USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: October 10, 2003

**BURNED-AREA REPORT**
(Reference FSH 2509.13)

## PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[ X] 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 or design analysis
[ ] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

## PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Lytle Fire

B. Fire Number: CA-BDF-009582

C. State: California

D. County: San Bernardino

E. Region: 05

F. Forest: San Bernardino (12)

G. District: Front Country

H. Date Fire Started: October 1, 2003

I. Date Fire Contained: Oct 5, 2003

J. Suppression Cost: $ 1,485,000 Morning of Oct 4

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): apox 5.5 mi dozer line
2. Fireline seeded (miles):
3. Other (identify): aprox 4.0 mi. handline

L. Watershed Number: 1807020309, 1807020308,

M. Total Acres Burned:
NFS Acres(779 ) Other Federal ( ) State ( ) Private (59 )

N. Vegetation Types: Mixed Chaparrel, Chamise, Scrub and Canyon Live Oak, Big Cone Douglas Fir, Alluvial Fan Scale Broom and Alluvial Fan Sage Scrub.

O. Dominant Soils: Springdale family – Lithic Xerorthents association, Springdale-Winthrop, Riverwash.

P. Geologic Types: Mesozoic Pelona Schist, Tertiary Granitic, Quaternary Riverwash.

Q. Miles of Stream Channels by Order or Class:
1st Order .95 miles 3rd Order .60 miles

R. Transportation System

Trails: 3.65 miles Roads: 3.78 miles

## PART III - WATERSHED CONDITION

A. Burn Severity (acres): 56 (low) 671 (moderate) 55 (high)

B. Water-Repellent Soil (acres): 78

C. Soil Erosion Hazard Rating (acres):
80 (low) 40 (moderate) 662 (high)

D. Erosion Potential: 33 tons/acre

E. Sediment Potential: 5,800 cubic yards / square mile

## PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 10

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 10

F. Design Flow, (cubic feet / second/ square mile): 53.

G. Estimated Reduction in Infiltration, (percent): 47%

H. Adjusted Design Flow, (cfs per square mile): 78.

## PART V - SUMMARY OF ANALYSIS

Background

The Lytle Creek Canyon on the San Bernardino Forest drains to the southeast toward the cities of San Bernardino and Fontana Water resource in Lytle Creek Canyon have been developed as a domestic supply for the City of Fontana. The intake structures for the water system are about 2 miles down stream of the burned area.

The Lytle Creek Road is located on the northern edge of the gravel and river-wash sloping plane that fills the bottom of the canyon. The Lytle Fire started on Oct 1, 2003 near the Lytle Creek Road. Cause of ignition is unknown. The fire quickly ran upslope onto the ridge that separates Lytle Creek Canyon from Lone Pine

Canyon. The fire burned over the top of the ridge and on to the north facing sloes of Lone Pine Canyon. A total of 406 acres were burned on the upper and mid slopes of Lone Pine Canyon. A small secondary arm of the fire burned to the west through sage and shrubs as it crossed the gravel and river-wash alluvium of Lytle Creek. This secondary arm ran a short distance up the north facing slopes of Lytle Canyon and on to private land. A total of 432 acres were burned in Lytle Creek Canyon.

The road up Lytle Creek Canyon provides easy access up the canyon bottom. The area where the fire occurred has been an unrestricted shooting range for many years. Most of the shooting area was closed to shooting several years ago. Unrestricted shooting has now been replaced by a controlled shooting area, which is operated under a special use permit from the Forest Service. During the period when unrestricted shooting occurred people would stop along the road set up targets and shot to the north into the canyon wall of Lytle Creek and out over alluvial river-wash to the south. Targets were anything the shooter would and could bring from home. Most of the targets were items of junk found around the house. Due to the variety of junk shot up and left the area the publics view of the area was that it is an informal dump. As a result all kinds of trash including hazardous wastes was brought to the area and dumped. There are several small dumps on the north side of the road along the canyon wall material in and on the dumps were used for target shooting. Several other dumps are located on and in the alluvial wash on the south side of the road. These dumps are full of lead from shooting and hazardous wastes. Since the time shooting has stopped the district has had a number of clean up days using volunteers who have removed much of the obvious material. Unfortunately lots of material is still left and buried including some that is hazardous.

The ridge separating Lytle Creek from Lone Pine Canyon has a road along the ridge crest. This road is popular with the local people who own OHVs and motorcycles. At one location people with OHVs have gotten off the road, scarred the soil and created an erosion problem. Also on the ridge are three Forest Service sensitive species. They are: 1. Short joint beaver tailed cactus. 2. Mariposa Lilly 3 Coast Horned Lizard.

The Pacific Crest Trail (PCT) is also found on the north slopes of the ridge that separates Lytle Canyon from Lone Pine Canyon and the fire burned over 3.65 miles of trail.

Noxious weeds are present within and in close proximity to the burned area. The weed of greatest concern is the Tree of Heaven this tree spreads through under ground roots and seeds. This plant is found just down stream of the burned area growing on Lytle Creek river-wash. This plant spreads by seed and through spreading roots. It is very difficult to kill even with the application of Roundup and Rodeo.

A. Describe Watershed Emergency:

Shooting area and dumps

The fire burned through the old shooting area. Of particular concern is the removal of all the vegetation on two small dumps (which are full of lead probable hazardous substances) located next to a channel that drains an 80 acre drainage that was also completely burned. The dumps were still burning a week after the fire start. The heat of the smoldering fire is releasing additional substances as pollutants. The substances released are paint-coatings, plastics and any other material that can decompose by high temperatures. Loss of water control in the drainage above is expected wash away part of the dump releasing lead and a variety of other substance probably some that are hazardous. The water will spread this hazardous material all over the local area with some of it reaching main channel where it could enter the domestic water supply. The size of the drainage above the dumps makes it impractical to try to control the spread material through the use of a settling basin.

A berm is located along the north side of the road which will helps control some of the water that coming off the burned slopes. Unfortunately the berm is breached in several areas and water can flow out onto the road and on to the main creek channels. This water will have picked up fine particles of lead and other chemicals. Repairing the breached berm would help control spread of some lead.

Along the south side of the road a significant amount of miscellaneous junk and shooting clays were left along the road's edge. The fire burned and scorched this material leaving a number of items as a source of pollution.

On the south side of Lytle Creek Road are several large dumps located on the alluvial fan surface and in one or more of dry channels. These dumps were still burning a week after the fire start. The smoke from these fires has a very strong chemical order. All of the material left over from the dumping and shooting along with new chemicals and substances released by the burning. All of wastes, chemicals and pollutants have the potential of getting into the water supply used by the City of Fontana.

Roads and trail.

The fire burned across over about 1½ miles of road located on the ridge. Even before the fire OHV users in two areas would go a short distance off the road and try to climb one of the hills next to the road. This activity has damaged a small area of soil creating an erosion problem. The fire has removed all of the vegetation on the ridge top and has opened up large areas to OHV access. It is expected that the OHV users will use the open areas and damage far more soil and increase erosion. The ridge top area is also the habitat of for three Forest Service sensitive species (1. Short joint beaver tailed cactus. 2. Mariposa Lilly 3 Coast Horned Lizard.) These species have been observed next to and within the burned area. OHV users going off road can damage or slow the recovery of these species and their habitat.

The PCT is located within the burned area. From past experience motorcyclists will often use the trail after a fire. The removal of brush and vegetation makes the trail more attractive to motorcyclists because they can get on and off the trail at many more places and they can now easily cut across the switchbacks increasing erosion. The PCT has already captured large volumes of dry ravel and is expected to catch significant volumes of debris washing off slopes above the trail during the winter rainy season. This dry ravel and debris will close the trail.

Noxious weeds, native and sensitive plants.

Fire and the associated ground disturbance due to the suppression effort will encourage the spread of noxious weeds and non-native species can displace the native species. The condition of the native species and the spread of noxious weeds will not be known until spring. One non-native of particular concern is the Tree of Heaven located just down stream of the burned area on Lytle Creek.

B. Emergency Treatment Objectives:

Reduce the spread of preexisting hazardous material, pollutants and chemicals released by the fire. Loss of water control will result in contaminated water reaching the Lytle Creek channel. These contaminated and polluted waters can enter City of Fontana water supply.

Restrict OHV traffic within the burned area. This is to reduce soil erosion and help protect two Forest Service sensitive plants and one sensitive animal.

Restrict access to the PCT by motorcyclists preventing trail damage and damage to the areas next to the trail. Provide for a method to keep the trail open.

Monitor the spread of noxious weed and track the impacts of the fire on sensitive plant species. If noxious weeds are found control their spread.

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

Land 100 % Channel ___ % Roads 100 % Other ___ %

D. Probability of Treatment Success

| | Years after Treatment | | |
|---|---|---|---|
| | 1 | 3 | 5 |
| Land | 90 | 95 | 100 |
| | | | |
| | | | |
| Channel | | | |
| | | | |
| | | | |
| Roads | 80 | 90 | 100 |
| | | | |
| Other | | | |
| | | | |

E. Cost of No-Action (Including Loss): **1,227,032.**

F. Cost of Selected Alternative (Including Loss): 247,937.

G. Skills Represented on Burned-Area Survey Team:

| | | | | |
|---|---|---|---|---|
| [x ] Hydrology | [x ] Soils | [ ] Geology | [ ] Range | [ ] |
| [ ] Forestry | [x] Wildlife | [ ] Fire Mgmt. | [x] Engineering | [ ] |
| [ ] Contracting | [ ] Ecology | [X ] Botany | [x] Archaeology | [ ] |
| [ ] Fisheries | [ ] Research | [ ] Landscape Arch | [X ] GIS | |

Team Leader: Vic Andresen
Email: vandresen@fs.fed.us Phone (626) 574 -5268 FAX:

Forest contact: Kathie Meyer Phone (909) 887-2576 ex 3306 at the Lytle Creek Office.

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.)

Land Treatments:

To reduce or mitigate potential sources of pollution to the City of Fontana's water supply we are proposing four land treatments which will remove hazardous material and pollution sources to a certified dump, or confine and control the spread of these substances.

We are proposing to remove the two small dumps (which are full of lead and hazardous substances) located at the base of an 80 acre burned drainage. The material will be removed to a commercial dump that can receive hazardous materials. Removal requires a crew trained in handling hazardous materials. .

Removal costs:

| | |
|---|---|
| Excavator | $ 21,900 |
| Dump truck | 9,100 |

| | |
|---|---|
| Dump Fees | 5,000 |
| Crew and supervision | 8,000 |
| Total | $ 44,000 |

Repair the berm which is breached at several locations on the north side of the road. This would retain some of the contaminated waters on site.

Berm repair:

| | |
|---|---|
| Excavator | $ 2,000 |
| Supervision | 500 |
| Total | $ 2,500 |

Clean up surface lead, junk and other pollutants along the south side of Lytle Creek road.

Clean up would use a vacuum truck:

| | |
|---|---|
| Vacuum truck& crew | $ 8,000 |
| Dump fees | 3,000 |
| Supervision | 2,000 |
| Total | $ 13,000 |

Clean up the top two layers of the dump/landfill located on the river wash which caught fire and burned.

Clean up would use a vacuum truck:

| | |
|---|---|
| Vacuum truck & crew | $25,000 |
| Dump fees | 8,000 |
| Supervision | 5,000 |
| Total | $ 38,000 |

Channel Treatments:

Roads and Trail Treatments:

We are proposing to close the road along the ridge top to keep traffic off the burned areas where the brush has been cleared by the fire. Keeping the road closed will give three Forest Service sensitive species time to recover. Also keeping the OHV traffic off the fire cleared area will reduce the potential for excellerated erosion. We are proposing to install two gates with wing fences to keep the OHV traffic out. We want to sign the area and follow up with weekly monitoring and make repairs to any breaches in the fence.

Cost of closing the road:

| | |
|---|---|
| 2 gates @ 4,500 | $ 9,000 |
| Wing fencing | 1,500 |
| Signing 20@ 150.00 | 3,000 |
| Patrol costs | 4,000 |
| Construction supervision | 2,000 |
| Total | $ 19,500 |

To keep motorcyclists off the PCT we are recommending 2 step through gates that will permit hikers and horse to use the trail but will reduce the possibility of motorcyclists using the trail. The step through gates will be located just out side of the burned area in unburned brush. Placing the gates in the unburned brush will keep motorcyclists from getting around the gate.

Cost of step through gates:

| | |
|---|---|
| Two step through gates | $ 6,000 |
| Wing fences | 500 |
| Supervision | 500 |
| Total | $ 7,000 |

Due to the burned slopes above the PCT we expect that heavy trail maintenance will be required because of the increased surface erosion. Due to the steepness of the slopes it would be impractical and costly to directly control erosion above the trail. We are requesting funds to pay for a hand crew to go out and clear the trail in the spring, this is the lowest cost option.

Trail clearing

Handcrew 4days @ 2,500 $10,000

Structures:

Other:

To removal of the old dumps may result in the digging up of objects of historical significance. During the BAER evaluation, the team Archeologist only found minor evidence of historic material in the dumps. As part of the dump removal it is possible that the deeper layers many have some historic significance. We will need an Archeologist on site during the removal process. We may have to contract out this service. A short archeological review is required before ground disturbance can start on the installation of the road closure fence and gates and the step through gates for the PCT.

Cost for Archeological review:

2 month contract archeologist $ 7,000

During the removal/vacuuming of the hazardous material along side the road there is the potential for lizards and toads to be sucked up into the vacuum truck. The other sites where hazardous materials are to be removed have a smaller surface area. A biologist will be needs to be present when vacuuming is occurring along the side of the road.

Cost for presence of biologist.

GS 5/9 biologist 5 days $ 1,162.00

I. **Monitoring Narrative:**

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Noxious Weed Monitoring

We plan to monitor for the spread of noxious weeds near and in the burned area. The monitoring would be for three years. The following monitoring costs are for the first year only. If noxious weeds have been introduced or are rapidly spreading an Interim BAER report will be completed requesting eradication funding.

First year monitoring for noxious weeds:

| | |
|---|---|
| GS-11 botanist/biologist 4days | $ 1,213.00 |
| GS-9 biologist 5 days | 1,162.00 |
| Vehical costs | 100.00 |
| Total | $ 2,475.00 |

## Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

| | | | NFS Lands | | | | Other Lands | | | All |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Unit | # of | WFSU | Other | # of | Fed | # of | Non Fed | Total |
| Line Items | Units | Cost | Units | SULT $ | $ | units | $ | Units | $ | $ |
| | | | | | | | | | | |
| **A. Land Treatments** | | | | | | | | | | |
| Remove 2 Dumps | | | | $44,000 | | | $0 | | $0 | $44,000 |
| Repir berm | | | | $2,500 | | | $0 | | | $2,500 |
| Clean along road | | | | $13,000 | | | $0 | | $0 | $13,000 |
| 2 top layers of dump | | | | $38,000 | | | $0 | | $0 | $38,000 |
| Archeological Sevice | | | | $7,000 | | | | | | $7,000 |
| Biological Sevice | | | | $1,162 | | | | | | $1,162 |
| *Subtotal Land Treatments* | | | | $105,662 | | | $0 | | $0 | $105,662 |
| **B. Channel Treatments** | | | | | | | | | | |
| | | | | $0 | | | $0 | | $0 | $0 |
| | | | | $0 | | | $0 | | $0 | $0 |
| *Subtotal Channel Treat.* | | | | $0 | | | $0 | | $0 | $0 |
| **C. Road and Trails** | | | | | | | | | | |
| | | | | $0 | | | $0 | | $0 | $0 |
| | | | | $0 | | | $0 | | $0 | $0 |
| | | | | $0 | | | $0 | | $0 | $0 |
| | | | | $0 | | | $0 | | $0 | $0 |
| *Subtotal Road & Trails* | | | | $0 | | | $0 | | $0 | $0 |
| **D. Structures** | | | | | | | | | | |
| Closing road | | | | $19,500 | | | $0 | | $0 | $19,500 |
| PCT step gates | | | | $7,000 | | | $0 | | $0 | $7,000 |
| Clean PCT | | | | $10,000 | | | $0 | | $0 | $10,000 |
| | | | | $0 | | | $0 | | $0 | $0 |
| *Subtotal Structures* | | | | $36,500 | | | $0 | | $0 | $36,500 |
| **E. BAER Evaluation** | | | | | | | | | | |
| **Bear Team** | | | | $19,444 | | | $0 | | $0 | $19,444 |
| **supplies** | | | | $150 | | | $0 | | $0 | $150 |
| **Vehicals +milage** | | | | $500 | | | | | | $500 |
| **F. Monitoring** | | | | $0 | | | $0 | | $0 | $0 |
| Noxious Weed | | | | $2,475 | | | | | | $2,475 |
| **G. Totals** | | | | **$164,731** | | | **$0** | | **$0** | **$164,731** |
| | | | | | | | | | | |

## PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date