma, and black sage

20. Geologic types
Upper cretaceous marine and jurasic-triasic metavolcanic

21. Soil erosion hazard rating	22. Erosion potential	23. Storm peak potential
L M H 100%	120,000 cu. yds./sq. mi.	380 cu. ft./sec./sq. mi.

24. Miles of stream channels by Regional order or classes
11.4 miles class 4

25. Miles of Forest Service roads by maintenance levels
mi. level I mi. level II 4.5 mi. levels III, IV, V

CLIMATIC DATA

26. Annual precipitation	27. Design storm rainfall during 24 hour period
18-25 inches	3.5 inches 2 yr. frequency 6.5 inches 10 yr. frequency
28. Annual runoff	29. Maximum 30 minute intensity storm
2-3.5 inches	.2 inches 2 yr. frequency .9 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

31. Describe emergency - Severe erosion and potential facility damage due to floods are very high. Two factors contribute to this: (1) proximity to dense population center (Corona, Calif.) and (2) the watershed characteristics (i.e., slopes 70% and erosion hazard high).

32. Emergency rehabilitation objective
To reduce downstream flooding, siltation and property loss and maintain watershed values on slope.

33. Personnel needs for rehabilitation project on NFS lands
1 man-years reassigned for $1700 man-years new hires for $

34. Probability of completing treatment prior to first major damage-producing storm
Land 100% Channel 100% Roads 100% Other 0 %

35. Net environmental quality benefit index	36. Net social wellbeing benefit index
☒ Significant ☐ Not Significant	☒ Significant ☐ Not Significant
37. Benefit/cost ratio 5.8	38. Cost effectiveness index (check one) ☒ I ☐ II ☐ III ☐ IV

39. Forest Supervisor approval & date	Regional Forester approval & date	Date funding approved in WO
Frederik G. deHoll 2/8/78 FREDERIK G. deHOLL		

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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 1500	4,152,000
41. Municipal water supply	people served 1475	20,000
42. Transportation systems	miles 60	1,640,000
43. Water distribution systems (irrigation)	miles 3	5,000
44. Agricultural development (crops, facilities)	acres 15	300,000
45. Industrial development (dams, power, manufacturing)	number 5	1,372,000
46. Power and communication lines	miles 12	70,000
47. Recreation development	PAOT 0	0
48. Fish habitat improvements	miles 0	0
49. Other (specify)	-	-
*TOTAL HAZARD POTENTIAL FY 77 and FY 78 Totals		7,559,000

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 Basin 102	094	53 216	54 FR&T	55 Other Fed. (Name)	56 Non-Fed. (Name)	57 Total
FEDERAL NFS	3100	3100	2.5	3.5		5130	17924					23,054
Other (name)												
Subtotal	3100	3100	2.5	3.5		5130	17924					23,054
NON-FEDERAL State and county					1[1]					2,000,000 (C.ofE)	100,000 (County)	2,100,000
Private	1600	1600	4.5	6				13,864		(CDF &	4,429 Local)	18,293
Indian												
Subtotal	1600	1600	4.5	6	1			13,864		2,000,000	104,429	2,118,293
TOTAL	4700	4700	7	9.5	1	5130	17924	13,864		2,000,000	104,429	2,141,347

[1] To be built in late 1978.

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*Does not enter into the B/C - merely an indication of values threatened.

FY 77

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LAND OWNERSHIP

Land ownership	50. Acres burned	51. Emergency rehab needs				Source of emergency rehabilitation funds for needed work (dollars)					
		Land acres	Channel miles	Road miles	Other	52 FFF 102	52 FFF 094	53 216	54 FR&T	55 Other Fed. (Name)	56 Non-Fed. (Name)	57 Total
FEDERAL NFS	3100	400	2.5	1		5130	4459					9589
Other (name)												
Subtotal	3100	400	2.5	1								9589
NON-FEDERAL State and county												
Private	1600	1600						none used			none used	
Indian												
Subtotal	1600	1600										
TOTAL	4700	2000		1		5130	4459					9589

FY 78

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LAND OWNERSHIP

Land ownership	50. Acres burned	51. Emergency rehab needs				Source of emergency rehabilitation funds for needed work (dollars)					
		Land acres	Channel miles	Road miles	Other	52 FFF 102	52 FFF 094	53 216	54 FR&T	55 Other Fed. (Name)	56 Non-Fed. (Name)	57 Total
FEDERAL NFS	3100	3100	1	2.5			13,465					13,465
Other (name)												
Subtotal	3100	3100	1	2.5								
NON-FEDERAL State and county												
Private	1600	1600	4.5	6				13,864		(CDE	4429 Local	18,293
Indian												
Subtotal	1600	1600	4.5	6				13,864			4429	18,293
TOTAL	4700	4700	5.5	8.5			13,465	13,864			4429	31,758

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*Does not enter into the B/C - merely an indication of values threatened.

Total for
FY 77 and FY 78

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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	
58. LAND	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	
Seeding	Acres	2.77	3100	8581	350 (102)	1315	2629 (216)	2629 (State)	14,189	5 Oct 77
Resource Aerial Photos	Photo	5.36	242	1297					1,297	23Nov77
Water Bars	Miles	597	8		4780 (102)				4,780	22Oct77
Rain Gage	Ea.	215	1	215					215	3Nov77
59. CHANNELS										
Opening water courses	Miles	1719	2.5	4298		4.5	9831 (216)		14,129	15Dec77
Stabilizing streambanks	Miles									
Sediment basins*	Basin	2million				1	2,000,000 (CofE)	100,000 (Local)	2,100,000	Early 1979
60. ROADS										
Ditch cleaning	Miles	1115	1.5	1673		6	1404 (216)	1800 (Local)	4,877	15Jan77
Road Bank Stab.	Miles	1504	2	1860					1,860	15Jan77
61. MAJOR STRUCTURES										
Preplanned structures from Unit Plans	Each									
		TOTAL		17,924	5,130		2,013,864	104,429	2,141,347	

*Riverside County Flood Control plans to build one or possibly two flood control structures on private land below National Forest land. Corp of Engineer funds will be used and not 216 fund as originally planned. Total cost will come to around $2,100,000 with construction to begin in late 1978.

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41-4 Exhibit 1 -- Continued

USDA-Forest Service BURNED AREA REPORT

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
58. LAND	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
Seeding	Acres	0.87	327		350 (102)				350
Resource Aerial Photos	Photo	9.00	121	1089					1089
Water Bars	Miles	597	13.8		4780 (102)				4780
59. CHANNELS									
Opening water courses	Miles	890	2.5	2222					2222
Stabilizing streambanks	Miles								
60. ROADS									
Ditch cleaning	Miles	1148	1	1148					1148
61. MAJOR STRUCTURES									
Preplanned structures from Unit Plans	Each								
		TOTAL		4459	5130				9589

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41-4 Exhibit 1 -- Continued

USDA-Forest Service BURNED AREA REPORT

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	2.77	3100	8581		1315	2629 (216)	2629 (State)	13,839	50ct77
Resource Photos	Photo	1.72	121	208					208	23Nov77
Rain Gage	Ea.	215	1	215					215	3Nov77
59. CHANNELS										
Opening water courses	Miles	2076	1	2076		4.5	9831 (216)		11,907	15Dec77
Stabilizing streambanks	Miles									
60. ROADS										
Ditch cleaning	Miles	1050	.5	525		6	1404 (216)	1800 (Local)	3,729	15Jan77
Road Bank Stab.	Miles	930	2	1860					1,860	15Jan77
61. MAJOR STRUCTURES										
Preplanned structures from Unit Plans	Each									
		TOTAL		13,465			13,864	4,429	31,758	

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Exhibit 1 -- Continued

USDA-Forest Service
Fire Name

BURNED AREA REPORT

Date of Report

EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

EXPECTED DAMAGE REDUCTION BENEFIT SUMMARY @ ___ PERCENT INTEREST

62.

ECONOMIC CRITERIA	Units of measure	DAMAGES EXPECTED Without treatment No. of units	Without treatment Present value $	With treatment No. of units	With treatment Present value $	Expected $ Damage Reduction
SEDIMENTATION IMPACTS						
Downstream storage	Acre-Ft	0	-	0	-	0
Sediment removal	yds 3	100,000	93,000	80,000	74,000	19,000
Fish habitat	-	-	-	-	-	-
Water quality	-	-	-	-	-	-
FLOOD WATER DAMAGE						
Land	Acres	1,000	7,500,000	960	7415000	85,000
Improvements						
OTHER						
TOTAL DOLLARS			7593000		7374000	104000

63. ENVIRONMENTAL QUALITY BENEFIT INDEX

ENVIRONMENTAL CRITERIA	Weight Factor	Without treatment Actual	Without treatment Weighted	With treatment Actual	With treatment Weighted	Difference Actual	Difference Weighted
Erosion and sediment	10	2	20	1	10	1	10
Aesthetic land quality	6	2	12	1	6	1	6
Water quality	5	2	10	1	5	1	5
Ecological benefits	2	1	2	0	0	1	2
Wildlife habitat	3	1	3	0	0	1	3
Fish habitat	0	0	0	0	0	0	0
Other	-	-	-	-	-	-	-
TOTAL	26		47		21		26
Average weighted index			1.81		.81		1.00
Net environmental quality benefit index							1.00

64. SOCIAL WELLBEING BENEFIT INDEX

SOCIAL CRITERIA	Weight Factor	Without treatment Actual	Without treatment Weighted	With treatment Actual	With treatment Weighted	Difference Actual	Difference Weighted
Life, health, safety	10	2	20	1	10	1	10
Employment	1	1	1	0	0	1	1
Recreational opportunity	5	1	5	0	0	1	5
Economic stability	6	1	6	0	0	1	6
Income distribution	-	-	-	-	-	-	-
Preserve special sites	-	-	-	-	-	-	-
Other	9	2	18	1	9	1	9
TOTAL	31		50		19		31
Average weighted index			1.61		.61		1.0
Net social wellbeing benefit index							1.0