

Date of Report: 8/24/05

**BURNED-AREA REPORT**

(Reference FSH 2509.13)

**PART I - TYPE OF REQUEST****A. Type of Report**

- ☒ 1. Funding request for estimated WFSU-SULT 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 or design analysis  
    ☐ Status of accomplishments to date  
☐ 3. Final Report (Following completion of work)

**PART II - BURNED-AREA DESCRIPTION**A. Fire Name: Cave Creek ComplexB. Fire Number: AZ-TNF-104/113C. State: AZD. County: Maricopa/YavapiaE. Region: 3F. Forest: Tonto and PrescottG. District: Cave Creek, VerdeH. Date Fire Started: 6/21/05I. Date Fire Contained: 7/12/05J. Suppression Cost: 16,586,000**K. Fire Suppression Damages Repaired with Suppression Funds**

1. Fireline waterbarred (miles):  
2. Fireline seeded (miles):  
3. Other (identify): subsoiled and seeded safety zones; brought back the berm and placed slash on 34 miles of dozer lines.

L. Watershed Number: 1507010201 (Ash Ck-Sycamore Ck), 1506020304 (Tangle Ck-Lower Verde River), 1507010204 (Bishop Ck), 1507010205 (Agua Fria River-Lake Pleasant), 1506020305 (Low Verde River-Horseshoe and Bartlet Res), 1507010208 (New River), 1507010206 (Cave Ck-Arizona Canal Diversion), 1506020307 (Camp Ck-Low Verde River)

M. Total Acres Burned: 246,714

NFS Acres(230,392)    Other Federal (2,844)    State (11,190)    Private (2,289)

N. Vegetation Types: Sonoran Desert(20%), chaparral(30%), desert grassland(20%), Juniper woodland(30%)

O. Dominant Soils: Typic Halplustalfs, Aridic Haplustalfs, Ustollic Haplargids, Typic Ustocrepts

P. Geologic Types: Grantics, Basalt, schist, rhyolite

Q. Miles of Stream Channels by Order or Class:

Perennial: 1.1 miles

Intermittant: 1,016 miles

R. Transportation System

Trails: 41 miles

Roads: 301 miles

### **PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 140,554 (low) 62,777 (moderate) 1,829 (high) 38,996 (Unburned)

B. Water-Repellent Soil (acres): 48,912

C. Soil Erosion Hazard Rating (acres):

180,254 (low) 45,171 (moderate) 21,289 (high)

D. Erosion Potential: 10 tons/acre

E. Sediment Potential: 21,500 cubic yards / square mile

### **PART IV - HYDROLOGIC DESIGN FACTORS**

A. Estimated Vegetative Recovery Period, (years): 3 in chaparral; 7 in desert

B. Design Chance of Success, (percent): 80

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 3.4

F. Design Flow, (cubic feet / second/ square mile): 245

G. Estimated Reduction in Infiltration, (percent): 20%

H. Adjusted Design Flow, (cfs per square mile): 486

### **PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency:

Background: The Cave Creek Complex started on June 21 and burned 246,714 acres. The BAER Team worked quickly to identify critical values at risk and determine appropriate treatments to be implemented prior to the monsoon season.

### Threats to Human Life and Property:

- Forest Road 24; focusing on the area between the Forest boundary the Recreation Residences. There is an increase threat of flood waters overtopping the road, and plugging culverts along this road. The fire burned with mostly moderate severity on Northfacing slopes and low severity on south facing slopes. The northfacing slopes contain drainages with large amounts of stored sediments increasing the risk of plugged culverts, overtopping the road, degrading fill slopes and running down the road creating hazardous conditions. This section of the road receives a high amount of use from recreation residence, and a few private ranches. It is not practical for the Forest to close this road.
- Recreational residences at Camp Creek; The recreational residences at camp creek are at risk of flooding. There are approximately 7 residences adjacent to the Creek that are at risk of flooding due to increased watershed efficiency from the fire. Columbine Spring provides domestic water to 5 currently standing cabins, 4 of the cabins that burned also received water from this spring. There is a risk that the spring box would be severely damaged and/or buried during a storm event impacting the primary water source for the recreation residences (8/24/05 Interim Request – Thunderstorms occurring since the fire have washed much of the ash from the watershed without damaging the spring box. The risk to this structure is significantly reduced). The risk of flooding to the residences is considered high. The Forest is working with Maricopa County flood control to determine the extent and severity of the risk.
- Residences and infrastructure on Private lands in the Cave Creek Drainage. There is an increased risk of flooding to residences and infrastructure within the floodplain of Cave Creek. There are an unknown amount of residences, roads and other infrasturcture at risk from flooding due to vegetation removal and changes in post-fire soil hydrologic function throughout the watershed. The risks to residences and infrastructure within the floodplain is considered high. The Forest is working with Maricopa County Flood Control and the NRCS to determine what is at risk and the extent and severity of the risk. Maricopa County is inventoring structures at 1 foot above the 100-year flood plain and will likely send the residences a letter and implement a reverse 911 system to warn the affected residence.
- Residences and infrastructure adjacent to Squaw Creek and Agua Fria River in Black Canyon City. There are an unknown number of residences, roads and other infrastructure at risk from flooding due to vegetation removal and changes in post-fire soil hydrologic function throughout the watershed. The risks to residences and infrastructure within the floodplain is considered moderate at this point. The Forest is working with Yavapia County flood control and NRCS to determine extent and severity of the risk.
- Residences and Infrastructure adjacent to New River. There is an increased risk of flooding to an unknown number of residences and infrastructure within the floodplain of New River. The risks from flooding is due to vegetation removal and changes to post-fire hydrologic function throughout the watershed. The Forest is working with Maricopa County flood control and NRCS to determine extent and severity of the risk. Maricopa County is inventoring structures at 1 foot above the 100-year flood plain and will likely send the residences a letter and implement a reverse 911 system to warn the affected residence. Based on the BAER teams evaluation, the risk of adverse flooding is considered low.
- Cartwright Ranch PVT – Bronco Creek. There is a risk of flooding to structures within the floodplain of Bronco Creek on the Cartwright Ranch. The Forest is working with the NRCS to identify the risk and prescribe proper mitigations.
- There is a risk of flooding, rock fall, culvert failure and road degradation on the following Forest Roads: 24, 24F, 36, 39, 41, 58, 254, 269, 468, 483, 562, and 677. Forest Road 24 from the fire boudary to the Yavapai County line is maintained by Maricopa County. The Forest is working with the County to identify critical areas to maintain. Activities include cleaning culverts, and culvert basins and The remaining piece in Yavapai County is maintained by the Forest. Additional Narrative for Interim #1. Forest Road 269 contains an area with steep slopes and switch backs that burned with moderate and high severity. This road is at high risk of multiple failure points effectively limiting access for long periods of time.

- CCC, Cave Creek Group and Seven Springs Campground are at risk from flooding due to vegetation removal and changes in post-fire soil hydrologic function. These campgrounds receive a high amount of use year-round.
- System Trails throughout the burn area. There are approximately 20 miles of main system trails that are of high concern. There is a risk of rock fall, flash floods, trail tread degradation leading to increased watershed efficiency and visitors getting lost due to signs burning. This area receives high hiker and equestrian use nearly year-round, due to the proximity of the Phoenix metropolitan area. Due to the geography of the area it is nearly impossible to close this area to hiking and equestrian use. Treatments are recommended for trails that receive the highest use and burned with moderate and high severity.
- “Mistress” Mine area PVT. Mining facilities and structures burned on PVT lands above Forest Road 24. Many of the burned structures are in drainages that burned with moderate severity and are at risk of mobilizing, causing debris to be deposited downstream, plugged culverts and posing a hazard to Forest Road 24. The Forest is working with the NRCS, Maricopa County and Arizona State Emergency Response to determine the risk and prescribe mitigation.

### Threats to Water Quality (TE&S)

- Aquatic Species and Habitat: Sycamore and Indian Creeks are proposed Critical and occupied habitat for Gila chub, *Gila intermedia* (proposed Endangered). The southern portion of the Sycamore Creek Watershed from about the confluence with South Prong downstream to the confluence with Dry Creek was burned. The majority of the Indian Creek watershed to the east of FR 677 was burned. A risk of high fish kill may result from a significant ash flow event(s). Initial and chronic sediment inputs will have negative effects to survival and reproduction of individuals and local populations as well as to habitat quality. This species has little effective mobility to avoid the effects from the fire or for repopulating extirpated areas as a result of the fire. The fire impacts could significantly affect two of six tributaries in the Agua Fria River drainage occupied by Gila chub. As these are two of only 24 local populations known in the species range and with several other populations threatened by previous fires, the impact to the species is of high concern.
- Additional Narrative for Interim#1: Tonto N.F. personnel worked with U.S. Fish and Wildlife Service and the Arizona Department of Game and Fish to salvage Gila topminnow, *Poeciliopsis occidentalis occidentalis* out of Lime Creek. Gila chub, *Gila intermedia* were salvaged out of Sycamore Creek located in the Prescott N.F. In addition, Gila chub, *Gila intermedia* were salvaged out of Silver Creek.

**8/24/05 Interim Request** – Portions of the burned area are heavily used OHV areas. The vegetation that prior to the fire restricted vehicle access has been removed making approximately 50,000 acres easily accessible to OHV's. OHV use of these areas would impede recovery of the burned area.

### Threats to Cultural Resources

- There are a number of heritage sites within the area impacted by the fire. These sites consist predominately of artifact concentrations and prehistoric habitations. Site types present include mescal roasting pits, lithic and groundstone scatters, pithouses, and an early Kv power transmission line. The majority of these sites are not in jeopardy because the majority of the fire was subject to a mosaic of unburned and light burn severity.
- The Upper Water Spring within the Indian Creek has a prehistoric artifact scatter of 6-8 acres. Through consultation with SHPO this site, AR-03-09-05-66, was considered eligible to the National Register. The high burn severity within this site makes this site subject to damage and loss from a potential increase in runoff, accelerated erosion, and gully initiation.
- Additional Narrative for Interim#1:

- The CCC built Seven Springs Campground is at risk of flooding from Seven Springs wash, losing the remaining stone masonry work along the channel. The remaining structures are considered historic architectural properties.
- The following sites are at risk of hazard tree (juniper) blowdown and collapse: AR-03-12-01-40, AR-03-12-01-42, 43 and 1292. These trees, when they fall down can bring walls and other structural features with them.
- The Heritage Resource specialist was unable to survey all the critical, known heritage resource sites given the size of the fire. There are several areas within the fire that contain known sites that are or have a high probability of meeting the eligibility criteria for listing in the National Register of Historic Places (NRHP). The fire areas contains both pre-historic and historic sites. Many of the historic sites are associated with a mining district located in the northwest section fo the fire area.

B. Emergency Treatment Objectives:

- Prevent the loss of life and risk to human safety.
- Reduce the risk to loss of property
- Reduce the risk to TE&S aquatic species.
- **8/24/05 Interim Request – reduce unacceptable degradation to natural resources**

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

Land 85 % Channel 95 % Roads 80 % Other     %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): **\$9,601,515**

F. Cost of Selected Alternative (Including Loss): **\$2,714,992** Coordination with the Flood control Districts and NRCS to prevent loss of life and property downstream is low cost to the Forest while providing a highly effective treatment.

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range	<input type="checkbox"/>
<input type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology	<input type="checkbox"/>
<input checked="" type="checkbox"/> Fisheries	<input checked="" type="checkbox"/> Research	<input checked="" type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS	

Team Leader: Todd J. Ellsworth and Grant Loomis

Email: Tellsworth@fs.fed.us Gloomis@fs.fed.us Phone: 760-937-2082 602-225-5254

FAX:

## H. Treatment Narrative:

The following are proposed emergency treatments for the Cave Creek Complex Fire. These treatments were developed based on BAER objectives, team recommendations or proven, effective treatments, line officer/agency administrator input, as well as BAER team effort and discussion. Due to high values at risk, multiple treatments may occur in the same area to address the same emergency situation, thereby improving the overall effectiveness of mitigating the emergency. Where treatments are prescribed; preventative treatments are targeted on the moderate severity areas above high value at risk areas. Treatments with low probability of success were eliminated by use of a preliminary least cost plus risk analysis to refine treatments.

### Land Treatments:

#### 1. *Natural Vegetative Recovery*

##### Objective

8/24/05 Interim Request. A portion of the fire burned in an area of heavy OHV use. Removal of the protective vegetation is expected to result in increased OHV use in the area which will impede recovery of the area. The objective would be to allow vegetative recovery to occur as quickly as possible by implementing and enforcing an OHV closure in the burned area.

##### Methods

Fund two GS-7 FPO's to enforce the closure order, primarily in the heavy OHV use area, but to some extent throughout the burned area on weekends. Costs would include a vehicle, ATV maintenance and miscellaneous supplies.

#### 2. *Hydromulching*

##### Objective

The primary objective is to retard hillslope erosion by increasing effective ground cover, preventing loss of top soil and improving infiltration rates; decreasing peak flows. This treatment includes the cost of removing hazard trees for workers safety and safety of the public using and maintaining the spring. 8/24/05 Interim Request. This treatment, except for removal of hazard trees around the Columbine Spring Development is no longer considered necessary and is deleted from the funding request.

##### Methods

Apply hydromulch using a truck mounted sprayer to approximately 30 acres of moderate and high severity burn around the Columbine Spring area. The mixture is approximately 2000 gallons of water/acre, 500/lbs of mulch/acre, 300 lbs organic binder/acre. The mulch will be 60% paper and 40% wood. No seed would be added to the mixture. 8/24/05 Interim Request – This treatment has been omitted from the interim request. Trained fire crews will remove identified hazardous trees and ensure material is removed from the channel.

#### 3. *Hand Seeding – Prescott N.F.*

##### Objective

Hand seeding will occur at Upper Water Spring in high and moderate burn severity areas where native plant recovery is too slow for effective erosion control to protect and maintain the Eligible National Register Historic heritage site, aquatic and riparian habitat, water quality, and long-term productivity. This will also assist in filtering the ash from entering the stream. A cover crop will be integrated with the native perennial seed mix to provide a quick vegetative ground cover response.

##### Methods

Ten acres of moderate and high burn severity acres will be seeded. The seed mix will entail the following species: Sideoats grama 4lbs/acre (*Bouteloua curtipendula*), Sand dropseed 1lbs/acre (*Sporobolus cryptandrus*), and Quickguard sterile tritocale 10 lbs/acre (*Tritocale spp*).

#### 4. Cultural site protection – Prescott N.F.

##### Objective

Protect the Eligible National Register Historic heritage site, floodplain and terraces, aquatic habitat, and riparian conditions adjacent to Upper Water Spring within the Indian Creek watershed. The mulch will minimize raindrop impact, minimize soil loss and ash delivery to the stream, enhance establishment of vegetation and reduce accelerated runoff where immediate ground cover protection is needed for effective erosion control and to protect water quality for aquatic habitat.

##### Methods

Approximately 9 acres will be mulched with certified weed free straw at 2000 lbs/acre rate. The mulch will be applied by hand.

#### 5. Noxious/invasive weed Detection/removal

##### Objective

Survey for and remove noxious/invasive weeds when found. Noxious/invasive weeds provide risks to ecosystem stability by replacing the native plant community.

##### Methods

Survey 98 miles of road and 20 safety zones for invasive and noxious weeds such as Malta Starthistle, fountain grass and buffelgrass. This assessment must be done in the spring as these plant do not sprout after monsoons. Weeds will be pulled when discovered.

A report will be completed documenting the results of the survey. Additional funding for monitoring, if needed, will be requested at that time.

Additional narrative for Interim #1

#### 6. Cultural site protection

##### Objective

Prevent structural damage to cultural sites threatened by fire-damaged juniper trees.

##### Methods

Remove fire-damaged trees that could blow down or fall down on walls or other structural features. Four sites will be treated.

#### 7. Continue survey of known Heritage Sites

##### Objective

Continue survey of known, critical Heritage Resource Sites in areas of moderate and high burn severity to assess damage and if necessary, recommend stabilization measures.

##### Methods

Utilize agency or contract personnel to assess sites. Areas surveyed would be in specific areas of known critical sites in areas of moderate and high burn severity. This is not a general survey of the entire fire area.

### **Channel Treatments:**

#### 1. Channel Clearing – Camp Creek



### Objective

Clear Camp Creek of floatable debris above and within the Recreation Resident area. The watersheds above Camp Creek burned with moderate and low severity removing vegetation and creating a change in post-fire soil hydrologic function (mostly moderate areas). This will increase peak flows putting the residences and structures within the Camp Creek flood plain at risk from flooding. Debris from the channel could accumulate, back up flood flows, and re-direct water into undesirable areas

### Methods

Remove floatable debris from the channel that could accumulate. Debris would be removed from the site or placed above the flood plain.

## 2. *Sand Bags*

### Objective

Deflect expected flood flows from residences of Camp Creek. Several residences showed the BAER team where flood flows affected their houses in the past.

### Methods

Provide the residences with sand bags and instruction on how to fill and place them.

Additional Narrative for Interim #1

## 3. Channel Clearing – Seven Springs

### Objective

Removal of trees, brush and floatable debris from above and within the Seven Springs campground to prevent accumulation flooding and degrading the stone masonry retaining walls. Tree removal would be limited to trees that could restrict flood flows.

### Methods

Remove floatable debris, trees and brush from the channel that could accumulate debris from flood flows. Debris would be removed from the site or placed above the flood plain.

## **Roads and Trail Treatments:**

### 1. *Hazard Advisory signs*

### Objective

Advise the public of the presence of a burned watershed and associated safety issues.

### Methods

Signs will be placed at major entrance points throughout the Tonto and Prescott N.F.'s, at critical stream crossings, at the 3 campgrounds and at 5 trailheads.

### 2. *Clean Culverts and leadoff ditches*

### Objectives

Maintain clear passage of water and debris during storm events.

### Methods

Clear culverts, basins and leadoff ditches prior to and after runoff producing storm events with a backhoe.

### 3. *Grade/Shape and re-cut ditches*

### Objective

Maintain clear passage of water and debris during storm events

Methods

Clear ditches with a grader

*4. Construct 2 concrete low water crossings (Rackensack wash and Seven Springs wash)*

Objective

Facilitate passage of storm debris without destruction of road prism. There are several concrete low water crossings in this area. This treatment is effective in maintaining the integrity of the road prism.

Method

Construct an engineered concrete low water crossing.

*5. Culvert replacement – 3 on Forest Road 24*

Objective

Facilitate passage of storm water and debris. The fire created conditions that would overwhelm the existing culvert.

Method

Dig out old culvert, place new culvert and recompact the road prism, following established engineering procedures for the Tonto N.F.

*6. Rolling Dips – 3*

Objective

Facilitate passage of storm water and debris while maintaining the integrity of the road prism.

Methods

With a catapiller tractor construct a low spot in the rode adjacent to a culvert to facilitate water and debris crossing the road if the culvert gets plugged or overtopped. The Forest will use Standard Engineering practices.

*7. Trails; enhance and construct erosion control features (approximately 20 miles)*

Objective

Provide for trail tread stability and reduce influence of trail system on post-fire accelerated runoff.

Methods

Construct water bars, tread retainers and clean out existing water bars on system trails with youth corp crews.

**Additional Narrative for Interim #1 under Road and Trail Treatments**

*8. Construct 7 hard surface rolling dips on Forest Road 269*

Objective

To facilitate storm water passage, while retaining the integrity of the road prism, from moderate and high severity burn areas above the road. The purpose of this treatment is to enhance function related to fire-increased storm flows; it is not intended as a long-term betterment.

Methods

At pre-determined sites, construct harden rolling dips using standard engineering procedures.

*9. Gates – 14*

### Objective

The objective of this treatment is to mitigate the threat to life and to a smaller extent property and resources in the short term following the fire, until the fire-caused risk minimizes. restrict traffic. These roads are likely to suffer storm damage and/or have unimproved stream crossing that will make them impassable and are a safety concern for forest visitors. This treatment will also limit access for Off-Highway Vehicles (OHV's). This treatment will facilitate the success of land treatment #1 Natural Vegetative Recovery. The majority of roads proposed for gates do not have road stabilization treatments proposed. A Forest Order for enforcement may be needed.

### Methods

Place gates at the start of Forest Roads. Gates would be placed so vehicles could not go around them and sufficiently stout so they cannot be easily removed.

## 10. *Storm Patrol*

### Objective

To identify and repair storm damage, where feasible and can be safely implemented, during and after periods of runoff in order to prevent otherwise greater damage from occurring.

### Methods

Utilize a workforce and equipment such as a backhoe to repair storm damage. Cleaning culverts, and leadoff ditches are high priority.

### Other Treatments – Additional narrative for Interim #1

## 1. *External Coordination*

### Objective

Maintain interaction and communication with cooperating agencies including; Maricopa County flood control and roads; NRCS, Yavapai County flood control, Agua Fria National Monument and other local, state and federal agencies. Expedite placement of early warning systems and additional rainguages.

### Methods

Utilize a local Forest staff to continue to attend coordination meetings and share information with previously mentioned agencies (1 PP of time). Make Forest specialists available to provide "clearance" for placement of early warning systems and/or additional raingauges on National Forest System Lands ( 3 days ea).

## **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.)

### **1. Hydromulch effectiveness monitoring**

- **Monitoring Question:** Determine if the hydromulching treatment retards erosion, increases infiltration and minimizes the anticipated increase in peak flows in the Columbine watershed.
- The Forest will measure effective ground cover after implementation, after a summer storm event and a winter storm event. Personnel will also observe effects to stream channel condition, the Columbine springbox and the 24 road.
- Ground cover would be measured by ocular estimates walking through the treatment area.

- A 1 page report would be completed after each site visit with a longer report completed in the spring, after the winter storms. The report would include photographs and a recommendation on whether additional treatments are necessary.

8/24/05 Interim Request – This treatment has been eliminated consequently the associated monitoring element is also omitted.

**Costs: \$0**

## 2. Seed and mulch treatments – Prescott N.F.

- **Monitoring Question:** Determine if the seeding and mulching provided adequate ground cover to protect the Eligible National Historic Heritage site, aquatic habitat and riparian conditions adjacent to Upper Water Spring within the Indian Creek watershed.
- The Forest will measure effective ground cover after implementation, after a summer storm event and a winter storm event. Ground cover density is an accept surrogate measure to determine off-site erosion. Personnel will also observe stream bank stability and and channel stability.
- Ground cover would be measured by ocular estimates, walking through the treatment area.
- A 1 page report will be completed after each site visit with a longer report completed in the spring, after the winter storms. The report will include photographs of the treatment area and a recommendation on whether additional treatments are necessary.

**Costs: \$2,000**

## 3. Road Treatments

- **Monitoring Question:** Determine whether treatments such as low water crossings on Forest Road 24 at Rackensack and Seven Springs drainages were effective. Evaluate the hard surface rolling dips at the switchbacks on Forest road 269.
- The Forest will measure where the roads were able to pass flood flows and still retain the road prism in drivable condition. Observations will occur after a summer storm event, and the winter storm season.
- The Forest will perform ocular observations along with photographs of the affected area.
- A report will be completed after each site visit with a longer report completed in the spring. The report will include photographs of the treatment area and a recommendation on whether additional treatments are necessary.

**Costs: \$1,500**

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

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands				All Total \$
			# of Units	WFSU SULT \$		# of units	Fed \$	# of Units	Non Fed \$	
<b>A. Land Treatments</b>										
Hydromulching	ac	1,500	30	\$1,000	\$0		\$0		\$0	\$1,000
Hand Seeding	ac	50	10	\$500	\$0		\$0		\$0	\$500
cultural site treatment	ac	9000	1	\$9,000	\$0		\$0		\$0	\$9,000
cultural site treatment	ea	625	4	\$2,500			\$0		\$0	\$2,500
invasive weeds detect/remove	ea	5700	1	\$5,700			\$0		\$0	\$5,700
Heritage assessment	ea	10,000	1	not approved			\$0		\$0	
closure enforcement	ea	55,500	1	\$55,500			\$0		\$0	\$55,500
<i>Subtotal Land Treatments</i>				\$74,200	\$0		\$0		\$0	\$74,200
<b>B. Channel Treatments</b>										
Channel Clearing	mi	2,500	2	\$5,000	\$0		\$0		\$0	\$5,000
Sand Bags	ea	1.5	200	\$300	\$0		\$0		\$0	\$300
Channel Clearing - seven spr	mi	2,500	1.5	\$3,750						
<i>Subtotal Channel Treat.</i>				\$9,050	\$0		\$0		\$0	\$5,300
<b>C. Road and Trails</b>										
Hazard advisory sign	ea	192	26	\$4,992	\$0		\$0		\$0	\$4,992
Culvert Cleaning	ea	500	76	\$38,000	\$0		\$0		\$0	\$38,000
Ditches	mi	1350	40	\$54,000	\$0		\$0		\$0	\$54,000
2-LWC	ea	45,000	2	\$90,000						\$90,000
Culvert Replacement	ea	4,000	3	\$12,000						\$12,000
Rolling dips	ea	1,666	3	\$5,000						\$5,000
Trail erosion control work	mi	3,500	20	\$70,000						\$70,000
Rolling dips (hardened)	ea	8,800	7	\$61,600						\$61,600
Gates	ea	3,100	14	\$43,400						\$43,400
Storm Patrol	ea	5,000	1	\$5,000						\$5,000
<i>Subtotal Road &amp; Trails</i>				\$383,992	\$0		\$0		\$0	\$383,992
<b>D. Other</b>										
External Coordination	ea	6,000	1	\$6,000	\$0		\$0		\$0	\$6,000
<i>Subtotal Structures</i>				\$6,000	\$0		\$0		\$0	\$6,000
<b>E. BAER Evaluation</b>										
Team	ea	55,000	1		\$55,000		\$0		\$0	\$55,000
<i>Subtotal Evaluation</i>				\$0	\$55,000		\$0		\$0	\$55,000
<b>F. Monitoring</b>										
Hydromulch	ea	0	0	\$0	\$0		\$0		\$0	\$0
Seed + Mulch	ea	2,000	1	\$2,000						\$2,000
Road Treatments	ea	1,500	1	\$1,500						\$1,500
<i>Subtotal Monitoring</i>				\$3,500	\$0		\$0		\$0	\$3,500
<b>G. Totals</b>				<b>\$476,742</b>	<b>\$55,000</b>		<b>\$0</b>		<b>\$0</b>	<b>\$527,992</b>

### 8/24/05 Interim Request – Changes from 7/12/05 Interim Request

- Hydromulching of the Columbine Spring watershed at a cost of \$46,200 has been reduced to \$1,000 to remove hazard trees around the Spring development only.
- Monitoring of the Hydromulch treatment at a cost of \$1500 has been removed.
- Funding for two GS-7 Forest Protection Officers to enforce closure of the burned area to OHV's has been added at a cost of \$55,500.

The difference between the previously approved interim 2500-8 that was approved on 7/15/05 and this request is a net increase of \$8,799.

The funding identified above reflects the entire program of work proposed for the Cave Creek Complex Fires.

## **PART VII - APPROVALS**

1. /s/ Gene Blankenbaker  
Forest Supervisor (signature)  
Gene Blankenbaker, Tonto National Forest
2. /s/ Abel M. Camarena  
Regional Forester (signature)