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

Date of Report: 5/31/05

**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: **Bart/St Clair Complex**

B. Fire Number: **AZ-TNF-045 ,AZ-TNF-044 (P3BRZ4)**

C. State: **AZ**

D. County: **Maricopa**

E. Region: **3**

F. Forest: **Tonto**

G. District: **Cave Creek**

H. Date Fire Started: **5/13/2005**

I. Date Fire Contained: **5/18/2005**

J. Suppression Cost: **$980,000**

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

L. Watershed Number: **1506020307 (6.1 $mi^2$), 1506020305 (19.4 $mi^2$)**

M. Total Acres Burned: **16,405**
NFS Acres(**x**) Other Federal ( ) State ( ) Private ( )

N. Vegetation Types: **Sonoran Desert (LSM, 2); Semi-Desert Shrub (LSM, 3); Chaparral (LSM, 4, -1)**

O. Dominant Soils: **Ustic Haplargids, Aridic Haplustalfs, Typic Haplustalfs**

P. Geologic Types: **Decomposed Granite (82%), Holocene Alluvium (14%)**

Q. Miles of Stream Channels by Order or Class:
**Order 1: 28.29 miles , Order 2: 2.45 miles**

R. Transportation System

Trails: 0 miles Roads: **40** miles

## PART III - WATERSHED CONDITION

A. Burn Severity (acres): 8200 (low) 4900 (low - moderate) ___ (high) *estimated*

B. Water-Repellent Soil (acres): 500

C. Soil Erosion Hazard Rating (acres):
7,144 (low) 6,839 (moderate) 2,188 (high)

D. Erosion Potential: 4 tons/acre

E. Sediment Potential: 1275 cubic yards / square mile

## PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3

B. Design Chance of Success, (percent): 75

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

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 3.58

F. Design Flow, (cubic feet / second/ square mile): 440

G. Estimated Reduction in Infiltration, (percent): 10

H. Adjusted Design Flow, (cfs per square mile): 660

## PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The St Claire/Bart Fires burned 16,405 acres of Sonoran desert scrub, semi-desert shrub, and low elevation chaparral along the roads that provide the major access to Bartlett and Horseshoe Reservoirs. These roads are heavily used by recreationists seeking access to Horseshoe and Bartlett Lakes and to recreation areas along the Verde River. Areas to the west of the fire (the Camp Creek area) have become heavily used ATV recreation areas because of their close proximity to the Phoenix metropolitan area. Some ATV trails exist within the burned area. Use of these trails and pioneering of new trails within the area burned by the St. Clair/Bart fires is occurring. The current amount of use is minimal compared to the Camp Creek area to the west. Removal of the protective vegetative cover makes access into and through the area much easier than before the fire. The area has become much more attractive to ATV users and is

expected to attract users from the Camp Creek area. Law enforcement personnel have already made contacts with motorcycle riders pioneering new routes in the burned area. Pioneering of new roads and trails is expected to increase. An increase in ATV roads and trails will reduce recovery of vegetation in the burned area and will increase rill and gully erosion. Soil productivity will be permanently impaired if new ATV routes are created within the burned area.

A dike exists above the Rattlesnake Recreation site to divert flow from a wash upgradient of the recreation site around the site. Sediment has filled approximately 200 feet of the channel along the dike. Flows from the wash currently overtop the dike and are creating a headcut that eventually will undermine the dike. The increase in runoff, sediment and ash expected from the burned area will hasten this process.

Equipment used to fight the fire may have imported noxious weeds into the area. Areas of known noxious weed infestation exist near the burned area. These conditions may result in spread of noxious weeds into the burned area.

B. Emergency Treatment Objectives:

Prevent ATV use from occurring within the burned area until vegetation has fully recovered, approximately 3 years.

Remove sediment from behind approximately 200 feet of dike to prevent erosion and failure of the dike

Detect and remove noxious weeds

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

Land **90** % Channel ___ % Roads **90** % Other ___ %

D. Probability of Treatment Success

| | Years after Treatment | | |
|---|---|---|---|
| | 1 | 3 | 5 |
| Land | 90 | 90 | |
| | | | |
| | | | |
| Channel | 75 | 50 | |
| | | | |
| | | | |
| Roads | | | |
| | | | |
| Other | 80 | 80 | |
| | | | |

E. Cost of No-Action (Including Loss): $750,000

F. Cost of Selected Alternative (Including Loss): $188,300

G. Skills Represented on Burned-Area Survey Team:

[**x**] Hydrology [**x**] Soils [ ] Geology [ ] Range [ ]

[ ] Forestry [**x**] Wildlife [**x**] Fire Mgmt. [**x**] Engineering [ ]
[ ] Contracting [**x**] Ecology [ ] Botany [**x**] Archaeology [ ]
[ ] Fisheries [ ] Research [ ] Landscape Arch [ ] GIS
[**x**] Recreation [**x**] Law Enforcement

Team Leader: Grant Loomis

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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: Construct barrier fencing on the fire perimeter along the heavily used roads accessing Horseshoe and Bartlett Lakes to prevent access into the burned area from these roads. Construct barrier fence along FR42 down to the USGS gage on the Verde River to prevent recreation users along the Verde River from accessing the burned area from the north with ATV's. Construct a barrier fence along the North shore lake road from just above FR 42 down to the high water mark of Bartlett Lake to prevent recreational users in the Bartlett Lake area from accessing the burned area from the south with ATV's.

Cost of installing ATV fencing was explored with Forests in Southern California that have installed ATV barriers to protect recently burned areas. Costs ranged from $19.60 per foot for post and cable barriers to $18,000 per mile for 3 strand smooth wire fencing. One Forest has also installed pipe barrier fencing at costs greater than the cable barrier. The cost estimate for the fencing proposed for the Bart Fire is $10,000 per mile.

Channel Treatments:

Roads and Trail Treatments: Place carsonite barrier signs at existing ATV access points into the burned area to discourage access prior to completion of the fence. Construct 5 gates on Forest Service system roads into the burned area. Pay for 20 days of patrol to discourage ATV use into the burned area prior to completion of the fence and to inspect the fence to repair locations where it has been cut by ATV users once the fence is completed.

Structures:

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.)

**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** | | | | | | | | | | |
| Fencing | miles | 10000 | 15.6 | $156,000 | $0 | | $0 | | $0 | $156,000 |
| Detect & rmv weeds | days | 500 | 5 | $2,500 | $0 | | $0 | | $0 | $2,500 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Land Treatments* | | | | $158,500 | $0 | | $0 | | $0 | $158,500 |
| **B. Channel Treatments** | | | | | | | | | | |
| remove sediment | hrs | 150 | 10 | $1,500 | $0 | | $0 | | $0 | $1,500 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Channel Treat.* | | | | $1,500 | $0 | | $0 | | $0 | $1,500 |
| **C. Road and Trails** | | | | | | | | | | |
| carsonite signs | ea | 50 | 120 | $6,000 | $0 | | $0 | | $0 | $6,000 |
| ATV Patrol | days | 200 | 20 | $4,000 | $0 | | $0 | | $0 | $4,000 |
| Barrier Gates | ea | 1500 | 5 | $7,500 | $0 | | $0 | | $0 | $7,500 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Road & Trails* | | | | $17,500 | $0 | | $0 | | $0 | $17,500 |
| **D. Structures** | | | | | | | | | | |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Structures* | | | | $0 | $0 | | $0 | | $0 | $0 |
| **E. BAER Evaluation** | | | | | | | | | | |
| Assessment costs | ea | 5000 | 1 | $5,000 | $0 | | $0 | | $0 | $5,000 |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Evaluation* | | | | $5,000 | $0 | | $0 | | $0 | $5,000 |
| **F. Monitoring** | | | | | | | | | | |
| | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Insert new items above this line!* | | | | $0 | $0 | | $0 | | $0 | $0 |
| *Subtotal Monitoring* | | | | $0 | $0 | | $0 | | $0 | $0 |
| | | | | | | | | | | |
| **G. Totals** | | | | **$182,500** | **$0** | | **$0** | | **$0** | **$182,500** |

## PART VII - APPROVALS

1. /s/ Tom Klabunde — 5/31/05
   Forest Supervisor (signature) — Date

2. /s/ Lucía M Turner — 6/1/05
   Regional Forester (signature) — Date