

95
United States
Department of
Agriculture

Forest
Service

Tonto
National
Forest

2324 E. McDowell Road
Phoenix, AZ 85006

File Code: 2520

Date: July 5, 1995

Route To:

No Rehab

Subject: Burned Area Emergency Rehabilitation; River Fire

To: Files

Forest Service Policy (FSM 2523.03) requires burned area surveys of all fires 300 acres or greater to determine if emergency watershed rehabilitation is needed. The purpose of this letter is to document the findings of the Forest Burned Area Emergency Rehabilitation (BAER) team regarding the River Fire.

Burned Area Information

The River Fire ignited on July 1, 1995 and was declared controlled on July 4, 1995 at 1800 hours. The fire was located primarily in an area known as The Rolls north of Saguaro Lake. Total burned area was approximately 9500 acres. Burn intensity was predominately light. Most of the burned area drains directly into Saguaro Lake. A small area in the far northeastern corner of the fire drains into Cottonwood Creek which is a tributary of the Salt River above Saguaro Lake. The far western part of the fire drains to the Salt River below Saguaro Lake. Elevations range from 1600 feet near Saguaro Lake to 2400 feet near Cottonwood Creek. The fire burned over approximately two miles of the Bush highway and along a short stretch of Highway 87.

Vegetation is typical of the Sonoran Desert and consists predominately of Palo Verde, Saguaro Cactus, mesquite and jojoba. Shrubs such as brittle bush and bursage are common. Annual grasses are also abundant and are the primary fuel responsible for allowing the fire to spread. Terrain is moderately steep with rolling ridges interspersed with flat bottom sandy washes. Soils are generally formed from older alluvium except for those formed in recent alluvium along drainage bottoms. Erosion hazard is primarily low to moderate. Effective ground cover averages approximately 15 percent in unburned areas. Numerous ORV roads and trails exist within the burned area. The Forest has closed and obliterated many of these routes in the past two years. Approximately 20 miles of open roads remain within the burned area.

Evaluation by the Burned Area Team

Little vegetative ground cover exists in the burned area under natural conditions (effective cover is estimated to be 15%). Runoff and erosion during storm events is therefore naturally high. The burn is located in an area of harsh climatic and soil conditions, consequently the likelihood of successfully seeding the area is small. Other rehabilitation measures, such as erosion control structures are not considered economically feasible.

Large percentages of two drainages that pass through the Butcher Jones Recreation Site were burned. Both drainages have been diked to protect site facilities. The unnamed drainage entering the Butcher Jones site at its northeast corner poses the greatest hazard to recreation site improvements.

Improvements include roads, picnic tables and bathrooms. Change in peak flows expected from this drainage as a result of the fire were estimated to evaluate whether the risk of overtopping has increased. Results of the analysis suggest that the dike is capable of containing the expected increase in flow and that emergency measures to improve the dike are not necessary.

The second drainage, Jones Canyon, crosses the entrance road to the recreation site through a vented ford. The road is reportedly designed to be overtopped without unacceptable damage. Flows overtopping the road would flow down through a parking lot and into the lake. Little damage would be expected consequently emergency measures are not recommended. The likelihood of the fire generating conditions that would result in overtopping is small because of the small change in peak flows that results from the burned conditions.

Recommendation

The Burned Area Rehabilitation Team recommends that emergency funds not be requested for the River Fire.

Grant Loomis
Burned Area Emergency Rehabilitation Team Leader

BURNED-AREA REPORT
(Reference FSH 2509.13, Report FS-2500-8)

PART I - TYPE OF REQUEST

A. Type of Report

- ☐ 1. Funding request for estimated EFFS-FW22 funds
☐ 2. Accomplishment Report
☒ 3. No Treatment Recommendation

B. Type of Action

- ☐ 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)
☐ 2. Interim Report
☐ Updating the initial funding request based on more accurate site data and design analysis
☐ Status of accomplishments to-date
☐ 3. Final report - following completion of work

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name: River Fire B. Fire Number: _____
C. State: AZ D. County: _____
E. Region: 3 F. Forest: Tonto
G. District: _____
H. Date Fire Started: 4/1/95 I. Date Fire Controlled: 7/4/95
J. Suppression Cost: \$ _____
K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
1. Fireline waterbarred (miles) _____
2. Fireline seeded (miles) _____
3. Other (identify) _____
L. Watershed Number: _____
M. NFS Acres Burned: 9,497 Total Acres Burned: 9,497
Ownership type:
() State () BLM () PVT () _____
N. Vegetation Types: Cemi2/Cegi/Prve/Sich.
Prve/Cefl2.
O. Dominant Soils: Ustalfic Haplargids, grx-sl, 0-40% slopes.
Ustic Torrifluvents, 0-5% slopes.
P. Geologic Types: Quaternary/Tertiary sediments (QTs).
Quaternary Alluvium (Qw)
Q. Miles of Stream Channels by Order or Class:

R. Transportation System:
Trails: _____ (miles) Roads: _____ (miles)

PART III - WATERSHED CONDITION

- A. Fire Intensity (Acres): 9,022 (low) 475 (moderate) _____ (high)
- B. Water Repellant Soil (Acres): 950
- C. Soil Erosion Hazard Rating (Acres):
2,374 (low) 6,648 (moderate) 475 (high)
- D. Erosion Potential: 5.5 tons/acre (for 2 years)
- E. Sediment Potential: 1,410 cu. yds/sq. mile (for 2 years)

PART IV - HYDROLOGIC DESIGN FACTORS

- A. Estimated Vegetative Recovery Period: _____ years.
- B. Design Chance of Success: _____ percent.
- C. Equivalent Design Recurrence Interval: _____ years.
- D. Design Storm Duration: _____ hours.
- E. Design Storm Magnitude: _____ inches.
- F. Design Flow: _____ cfs.
- G. Estimated Reduction in Infiltration: _____ percent.
- H. Adjusted Design Flow: _____ cfs.

PART V - SUMMARY OF ANALYSIS

- A. Describe Emergency:

See attached narrative

- B. Emergency Treatment Objectives:

See attached narrative

- C. Probability of Completing Treatment Prior to First Major Damage Producing Storm:

Land _____ % Channel _____ % Roads _____ % Other _____ %

- D. Probability of Treatment Success

	<----Years after treatment----->		
	1	3	5
Land			
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss): \$ _____

F. Cost of Selected Alternative (Including Loss): \$ _____

G. Skills Represented on Burned-Area Survey Team:

<input type="checkbox"/> Hydrology	<input type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range
<input type="checkbox"/> Timber	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input type="checkbox"/> Research	<input type="checkbox"/> Archaeology
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Team Leader: _____

Phone: _____ DG Address: _____

H. Treatment Narrative:

Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.

see attached narrative

PART VI - EMERGENCY REHABILITATION TREATMENTS AND SOURCE OF FUNDS BY LAND OWNERSHIP

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	Units	Unit Cost \$	NFS Lands			Other Lands			All
			Number of Units	EFFS-FW22 \$	Other \$ ident.	Number of Units	Fed \$ ident.	Non-Fed \$ ident.	Total \$
A. LAND TREATMENTS									
B. CHANNEL TREATMENTS									
C. ROADS AND TRAILS									
D. STRUCTURES									
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
F. TOTALS									

PART VII - APPROVALS

- /s/ Judith A. Miller 7-7-95
for Forest Supervisor (Signature) Date
- /s/
Regional Forester (Signature) Date