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
    [X] 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: __ARMER__   B. Fire Number: ___AZ-TNF-195___

C. State: ___ARIZONA___   D. County: __GILA__
E. Region: ___3___   F. Forest: ___TONTO___
G. District: __PLEASANT V & TONTO BASIN__

H. Date Fire Started: __6/29/94__   I. Date Fire Controlled: _____
J. Suppression Cost: $ 2,030,000

K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
        1. Fireline waterbarred (miles) __3.5__
        2. Fireline seeded (miles) __2__
        3. Other (identify) __1 STAGING AREA SEEDED__

L. Watershed Number: __15060103171 AND 15060103170__

M. NFS Acres Burned: 5760   Total Acres Burned: __5760__
    Ownership type:
    (   ) State   (   ) BLM   (   ) PVT   (   ) ____ _____

N. Vegetation Types: __DESERT SHRUB (LSM, 2+1), GRASSLAND (LSM,3), JUNIPER__
                     __(LSM, 4-1) CHAPARRAL (LSM,4,0) PONDEROSA PINE (LSM,5,0)__
O. Dominant Soils: __ARIDIC HAPLUSTALFS, TYPIC HAPLUSTALFS, TYPIC USTOCHREPTS__
                  __AND UDIC HAPLUSTALFS__
P. Geologic Types: __PRECAMBRIAN APACHE GROUP, GRANITE, DIABASE AND__
                  __QUATERNARY VALLEY FILL DEPOSITS__
Q. Miles of Stream Channels by Order or Class:
        __(1) 13.3__   __(2) 7__   __(3) 0.9__   _____
R. Transportation System:
    Trails: _____ (miles)   Roads: __1.2__ (miles)

PART III - WATERSHED CONDITION

A. Fire Intensity (Acres): __4645__ (low) __427__ (moderate) __488__ (high)

B. Water Repellant Soil (Acres): __1740__

C. Soil Erosion Hazard Rating (Acres):
   __1200__ (low) __4060__ (moderate) __500__ (high)

D. Erosion Potential: __5.8__ tons/acre
E. Sediment Potential: __2990__ cu. yds/sq. mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: __3__ years.
B. Design Chance of Success: __90__ percent.
C. Equivalent Design Recurrence Interval: __25__ years.
D. Design Storm Duration: __6__ hours.
E. Design Storm Magnitude: __3__ inches.
F. Design Flow: __520__ cfsm.
G. Estimated Reduction in Infiltration: __20__ percent.
H. Adjusted Design Flow: __632__ cfsm.

PART V - SUMMARY OF ANALYSIS

A. Describe Emergency:

   SEE NARRATIVE

B. Emergency Treatment Objectives:

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:

    [X] Hydrology   [X] Soils   [ ] Geology   [X] Range
    [ ] Timber   [X] Wildlife   [ ] Fire Mgmt. [ ] Engineering
    [ ] Contracting [ ] Ecology   [ ] Research   [ ] Archaeology
    [ ] _____   [ ] _____ [ ] _____ [ ] _____

Team Leader: __GRANT LOOMIS_____
Phone: __(602) 225 5200_____ DG Address:__G.LOOMIS:R03F12A___

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.

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

PART VII - APPROVALS

1. /s/CHARLES R. BAZAN   7-12-94
     Forest Supervisor (Signature)   Date

2. /s/
     Regional Forester (Signature)   Date

ARMER FIRE

BURNED AREA EMERGENCY REHABILITATION EVALUATION

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 narrative is to document the findings of the Forest Burned Area Emergency Rehabilitation (BAER) team regarding the Armer Fire.

Burned Area Information

The Armer Fire was a lightning caused fire that ignited on June 29, 1994. The burned area begins approximately 6 miles north of Roosevelt Lake and extends from Parker Creek on the east to unnamed tributaries to Armer Gulch on the west and to Armer Mountain on the north. Total burned area is 5,760 acres. Major tributaries flowing through the burned area include Schell Gulch, Connor Canyon and Cellar Creek. These are intermittent streams that drain south into Roosevelt Lake. The headwaters of Rose Creek begin in the burned area on Armer Mountain. Rose Creek is a perennial stream that flows north into Workman Creek and then on into Salome Creek and finally Roosevelt Lake.

The fire began in desert shrub at an elevation of approximately 2800 feet, burned upwards through grassland and chaparral, and was finally controlled in Ponderosa Pine at an elevation of approximately 7000 feet on the top of Armer Mountain. Terrain ranges from gently sloping in the desert shrub lowlands, on the plateau grasslands and on the top of Armer Mountain to very steep on the face of Armer Mountain and the face of the grassland plateaus. Burn intensity was mostly low in the desert shrub and grasslands area, an area of about 4600 acres. Areas of moderate intensity burn (approximately 400 acres) occurred primarily in chaparral along the steep face of a series of plateaus near the middle of the fire and the steep face of Armer Mountain itself. Areas of high intensity burn (approximately 500 acres) include a chaparral covered basin at the base of Armer Mountain and about 60 acres of ponderosa pine on the top of Armer Mountain. Soils range from very cobbly loams in the desert lowlands to very cobbly sandy loams in the steeper areas. Erosion hazard is primarily moderate (4060 acres) with areas of low erosion hazard on gentle slopes (1200 acres) and high erosion hazard on steep slopes (500 acres).

Evaluation by the Burned Area Rehabilitation Team

Resource values potentially at risk from the fire include road crossings, private lands, soil productivity in high intensity burn areas, and water quality in perennial streams.

The only private land potentially affected by the fire is the Jack Shoe Ranch in Township 5N Range 13E section 29. This private land includes a short reach of Armer Gulch approximately 4 miles downstream of the burned area. Structures on this land include a home and outbuildings constructed on a ridge above Armer

Gulch. These structures appeared to be located well above the floodplain and are not threatened by increased peak flows that might be generated from the burned area.

Forest Road 60 (the A-Cross Road) is the major transportation corridor for the back side of Roosevelt Lake. Road crossings of streams affected by the fire were inspected. All crossings are low water crossings that should not be adversely affected by increased peak flows. Modifications are not necessary.

Soil productivity in lightly burned desert and grassland areas will not be adversely affected by the fire. Adverse impacts to soil productivity are not expected in moderately burned areas because of rapid resprouting of the chaparral vegetation that occupies the majority of this area. Soil conditions in areas of high intensity burn were inspected on the ground. These soils occur on either gentle slopes (eg top of Armer Mountain) or have a very high rock content. Consequently their erosion hazard is reduced.

Change in peak flow from the intensively burned basin was evaluated and determined not to result in emergency flood conditions. Peak flow changed from 520 cfs before the burn to 630 cfs in the immediate post burn period.

Rose Creek is a perennial tributary to Workman Creek,which is also perennial. Workman Creek is a popular trout fishing stream. Most of the fishing occurs upstream of the confluence with Rose Creek. Approximately 60 acres of the headwaters of the Rose Creek watershed burned with high intensity. Total watershed area is about 3500 acres consequently the burned area constitutes only a small percent (2%) of the Rose Creek watershed and an even smaller portion of the Workman Creek watershed. Although some ash and sediment is expected to enter Rose Creek and eventually Workman Creek, the concentrations of these pollutants should be diluted by flow from the remaining contributing watershed area. Discharge of ash and sediment to Rose Creek is expected to be shortlived due to the shallow depth of ash, and gentle slope of the burned area.

The opinion of the BAER team is that emergency conditions do not exist and that emergency treatment funds are not warranted.

Recommendation

Three alternatives were developed by the BAER team. These consist of a No Action alternative, a preferred alternative and a maximum treatment alternative.

The No Action alternative would not result in any emergency treatment of burned areas. This alternative would result in rehabilitation of suppression damage only. Approximately 3.5 miles of fireline were constructed for the fire suppression effort. These lines would be waterbarred and seeded to prevent erosion. No further rehabilitation measures would be implemented.

The preferred alternative would use a high altitude seed mix of native grass species already stockpiled at the Payson Ranger District to seed the 60 acres of intensively burned area on the top of Armer Mountain to accelerate the revegetation of this area. The intent would be to minimize erosion and the

quantity of ash and sediment discharged into Rose Creek and subsequently into Workman Creek. Rehabilitation of suppression damage would also occur under this alternative

The maximum treatment alternative proposes aerial seeding of both the intensively burned basin below Armer Mountain and the top of Armer Mountain. It also proposes felling of dead trees on the top of Armer Mountain to create both a microclimate to speed revegetation and to hold some sediment and ash onsite. Hay bale checkdams would also be constructed in the main channel of Rose Creek within the burned area to capture ash that is eroded from the slopes.

The BAER team recommends selection of the Preferred Alternative. Emergency conditions do not exist consequently the Maximum Treatment alternative is unnecessary. Selection of the Preferred Alternative would accelerate revegetation of the upper Rose Creek watershed and consequently reduce the quantities of ash and sediment entering Workman Creek. This alternative utilizes seed stocks already on hand and does not require BAER funding to implement.