United States Department of Agriculture | Forest Service | Tonto National Forest | 2324 E. McDowell Road Phoenix, AZ 85006

File Code: 2500
Route To:

Date: July 2, 1997

Subject: Lone Fire Emergency Rehabilitation

To: Regional Forester, R-3

Enclosed please find the final Burned Area Emergency Rehabilitation accomplishment report for The Lone Fire on the Tonto National Forest. This fire burned approximately 60,000 acres in the Four Peaks region of the Mazatzal Mountains east of Phoenix at the end of May 1996. Emergency treatment measures were proposed to protect soil productivity and water quality, prevent downstream flooding on private lands, protect roads, and to protect trails in the Four Peaks Wilderness Area.

Total funding approved for the project was $323,446. The Forest requested carryover of $17,216 into Fiscal Year 1997 to complete land treatment and trail protection measures. These treatments have been implemented. Total BAER funds spent for treatment of the burned area are $306,100. Your support of the funding request for this project was greatly appreciated.

for CHARLES R. BAZAN
Forest Supervisor

Enclosure

cc:
Grant Loomis

USDA-FOREST SERVICE

Date of Report: May 16, 1996
Revised: June 2, 1996
Completed: June 30, 1997

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
[X] 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

[X] 3. Final report - following completion of work

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Lone
B. Fire Number: AZ TNF 053

C. State: Arizona
D. County: Gila
E. Region: 03
F. Forest: Tonto
G. District: Tonto Basin/Mesa

H. Date Fire Started: April 28, 1996
I. Date Fire Controlled: May 14, 1996
J. Suppression Cost: $ 5,000,000

K. Fire Suppression Damages Repaired with EFFS-PF12 Funds:
  1. Fireline waterbarred (miles) 1
  2. Fireline seeded (miles) 0
  3. Other (identify) _____

L. Watershed Number: 15060105, 177, 178, 179, 195

M. NFS Acres Burned: 58,942 (GIS) Total Acres Burned: 58,960 (GIS)
Ownership type:
( )State ( )BLM (18)PVT ( )____ _____

N. Vegetation Types: Chaparral 80%, Sonoran Desert 15% (Paloverde/ Saguaro), Ponderosa Pine/Arizona Oak 5%

O. Dominant Soils: 70% GES MU486 T.Ustochrepts,LSM 4-U.Ustochrepts,LSM 5
30% GES MU303 L.Torriorthents,LSM 2-T.Ustochrepts,LSM 4

P. Geologic Types: Pre-Cambrian granite on 80% of the burn with samller amounts of dacite, schist, and granite gneiss.

Q. Miles of Stream Channels by Order or Class:
1-204 2-69 3-32 4-3

R. Transportation System:
Trails: 40.8 (miles) Roads: 38.0 (miles)

PART III - WATERSHED CONDITION

A. Burn Intensity (Acres): 39,574 (low) 17,334 (moderate) 0 (high)
2,052 Unburned

B. Water Repellant Soil (Acres): 7,000

C. Soil Erosion Hazard Rating (Acres):
0 (low) 39,000 (moderate) 20,000 (high)

D. Erosion Potential: 10 tons/acre for 2 years.

E. Sediment Potential: 21,500 cu. yds/sq. mile for 2 years

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 3 years.
B. Design Chance of Success: 80 percent.
C. Equivalent Design Recurrence Interval: 25 years.
D. Design Storm Duration: 6 hours.
E. Design Storm Magnitude: 3.2 inches.
F. Design Flow: 114 cfsm.
G. Estimated Reduction in Infiltration: 15 percent.
H. Adjusted Design Flow: 208 cfsm.

PART V - SUMMARY OF ANALYSIS

The Lone Fire burned approximately 60,000 acres of sonoran desert, chaparral and ponderosa pine on the flanks and crest of the southernmost extension of the Mazatzal Mountains about 40 miles east of the Phoenix metropolitan area. 30,000 acres of the burned area lie within either the Four Peaks Wilderness Area or the Buckhorn Mountain Research Natural Area. Much of the fire in these areas burned on steep slopes occupied primarily by chaparral and to a lesser extent by ponderosa pine. Fifty percent of the burned area lies on the east side of the Mazatzal Mountains in the Tonto Basin Ranger District. This part of the fire drains into Roosevelt Lake, a popular recreation area and a water supply reservoir for the Phoenix metropolitan area and surrounding agricultural lands. The remaining fifty percent of the burn drains to the south or west into Apache, Canyon and Saguaro Lakes, also popular recreation and water supply reservoirs for the Phoenix area.

The fire was fueled by record low fuel moistures and strong winds. Fire intensities were high but residence times were low consequently limited areas of water repellent soils were developed. The fire resulted in nearly complete burning of all fuels. Few islands of unburned vegetation remain. One large island of unburned vegetation may not have burned because of a prescribed burn

in the fall of 1995 that borders the unburned area. Watershed conditions are characterized by steep slopes, erosive soils of primarily granitic origin, and low ground cover density. Peak flows are expected to be substantially higher than pre fire conditions and sediment yields are expected to be orders of magnitude greater than preburn conditions.

A. Describe Emergency:

BAER survey of the area burned by the Lone Fire indicates the following emergency conditions exist:

1. **Threat to Human life**
Private lands exist at the mouth of Sycamore Creek. These lands are occupied by houses and mobile homes. Occupied structures potentially at risk are located on a terrace above the channel. Approximately 20 percent of this eighteen square mile watershed burned in the fire. Homes located at the mouth of this creek are potentially threatened by increased peak flows and from bulking of these flows by sediment, ash and debris.

Several of the channels draining the burned area (Bumblebee Creek, Rock Creek, Mills Canyon, Bronco Creek, Alder Creek, Long Canyon and Cottonwood Wash) discharge into Roosevelt, Apache and Saguaro Lakes at beaches that are popular swimming, camping and picnicing locations. The potential for flash flooding in these drainages represents a hazard to users of these beaches.

2. **Threat to Property**
Arizona State Highway 188 crosses several of the streams draining the burned area before they enter Roosevelt Lake. Several bridges and culverts convey flows from these drainages through the highway. Increased peak flows and bulking of these flows by ash, debris and sediment pose a risk to these structures.

The Three Bar Cabin is used by the Arizona Department of Game and Fish while conducting research in the Three Bar Wildlife Area. This cabin is located on a terrace above Rock Creek. Approximately 84 percent of this 21 square mile watershed was burned, 52 percent at moderate intensity. Increased peak flows and sediment and ash bulking of these flows pose a threat to this cabin.

Approximately 40 miles of Forest trails and 38 miles of Forest roads are also threatened by increased runoff and erosion generated from burned areas. Roads particularly at risk are those through or downstream of moderately burned areas. These include FDR 143 (Four Peaks-El Oso Rd) which is a popular recreation road that provides access to the most heavily used trailhead for the Four Peaks Wilderness Area. This road is threatened where it passes through the Brushy Basin area. Brushy Basin is predominately chaparral that burned with moderate intensity. Substantial increases in peak flows and sediment yield are expected and represent threats to both users of the road and to the road itself. FDRs 648 (Lone Pine Saddle Rd) and 422 (Big Pine Flat Rd) also lie partly within or downstream of moderately burned areas. The integrity of these roads is also threatened by increased runoff and sediment. FDR 445 (Three Bar Rd) lies within the Rock Creek drainage and is also threatened.

Approximately 21 miles of trails within the Four Peaks Wilderness Area lie within areas burned at moderate intensity. Many log waterbars on these trails were consumed by the fire. Substantial increases in peak flows and sediment yields are expected to pose a severe erosion hazard to these trails. Additional waterbars and outsloping of the trail tread are necessary to prevent these trails from becoming gullies.

3. **Loss of Control of Water**
Eighty percent of the burned area lies within the chaparral vegetation type. Much of the chaparral lies on steep slopes within the Four Peaks Wilderness Area and Buckhorn Mountain Research Natural Area. Substantial research has been conducted on the watershed effects of wildfire within the chaparral vegetation community, including research conducted on a wildfire in 1959 which occurred within the area burned by the Lone Fire. Reported increases in peak flows in California and Arizona chaparral vary from 2 to 45 times normal, depending on storm size and antecedent moisture conditions (Baker, 1988). Sediment yield for the first three years following the 1959 wildfire was 25 times that measured during 13 years of measurement that were not affected by the fire (Hibbert, 1974). These two effects combine to result in significant loss of control of water draining from the burned area. Peak flows are expected to be greater than normal and to be compounded by the bulking effect of sediment, ash and debris.

4. **Threat to Water Quality**
Large increases in sediment are expected from burned chaparral watersheds. Baker (1988) reported erosion rates ranging from 9 to 35 times the normal rate in the first year following wildfire in chaparral and rates 12 times normal can occur the second year. Sedimentation and turbidity are expected to be the main water quality impacts of the fire. Streams draining the burned area are primarily intermittent with some supporting short reaches of perennial flow. All streams drain to either Roosevelt, Apache, Canyon or Saguaro Lakes which provide the primary water supply for the Phoenix Metropolitan area. No instream fisheries values are threatened by impaired water quality. Sediment and turbidity impacts to downstream reservoirs are not expected to impact the quality of municipal water supplies. Some sedimentation of these reservoirs is expected.

5. **Threat to Long Term Soil Productivity**
Erosion rates are expected to exceed the rate of soil formation for approximately three years. As reported above erosion rates can range from 9 to 35 times normal the first year after wildfire in chaparral and up to 12 times normal the second year.

References:

Baker, Malchus B.; Hydrologic and Water Quality Effects of Fire, in Effects of Fire Management of Southwestern Natural Resources, Proceedings of the Symposium, November 15-17, 1988 Tucson Az. GTR RM-191 Pg 31-42. Ft. Collins, Co. U.S. Dept of Agriculture, Forest Service, Rocky Mtn Forest and Range Experiment Station.

Hibbert, Alden R.; Davis, Edwin A.; Scholl, David G. 1974. Chaparral Conversion Potential in Arizona. Part 1: Water yield response and effects on other resources. Res. Pap. RM-126. Ft. Collins, Co: U.S. Dept of Agriculture, Forest Service, Rocky Mtn Forest and Range Experiment Station. 36 p.

B. Emergency Treatment Objectives:

To minimize erosion and runoff from moderately burned areas in the Sycamore Creek watershed above private lands, To warn recreational users of Forest beaches, trails and roads about the flash flooding hazard that has developed as a result of the fire, to minimize watershed damage (accelerated erosion and runoff, scouring and deposition in channels, and loss of soil productivity) in moderately burned areas that are suitable for treatment outside of the Four Peaks Wilderness Area, and to protect Forest roads and trails from the increased runoff and erosion that is expected from the burned area.

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

Land 90 % Channel 90 % Roads 75 % Other 75 %

D. Probability of Treatment Success

	<----Years after treatment-----> 1	3	5
Land	60	60	95
Channel	80	80	95
Roads	85	85	95
Other (Trails)	65	65	90

E. Cost of No-Action (Including Loss): $ 4,450,000

F. Cost of Selected Alternative (Including Loss): $ 3,225,000

G. Skills Represented on Burned-Area Survey Team:

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

Arizona Game and Fish Dept

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.

1. Treat approximately 600 acres in the upper portion of the Sycamore Creek watershed. This area was selected for treatment for two reasons. The primary reason was to protect **downstream values on Sycamore Creek** (A subdivision, consisting mostly of trailer homes, occurs on a terrace near the mouth of the creek.). A secondary reason was to conserve **site productivity on Big Pine Flat**, one of the few relatively flat areas within the burn capable of producing ponderosa pine. This is an important wildlife area needed for habitat diversity.

The treatments include: (A) Seeding 600 acres in the Big Pine Flat area by helicopter at the rate of 6.95 lbs/acre with a mixture of annual and perennial grasses, (B) Installing approximately 100 straw bale check dams, and (C) installing 3 miles of temporary electric fence at Big Pine Flat. The following seed mix is proposed:

Regreen	71.9%	by weight
Yellow Sweet Clover	15.8	"
Sand Dropseed	1.4	"
Prairie Junegrass	2.2	"
Green Sprangletop	8.6	"

The Regreen was selected in order to give a quick cover during the first year. Annual ryegrass was initially proposed for the mix but Arizona Game and Fish expressed concern that the ryegrass would persist in the environment and could become a weed. For that reason, Regreen was substituted for the ryegrass even though Regreen is considerably more expensive. Yellow Sweet Clover was selected for its nitrogen fixing ability. The other grasses (native perennials) were selected to give site stability after the first season. The recovery of the ponderosa pine watershed is expected to take longer than that of the chaparral where recovery is more rapid because of brush resprouting. For this reason it was important to provide grass cover that would last for several years in the pine zone. Sand Dropseed and Green Sprangletop are warm season grasses that germinate well. Prairie Junegrass is one of the very few cool season grasses available from seed companies and was selected to provide site protection early in the spring.

Straw bale checkdams are proposed in first order drainages of this area in order to retain sediment on-site, to prevent sediment bulking of high flows and to prevent down cutting of these channels.

The temporary electric fence may be necessary to protect the Big Pine Flat area from cattle once the cattle are returned to the allotment after 2 years. Big Pine Flat is one of the few places within the burn that may grow a significant amount of grass. This may draw cattle to it.

2. Seed approximately 3000 acres of moderately burned chaparral on slopes of 40% or less with a mixture Regreen and yellow sweetclover at the rate of 6.1 lbs/acre. This treatment was selected to protect site productivity and to help keep sediment on site. Much of the area to be treated, especially the Brushy Basin area, is in the watershed above a portion of the Four Peaks road that is crossed by many drainages. It is felt that this road segment is in the greatest danger of being washed out by high flows. Therefore the following seed mix is proposed:

Regreen	84%	by weight
Yellow Sweetclover	16%	by weight

It is felt that these species will provide a quick cover during the first year when the watershed is most at risk. The chaparral vegetation is expected to resprout rapidly and begin to provide cover by the second year. For this reason perennial grasses were not included in the seed mix.

3. Perform trail maintenance on approximately 21 miles of Forest Service system trails. The work to be done includes: (A) Replacing wooden waterbars that were destroyed during the fire, (B) constructing new earthen waterbars, and (C) outsloping of trails to provide better drainage.

It is felt that these treatments will reduce erosion damage to trails from the increased runoff that is expected following the fire.

4. Perform maintenance on 12.7 miles of Forest Service system roads. The work to be done includes (A) installing approximately 300 straw bale check dams, (B) providing culvert inlet protection, (C) installing 5 hog wire drainage trashracks, (D) replacing approximately 20 existing culverts with larger culverts, and (E) closing FDR 422 with a road closure gate.

The staw bale checkdams are intended to trap sediment and debris and prevent damage to culverts and drainage ditches. The culvert inlet protection is designed to prevent high flows from damaging culvert inlets. Hog wire trashracks are to be installed on larger drainages to prevent large debris from clogging culverts. The existing culverts on a segment of the Four Peaks Road (FDR 143) may be too small to handle the expected increased runoff, especially in the vicinity of Brushy Basin where most of the watershed experienced moderate burn intensity. Many of the culverts may need to be replaced with larger culverts. FDR 422 needs to be temporarily closed to protect other rehab projects in the area serviced by the road.

5. Install approximately 20 signs on roads, trails, and major streams warning of an increased danger of flash floods. The burn and areas downstream (Roosevelt and Apache Lakes) are popular recreation areas. The public needs to be made aware of the increased flood danger in the area.

BAER Accomplishment

Land Treatment

3,600 acres were seeded, 100 strawbale checkdams were installed in Big Pine Flat and 15 flood warning signs were installed at recreational sites at danger from flash floods. Approximately 7 miles of fence were installed at the 3Bar wildlife area to exclude livestock. BAER funds were combined with other Forest funds to enable construction of permanent fencing to exclude livestock. BAER funds were expended at a rate of slightly less than $1,000 per mile of fence.

Road Treatments

Protection of 12.7 miles of road was completed. Road protection includes straw bale check dams upgradient of drainage crossings, increased roadside ditch capacity, replacement of existing culverts with larger capacity culverts, installation of new culverts at unculverted crossings, installation of culvert inlet and outlet protection, and installation of a road closure gate on FDR 422. Wire trash racks proposed in the original BAER submission were not constructed.

Trail treatments

Protection of approximately 11 miles of trails was completed. Trail protection included construction of new and repair of existing water bars, construction of drain-dips, outsloping of trails and construction of small and medium sized check dams.

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.

			NFS Lands			Other Lands			All
Line Items	Units	Unit Cost $	Number of Units	EFFS-FW22 $	Other $ ident.	Number of Units	Fed $ ident.	Non-Fed $ ident.	Total $
A. LAND TREATMENTS									
Seed Big Pine Flat	Acre	20.33	600	12,200					12,200
Straw bale chekdams	Ea	210	100	21,000					21,000
Fence	Mi	857	7	6,000					6,000
Seed Brushy Basin	Acre	14.07	3000	42,200					42,200
Signs (Flash Flood)	Ea	300	15	4,500					4,500
Administration (21%)				17,703					17,703
								Sub Total	103,603
B. CHANNEL TREATMENTS									
C.1. ROADS									
Straw bale check dams	Ea	150	260	40,000					39,000
Culvert armoring	Cu Yd	33.33	150	5,000					5,000
Install 36" CMP's	Ea	3110	20	62,200					62,200
Increase road ditch cap.	Ft	5	2500	12,500					12,500
Road closure gate	Ea	1,000	1	1,000					1,000
Admin., Design, Mobil.	25% of cost								30,386
								Sub total	150,086
C.2. TRAILS									
Trail drainage	Mi	4,090	11	45,000					45,000
Administration (16%)				6,400					7,411
								Sub total	52,411
D. STRUCTURES									
E. BAER EVALUATION/ ADMINISTRATIVE SUPPORT									
F. TOTALS				306,100					306,100

PART VII - APPROVALS

1. Charles R. Bazan — 6/2/07
Forest Supervisor (Signature) — Date

2. _____ _____
Regional Forester (Signature) — Date

OTHER

United States Department of Agriculture | Forest Service | Washington Office | 14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

Reply to: 2520-3/6520 Date: May 21, 1996

Subject: Burned Area Emergency Rehabilitation - Lone Fire, Supplement
Tonto National Forest

To: Regional Forester, R-3

We have received your supplemental request for Burned Area Emergency Rehabilitation (BAER) funding to address road and trail needs for the Lone Fire on the Tonto National Forest (enclosed). As outlined in our letter of May 17, 1996 to you approving the initial request for $82,603 for land treatment measures, delaying this supplemental request allowed the Tonto NF additional time to refine road and trail costs and needs while allowing land treatment measures to proceed in a timely manner.

We approve your supplemental request for $219,843 for the road and trail treatment portion of your BAER needs. This brings your total approved BAER funding for the Lone Fire to $302,446. The Fund/Activity codes for this action are WFSU-FW22.

As work progresses on implementation of this work we encourage you to explore opportunities to gain cost savings through revised designs and materials needs. More efficient means to increase road ditch drainage and provide for trail drainage are two such opportunities. We also encourage you to develop and implement a monitoring plan for the Lone Fire BAER activity so the Tonto and similar forests can learn from your experiences.

BAER ID Team costs are approved to the extent of actual salary, travel, and per diem cost incurred. Administrative personnel working in support of rehab survey are considered members of the team. Contracting and administration costs of implementing treatments should be reflected in treatment costs.

Send your final 2500-8 describing treatment units completed and their costs within 60 days after completing the treatments. If submitting additional supplemental requests, a brief status report of accomplishments to date will aid review of the request.

Please pass on to BAER team leader Grant Loomis and his team recognition for a thorough evaluation and a well prepared report. Thanks also to Regional BAER Program Manager Penny Luehring for coordinating carefully and constructively with both the Tonto and this office in this complex effort.

/s/ Arthur Bryant

ARTHUR BRYANT, Acting Director
Watershed and Air Management

Enclosure

cc:
P.Luehring:R03A
L.Gadt:W01C
A.Sartori:W01C
A.Wojtasek:W01C
C.Kirkpatrick:R03A
A.Carter:R03A

WSA:R.LAFAYETTE:ral:5/21/96
BAER:FY 96 BAER AUTHORIZATIONS:R3:LONE:TONTO NF:SUPPLEM

United States Department of Agriculture | Forest Service | Tonto National Forest | 2324 E. McDowell Road Phoenix, AZ 85006

File Code: 2500 Date: June 3, 1996
Route To:

Subject: Lone Fire Emergency Rehabilitation

To: Regional Forester, R-3

Enclosed please find an interim request for additional funding for emergency rehabilitation of the Lone Fire on the Tonto National Forest. This fire burned approximately 60,000 acres in the Four Peaks region of the Mazatzal Mountains east of Phoenix at the end of May. Emergency treatment measures were proposed to protect soil productivity and water quality, prevent downstream flooding on private lands, protect roads and to protect trails in the Four Peaks Wilderness Area.

The Forest is requesting additional funding to complete the land treatment measures proposed in our original request and to complete measures necessary to protect trails in the wilderness area.

The funds requested for treatment of trails were submitted in our original Burned Area Emergency Rehabilitation (BAER) request. This funding was reduced at the Regional Office before submission to the Washington Office for approval. The Forest has reviewed its trail rehabilitation needs and continues to believe that our original request was appropriate. Your support of this funding request would facilitate the approval process and be greatly appreciated by the Forest.

CHARLES R. BAZAN
Forest Supervisor

cc:
G.Loomis

United States Department of Agriculture | Forest Service | Southwestern Region | 517 Gold Avenue SW.
Albuquerque, NM 87102-0084
FAX: (505) 842-3800
V/TTY: (505) 842-3292

File Code: 2520-3/6520 Date: June 12, 1996
Route To:

Subject: Lone Fire Burned Area Emergency Rehabilitation, Supplemental Request

To: Forest Supervisor, Tonto National Forest

Enclosed is the Chief's partial approval of your supplemental request for Burned Area Emergency Rehabilitation activities on the Lone Fire. This approval is for $21,000 for the land treatment measures described in your request. The portion of your request for additional funds for trail drainage work was not approved. Your total approved funding for this project now stands at $323,446.

Send your final 2500-8 describing treatments completed and actual costs to me within 60 days of project completion.

/s/ John R. Kirkpatrick

JOHN R. KIRKPATRICK
Deputy Regional Forester

Enclosure

cc:
PDB

MESSAGE DISPLAY FOR PENNY LUEHRING

To P.Luehring

From: Douglas Shaw
Postmark: Jun 06,96 4:40 PM Delivered: Jun 06,96 4:40 PM
Status: Previously read
Subject: Forwarded: Reply to a reply: Lone Fire

Comments:
From: Douglas Shaw:R03A
Date: Jun 06,96 4:40 PM
Hot stuff!

Previous comments:
From: Carl Taylor:R03F12A
Date: Jun 06,96 11:55 AM
Thanks. I ran into some upset people on my request for documentation. They feel they had 24 hours to look over a 61,000 acre fire. Then a private meeting was held with Rich, Forest Supervisor and both acting rangers and the request was changed. Then John Barksdale decided that it was still wrong and changed it again. We can put together more documentation but from what I have found out is that Pete (trails coordinator) used historic costs from the Mesa District times the miles of trail and turned in the request. Rich/Norm/Grant adjusted the miles by veg type and/or burn intensity and explained it to line who then reduced the request.. I guess John Barksdale heard about a contract on the Cibola for less and other Forests requests for less per mile and used that as his adjustment factor. I don't know as he hasn't said what he used or why. Bottom line is a fire with 5 million dollar suspression costs and we are not willing to spend 2% of that to protect the primary transportation system. I would ask you to keep in mind that we are trying to get this done during the heat of the summer, packing in water and food, we need shade as the crew is going to "hole up" during the heat of the day and work early and late. It isn't cheap or easy work. If Russ says the WO can't afford it we will understand.

Message:
From: Douglas Shaw:R03A
Date: Jun 06,96 6:59 AM
Sent your supplemental request to WO yesterday. Already have some questions on the trail costs we could not answer. You may be hearing from them directly. Stay cool!

----------X----------

MESSAGE DISPLAY FOR PENNY LUEHRING

To Carl Taylor:R03F12A
CC P.Luehring

From: Douglas Shaw
Postmark: Jun 06,96 1:58 PM Delivered: Jun 06,96 1:58 PM
Status: Previously read
Subject: Reply to a reply: Lone Fire

Reply text:
From: Douglas Shaw:R03A
Date: Jun 06,96 1:58 PM
Thanks for the feedback. Understand your concern and the concern of the folks in the field. We are willing to spend what it takes to meet the objectives of the burned area evaluation and restoration authority. After our conversation with you yesterday, we took your word the funds requested were necessary to meet these objectives. Prior to our discussion we felt the unit costs were outside the range of our experience and the experience of those reviewing the request in the W.O. We did touch base with your engineers prior to our adjustments in the first request, and we thought we had agreement before sending it to Washington. We obviously left you out of the loop and I apologize. We have a day to review and make a recommendation on these requests, so we do the best we can to assure their accuracy and appropriateness.

Preceding message:
From: Carl Taylor:R03F12A
Date: Jun 06,96 11:55 AM
Thanks. I ran into some upset people on my request for documentation. They feel they had 24 hours to look over a 61,000 acre fire. Then a private meeting was held with Rich, Forest Supervisor and both acting rangers and the request was changed. Then John Barksdale decided that it was still wrong and changed it again. We can put together more documentation but from what I have found out is that Pete (trails coordinator) used historic costs from the Mesa District times the miles of trail and turned in the request. Rich/Norm/Grant adjusted the miles by veg type and/or burn intensity and explained it to line who then reduced the request. I guess John

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United States Department of Agriculture | Forest Service | Tonto National Forest | 2324 E. McDowell Road Phoenix, AZ 85006

File Code: Date:
Route To:

Subject: Critique of Lone Fire Burned Area Emergency Rehab

To: Participants in Review

DRAFT DRAFT DRAFT

A critique of the Lone Fire rehab effort was held at the Tonto Basin work center on Thursday, October 24, 1996. Participants included: Gordon Cates, Don Van Driel, Art Wertz, Greg Hanson, Don Stanhardt, Lenny Warren, Anthony Miller, Brad Orr, Norm Ambos, Penny Luehring and Grant Loomis. The critique began with a brief review of the intent of the Burned Area Emergency Rehabilitation (BAER) process which is: "To initiate action promptly following wildfire to stabilize soil, control water, sediment and debris movement, and to minimize, to the extent practicable:

Threats to human life and property.

Loss of soil productivity.

Deterioration of water quality."

To qualify for funding, proposed BAER projects must address the objectives listed above and meet the following criteria:

Emergency rehabilitation is necessary to protect soil and water resources from unacceptable losses, or to prevent unacceptable downstream damage.

Prescribed rehabilitation measures are proven effective and are feasible to implement before anticipated damage producing storms.

Prescribed rehabilitation measures are environmentally and socially acceptable and are compatible with long-term restoration needs and the Forest plan.

Costs are minimal while still providing essential protection.

A description of the specific BAER treatments proposed for rehab of the Lone fire followed the discussion of the objectives of the BAER process. Specific treatments included:

Seeding 3600 acres of pine and chaparral in Big Pine Flat, Brushy Basin and the headwaters of Rock Creek.

Trail maintenance on approximately 21 miles of Forest Service system trails in the Four Peaks Wilderness Area

Road maintenance on 12.7 miles of Forest Service system roads.

Installation of approximately 20 flood warning signs

Total funding approved by the Washington Office to implement these treatments was $358,000.

Proposals to improve both the BAER planning and implementation process were recommended at the critique. Proposals to improve the BAER planning process include:

1) Have a preseason meeting to discuss BAER issues prior to the fire season so that districts and BAER team members are better informed about the BAER process and are better prepared to plan and implement BAER actions.

2) Core BAER team members should participate in the Type II fire teams annual preseason meeting to improve coordination between the two teams.

3) Identify specific team members that will serve on the BAER team from engineering, wildlife, recreation and archaeology as well as soils and hydrology. Identification of specific team members who are available on a consistent basis will avoid the need to train new individuals for each fire and should make the BAER planning process more efficient.

4) BAER team members should be dedicated to the fire full time. If they can not make this commitment consider bringing in trained BAER team members in the affected discipline from off Forest.

5) The BAER team should be brought into the fire organization early in the fire suppression effort so that coordination between the fire team and the rehab team and sharing of available resources is accomplished as early and efficiently as possible.

6) Develop a procedure to transition from the BAER planning phase to the implementation phase to improve the efficiency of this process.

7) Add a signature line to the BAER report for District Rangers for signature prior to submission to the Forest Supervisor. Intent is to make clear that district line officers have approved the plan before forwarding to the Forest Supervisor and the Regional office.

8) Prepare interim BAER reports as early in the incident as possible so that funding enables use of fire suppression resources to implement BAER treatments.

9) A line officer should be involved in helping to settle disputes between technical specialists about the necessity of various treatments.

10) Technical specialists should be aware of the objectives and policies of the BAER process.

11) The BAER team should get concurrence on the costs of the proposed BAER treatments with persons knowledgeable about various treatment costs prior to submitting the BAER report to the region for funding approval.

Recommendations for improving implementation of the BAER treatments include:

1) Prepare an implementation plan that identifies locations and designs for BAER treatments, resources for implementing BAER treatments and responsibilities of the implementation team leader and team members.

2) Identify an implementation team leader early in the BAER process and include that person in the BAER team. That person could be identifying necessary resources for implementing BAER treatments, preparing the implementation plan, and identifying other critical path items such as the air operations plan that need to be started early to make implementation as timely and efficient as possible.

3) Existing fire suppression resources should be used to the extent possible to implement BAER treatments. Ability to use these resources is dependent on the timeliness with which a BAER plan can be prepared and approved.

4) Make installation of flood warning signs a high priority for early implementation. Use local sign making contractors rather than the standard Forest Service contractor to get signs prepared quickly.

5) When seeding is proposed as a BAER treatment the seed contract should specify that the seed mix will be tested for germination and purity.

MESSAGE SCAN FOR PENNY LUEHRING

To G.Cates
CC D.Van Driel
CC D.Standhardt
CC N.Ambos
CC R.Martin
CC T.Bos
CC L.Warren:R03F12D06A
CC B.Orr:R03F12D06A
CC A.Miller:R03F12D02A
CC W.Brasher:R03F12D02A
CC G.Hansen:R03F12D03A
CC A.Wertz:R03F12D03A
CC C.Taylor
CC P.Weinel
CC P.Luehring:R03A
CC G.Loomis

From: Grant Loomis:R03F12A
Postmark: Oct 29,96 1:19 PM Delivered: Oct 29,96 1:14 PM
Status: Previously read
Subject: Lone Fire BAER critique

Comments:
Enclosed are the recommendations I came away with from our meeting of 10/24. Thanks very much for participating and for your recommendations. I would appreciate your comments or thoughts on additional recommendations to this document by cob 11/15/96. I will work up a final document and identify who is responsible for what recommendation once i get your comments.
Thanks
Grant

-------========X========-------

MESSAGE SCAN FOR PENNY LUEHRING

To g.loomis:r03f12a
CC c.taylor:r03f12a
CC t.brown:r03f12a
CC c.kirkpatrick
CC j.acree
BC Penny Luehring

From: Penny Luehring
Postmark: Oct 09,96 3:29 PM Delivered: Oct 09,96 3:30 PM

Subject: Forwarded: TONTO BAER CARRYOVER JUSTIFICATION

Comments:
From: Penny Luehring:R03A
Date: Oct 09,96 3:29 PM
Any additional trail work that is unfinished (approximately $11,216) can continue as long as that activity meets the original BAER objective of preventing or minimizing erosion due to increased runoff after the fire. BAER funding cannot be used to repair or maintain trails that were already eroding prior to the fire nor can it be used to repair damages to the trail that have occurred since the fire. The reference to the Alder creek section that needs work and its description as a "heavily eroded trail section" concerns me greatly. It is the Forest's reponsibility to assure that these emergency funds are being spent appropriately. Any remaining work should be implemented as soon as possible and a final accomplishment report submitted when final costs are known. If you have any questions, please call. Penny

----------X----------

LONE FIRE TRAIL EROSION CONTROL
JUSTIFICATION STATEMENT

In May of 1996, the Lone Fire burned over 60,000 acres in the Four Peaks Wilderness. BAER dollars were requested by the Tonto to minimize the amount of erosion that would occur following this fire. The Tonto was allocated $60,375 for the stabilization of trails in the Four Peaks Wilderness. An 8 person crew was formed as expeditiously as possible and worked under extreme conditions but were unable to finish the planned work. The following information is presented as a justification for the carry-over of the remaining BAER dollars into fiscal year 97.

BAER Treatments Completed

It was decided that erosion control efforts would only be carried out in the "Moderate" burn zones. To date, 208 new water-bars have been constructed, 127 existing water bars have been repaired and maintained, 19 drain-dips have been constructed, 10.25 miles of existing trail tread has been stabilized and out-sloped, and 14 small and medium sized check dams have been constructed.

BAER Dollars Spent

As of September 30, 1996, $49,159.24 is estimated to have been spent on the stabilization of the trails.

Treatments That Will Not Be Completed By FY-96

Over 8 miles of the Alder Creek Trail is still in need of stabilization. This work includes: stabilization of eroding trail tread, constructing water drainage structures, and securing eroded creek crossings. One 10 day tour would be needed to complete this important part of the overall project.

Emergency Justification

Due to steep slopes, unstable soil types, lack of proper trail design, and the remoteness of the country (making it hard to access and maintain) approximately 8 miles of the Alder Creek Trail still needs approximately 10 days of stabilization work. Although two relatively substantial storms have hit the Phoenix area, neither have concentrated much precipitation on this section of the Four Peaks Wilderness. Enough rain has fallen in the area to make this steep and heavily eroded trail section extremely vulnerable to wash-out. The Alder Creek Trail is the main access for the most remote sections of this Wilderness and re-building it would be very costly to the Forest Service. If the work described above is not completed before the next major rains, this important route will be lost.