

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. (see added narrative)

PART II - FIRE LOCATION

1. Fire Name (from Form FS-5100-29): LUNA
2. Forest Supervisor's Fire No. (from Form FS-5100-29): AZ-ASF-038
3. State: ARIZONA
4. County: APACHE
5. Region: 03
6. Forest: 01
7. Ranger District: ALPINE
8. Date Fire Started: 5/22/89
9. Date Fire Controlled: 5/23/89
10. Estimated Suppression Costs: \$ 150,000
11. Fire Suppression Damages Repaired with FFF 102 Funds:

3.0 miles (firelines waterbarred)
3.6 acres (firelines seeded) IN PROGRESS
 Other (identify)

12. Fire Intensity: 30 % (low) 30 % (medium) 40 % (high)

PART III - NATIONAL FOREST SYSTEM PROBLEM INVENTORY

1. Watershed No.: 15040004-34
2. NFS Acres Burned: 380
3. Water Repellant Soil: 20 % of NFS acres burned

4. Vegetation Types: Ponderosa Pine
5. Geologic Types: Datil formation (sandstone & basalt)
6. Soil Erosion Hazard Rating:

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

7. Erosion Potential: 6320 cu. yds/sq. miles
8. Miles of Stream Channels by Regional Order or Classes: #1=.8
9. Miles of Forest Service Trails: 0
10. Miles of Forest Service Roads by Maintenance Levels:

0 miles (Level I) 1.5 miles (Level II)
0 miles (Levels III, IV, V)

PART IV - CALCULATED RISK AND CLIMATIC EVALUATION

1. Estimated Vegetative Recovery Period: 5 years.
2. Chance of Success Desired by Management: 80 percent.
3. Equivalent Design Recurrence Period: 25 years.
4. Related Design Storm Duration: 1 hours.
5. Related Design Storm Magnitude: 1.80 inches.
6. Related Design Flow 120 cfs.
7. Estimated Reduction in Infiltration: 15 percent.
8. Adjusted Related Design Flow: 393 cfs.

PART V - SUMMARY OF SURVEY AND ANALYSIS

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

[X] Hydrology [X] Soils [] Geology [X] Range
[X] Timber [X] Wildlife [] Fire Mgmt. [] Engineering
[] Contracting [] Local Mgmt. [] Research [] Other (identify)

2. Describe Emergency: See Narrative
3. Emergency Rehabilitation Objective: See Narrative
4. Probability of Completing Treatment Prior to First Major Damage Producing Storm:

Land 90 % Channel NA % Roads NA % Other _____ %

5. Net Environmental Quality Benefit Index:

[X] Significant [] Not Significant

6. Net Social Well Being Benefit Index:

[] Significant [X] Not Significant

7. Benefit/Cost Ratio: .72

8. Net Benefits: \$ -1500

9. Cost Effectiveness Index: [] I. [] II. [X] 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	NFS Lands					Other Lands			All Lands
	Units	Unit	No. of	FFP 092	Other \$	No. of	Federal \$	Non-Federal	Total
		Cost	Units	\$		Units		\$	\$
(1)	(2)	(3)	(4)	(5)	ident.	(7)	ident.	identify	(9)
A. LAND									
a. Seeding	Acres	21	131	2751					
b. Seed Application	Acres	5	131	655					
c. Contour discing	Acres	8	70	560					
d. Contour felling	acres	30	25	751					
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				\$4717	\$		\$	\$	

PART VII - APPROVALS

/S/ Vearl L. Haynes (for)/ _____ 5/31/89
Forest Supervisor (Signature) _____ Date

/S/ _____
Regional Forester (Signature) _____ Date

Note: Terraces constructed on less acres than planned

From
Initial

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

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Line Items	NFS Lands					Other Lands			All Lands Total
	Units	Unit	No. of	FFR 092	Other \$	No. of	Federal \$	Non-Federal	
		Cost	Units	\$		Units		\$	
(1)	(2)	(3)	(4)	(5)	ident.	(7)	ident.	identify	(9)
A. LAND									
a. Seeding	Acres	21	131	2751					2751
b. Seed Application	Acres	5	131	655					655
c. Contour discing	Acres	8	70	560					560
d. Contour felling	acres	30	59	1500					1500
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				\$5466	\$		\$	\$	\$5466

PART VII - APPROVALS

/S/ Vearl L. Haynes (for)/
Forest Supervisor (Signature)

5/31/89
Date

/S/ *Michael Lanson*
Regional Forester (Signature)

6-1-89
Date

Acting Deputy Regional Forester

N
ADRF

[Handwritten signature]

EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN
EMERGENCY PROGRAM
(Reference FSH 2509.13)

Fire Name	Date of Report
* Luna	* 5/26/89

A. ENVIRONMENTAL QUALITY BENEFIT INDEX

Environmental Factor (a)	Weight	Without Treatment		With Treatment		Difference	
	Factor	Actual	Weighted	Actual	Weighted	Actual	Weighted
	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1. Erosion and sediment *	10	2	20	1	10	1	10
2. Aesthetic land quality *	6	1	6	1	6	0	0
3. Water quality *	8	1	8	0	0	1	8
4. Site productivity *	4	1	4	0	0	1	4
5. Wildlife habitat *	6	1	6	0	0	1	6
6. Fish habitat *	10	2	20	1	10	1	10
7. Other *							
8. TOTAL *	44	////////	64	////////	26	////////	38
9. Average weighted index *	////////	////////	1.45	////////	0.59	////////	.86
10. Net environmental quality benefit index *	////////	////////	////////	////////	////////	////////	.86

B. SOCIAL WELL-BEING BENEFIT INDEX

Social Criteria (a)	Weight	Without Treatment		With Treatment		Difference	
	Factor	Actual	Weighted	Actual	Weighted	Actual	Weighted
	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1. Life, health, safety *	10	0	0	0	0	0	0
2. Employment *	2	0	0	0	0	0	0
3. Recreational opportunity *	10	1	10	0	0	1	10
4. Economic stability *	4	1	4	0	0	1	4
5. Income distribution *	2	0	0	0	0	0	0
6. Preserve special sites *	2	0	0	0	0	0	0
7. Other *							
8. TOTAL *	30	////////	14	////////	0	////////	14
9. Average weighted index *	////////	////////	0.47	////////	0	////////	.47
10. Net social well-being benefit index *	////////	////////	////////	////////	////////	////////	.47

C. REMARKS

[illegible]

USDA-Forest Service

ON-SITE AND OFF-SITE DEVELOPMENTS SUBJECT TO HAZARDS¹

(Reference FSII 2509.13)

Fire Name

Luna

Date of Report

5/26/89

Line Items

Type of

Number of

Estimated

Units

Units

Value \$

(a)

(b)

(c)

(d)

1. Community and urban development

People

2. Municipal and domestic water supply

People

Served

3. Transportation systems

Miles

4. Water distribution system (irrigation)

ACFT

840

36,000

5. Agricultural development (crops, facilities)

Acres

6. Industrial development (dams, power, manufacturing)

Number

7. Power and communication lines

Miles

8. Recreation development

PAOT

100

108,000

9. Fish habitat

ACRES

154

94,000

10. Other (specify)

2

XXXXXXXX

XXXXXXXX

11. Total Hazard Potential

XXXXXXXX

XXXXXXXX

238,000

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.

FS-2500-8b (11/82)

SUMMARY OF EMERGENCY REHABILITATION NEEDS BY LANDOWNERSHIP
(Reference FSH 2509.13)

Fire Name

* LUNA

Date of Report

* 5/26/89

Landownership	A. Acres Burned	B. Emergency Rehabilitation Needs			
		(1) Land (acres)	(2) Channel (miles)	(3) Road & Trail (miles)	(4) Other
Federal (NFS) *	330	131			
Other (specify) *					
Subtotal (NFS) *					
Non-Federal (State & County) *					
Indian reservation *					
Private *	50				
Subtotal (Non-Federal) *					
TOTAL *	380	131			

C. Source of Emergency Rehabilitation Funds for Needed Work (\$)

Landownership	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) *	5466						5466
Other (specify) *							
Subtotal (NFS) *	5466						
Non-Federal (State & County) *							
Indian reservation *							
Private *							
Subtotal (Non-Federal) *							
TOTAL *	5466						5466

D. Remarks

*

NARRATIVE

Luna Fire

2. Narrative of Fire Emergency

The Luna Fire covered 380 acres primarily in Ponderosa Pine at an elevation of 8100 feet. The fire started on private land and quickly burned onto National Forest. The fire was directly north of Luna Lake and campground. Fire intensity varied from low to high with approximately 40% of the burn at high intensity. Much of the high-intensity burn is characterized by fairly gentle slopes but having long slope lengths. These long slope lengths will contribute to the formations of rills and gullies if no treatment is undertaken. An additional 50 acres of private land was burned with low to moderate intensity within the overall fire line. Three drainages dissect the fire and will allow soil movement to the lake which is less than 1/4 mile away.

Recommended burned area rehabilitation consists of using a Towner Disk along the contours to promote infiltration and provide a suitable seeding environment for seeding which will occur on all of the high intensity burn area. The discing will be restricted to the gentle non-rocky slopes. Grass species to be seeded will emphasize annuals including annual rye and black mustard if a seed source can be found for the black mustard. These species will provide early coverage until orchard grass, intermediate wheatgrass and smooth brome can be established. Seeding will be done by ground application. Because of the valued fishing and recreational opportunities at Luna Lake, additional measures such as contour felling of pole size (fire kill) trees will be done on selected areas. This will aid in improving the micro climate and prevention of soil movement. The area can be removed from grazing for at least two years to aid in the establishment of the vegetation.

DISCING ?

3. Emergency Rehabilitation Objectives

- Promote infiltration of precipitation through contour discing, vegetation establishment and creation of log barriers.
- Reduce on-site erosion of soil and ash and movement of sediment and ash into Luna Lake.
- Reduce sediment movement onto private land below and adjacent to burned area.

Seeding Mix Luna Fire Rehab

Orchardgrass

Intermediate Wheatgrass

Smooth Brome

Yellow sweetclover

Annual rye