September 28, 2005

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[] 1. Funding request for estimated WFSU-SULT 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 or design analysis
[ ] Status of accomplishments to date

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name:Crown Complex - of Foothill and Crown
B. Fire Number: LA-LAC-146068, CA-ANF-2517

C. State: CA D. County: Los Angeles

E. Region: 05 F. Forest: Angeles

G. District: 53 Santa Clara/Mojave River
55 Los Angeles River

H. Date Fire Started: July 17, 2004 (Foothill) I. Date Fire Controlled: July 25, 2004 (Crown)

J. Suppression Cost: $12,000,000

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 31.8 miles, 24.0 Crown and 7.8 Foothill (in progress)
2. Fireline seeded (miles): 0
3. Other (identify): 0

L. Watershed Number: 1807010501, 1807010202, 1807010201, 1809020608, 1809020611

M. Total Acres Burned: 17980
NFS Acres(13097) Other Federal ( ) State, County, and City (3296) Private (1588)

N. Vegetation Types: Crown: chaparral, juniper shrub, desert shrub, pinyon pine
Foothill: semi-desert chapparal, California juniper shrub, mixed desert shrub, pinyon pine

O. Dominant Soils: shallow to moderately deep Xerorthents, Xerochrepts, Xeropsamments, and Haploxerolls

P. Geologic Types: Crown: granitic.
Foothill: granitic, and marine and nonmarine sedimentary

Q. Miles of Stream Channels by Order or Class: Perennial: 1.4 miles, Intermittent: 71.8 miles

R. Transportation System - Trails: 22 miles Roads: 83 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 2352 (low) 13283 (moderate) 285 (high)

B. Water-Repellent Soil (acres): 14690

C. Soil Erosion Hazard Rating (acres):
1000 (low) 4000 (moderate) 12980 (high)

D. Erosion Potential: 11 tons/acre (24 month by USLE)

E. Sediment Potential: 30,000 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. Design Chance of Success, (percent): 95

C. Equivalent Design Recurrence Interval, (years): 3

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 6.5

F. Design Flow, (cubic feet / second/ square mile): 15

G. Estimated Reduction in Infiltration, (percent): 50

H. Adjusted Design Flow, (cfs per square mile): 43.4

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Heritage Resources –

Aliso-Arrastre Special Interest Area (Proposed) – The Crown Fire burned the entire proposed Aliso-Arrastre Special Interest Area increasing its visibility and exposing it to vandalism. The area includes numerous prehistoric archaeological sites, including the Chavez Site (CA-LAn-902), the largest village site known on the Angeles National Forest. There are hundreds of seasonal encampments and special-use resource procurement, processing, and storage sites distributed across the proposed SIA. There are more than 100 stone circle features so far foundthat are interpreted as house rings, storage caches, and religious sites. This concentration of stone circles may be unique in southern California. Also located within the proposed SIA are several sites containing cupule rock art features, one of which is currently being nominated to the National Register of Historic Places.

Chavez House Pit Feature – A house pit feature that is part of the culturally important Chavez Site in the Aliso-Arrastre area is in danger of being destroyed by bank erosion of Aliso Creek.

Dry Canyon Earth Ovens – FS #05-01-55-00117 - Two remnants of earth oven features (one of which is 1900 years old) are exposed in the steep cutbanks of a creek tributary of Aliso Creek. They are in danger of being eroded away by channel erosion due to increased flooding resulting from the Crown Fire.

Roads –

Forest Access roads located within the Crown Complex are at risk of damage due to loss of water control. Existing drainage may be inadequate, and the expected increase in flow could wash out portions of these roads and prevent access to portions of the Forest. Inadequate drainage will result in increased sediment transport, accelerated rilling, gullying, and slumping of road travelway surface and road fills. This can result in increased sediment deposition in the channels and drainages, some of which are occupied habitat for TEPCS species. There are 11.7 miles of Forest Developed Roads within the burn as well as 7.2 miles of County Developed Roads.

Of particular importance is the Whitney Canyon Road, an important part of the backbone road system for the main body of the Forest, as well as a primary access for fire suppression equipment to wildfires in the western portion of the Forest. The roadbed is at high risk for failure resulting in the closure of the road and the loss of access for both emergency and permittees for that part of the Forest.

An unnamed road in Gleason Canyon is at risk of having woody debris plug a culvert and having the road wash out. A 1000-foot segment upstream has burned trees and existing woody debris that would not pass through the culvert. This road is on the detour route around a bridge on Aliso Canyon Road that burned during the fire, and is therefore important to maintain

A low water crossing on the Little Rock Reservoir Road lies at the base of a drainage that was completely burned. Sediment movement and loss of water control poses a threat to travelers on the road as well as recreationalists in the Little Rock Reservoir.

The County roads on the forest have been surveyed by Los Angeles County that is proposing its own treatments at its own expense.

Utility Corridors (including Special Use Roads) –

Utility infrastructures exist within the Crown Complex that are of extreme importance to the Los Angeles urban area. The fires burned over the Los Angeles Aqueduct as well as major transmission lines for the Los Angeles Department of Water and Power, and Southern California Edison that service southern California. All can be considered susceptible to sediment movement, water flow, and landslides.

Hazmat –

The fire burned approximately 2 acres of the inactive Kentucky Shooting area, removing most of the existing onsite vegetation. Five shooting lanes with shooting debris and trash accumulation were burned over. The site is at the bottom of several burned drainages. Surface runoff and concentrated flows will pass through the fire damaged portion of the shooting area. There is the potential for off-site movement of hazardous materials or pollutants, including lead. The Crown Fire has also exposed hazardous waste dumps (paint cans and asbestos) so that increased sediment movement and loss of water control could introduce hazardous materials into the stream courses. There are additional solid waste concentrations such as an unauthorized junk yard in trespass

(automobiles, tractor, metal debris), and trash dumps (auto, tires, metal and glass trash) that need cleanup but are not BAER emergencies.

Unauthorized Off-Highway Vehicle Use –

The open country caused by the fires has resulted in a significant threat to natural recovery and sensitive resources (such as heritage resources) from increased illegal off-route Off-Highway Vehicle use. This portion of the Forest is near the cities of Santa Clarita and Acton and in the past has been the impacted by the unauthorized motorized recreation use (in particular motorcycles). Motorcyclists have in the past pioneered trails into areas that have been cleared of brush resulting in increased erosion, rilling, and gullying during winter rains with a resulting increase in sediment deposition into the channels. The anticipated increase in the unauthorized motorized recreation use, especially on the Crown Fire, increases the likelihood of surface damage to the many archaeological sites present in the area that were previously protected by the vegetation. It is wise to patrol to prevent the establishment of new user-created routes until vegetative regrowth forms a natural barrier.

Noxious Weeds –

Noxious weeds are a management issue for the Forest particularly after fire. The fire removed other plants that would be considered competitors with noxious weeds and invasive plants. It is anticipated that without plant competitors noxious weeds, especially star thistle and tocolote, could become established in areas where they weren't previously but are currently devoid of vegetation. The spread of invasive plants is an emergency as their presence is not indicative of a healthy ecosystem, and can prohibit the normal regeneration of the natural plant community.

Boundary Management –

Approximately 32 miles of Forest Boundary were burned over by the Crown Complex (Foothill Fire – 18 miles, Crown Fire – 14 miles). It is estimated that approximately 90 corner monuments and controlling monuments were burned over (Foothill Fire – 50, Crown Fire – 40), and potentially damaged or destroyed. The lack of a marked boundary could result in the encroachment onto the Forest of activities and developments associated with a highly urbanized area that could impede the natural recovery of the deteriorated watershed. The need for resurvey will be addressed outside of BAER, potentially by National Fire Plan proposal.

B. Emergency Treatment Objectives:

Heritage Resource Objectives -

- Avoid damage to significant heritage resources due to the increased runoff and erosion, and debris flows resulting from the effects of winter storms on the burned watershed.
- Avoid damage from BAER rehabilitation measures.
- Avoid damage to significant heritage resources by vandalism due to the increased visibility of the site locations.

Roads Objective –

- Preserve the integrity of the roads and road embankments.
- Prevent degradation of drainage channels and watersheds from sediment flow and loss of water control associated with the road system.

Utility Corridors –

- Work with utility companies under existing special uses permits to avoid resource damage or damage to utility lines

Hazmat –

- Minimize the movement of hazardous wastes and solid materials into the waterways within the burn.
- Remove hazardous wastes, and solid wastes where the fire has created public safety issues.

Unauthorized Motorized Recreation -

- Increase patrols to avoid the establishment of new illegal routes during the period prior to vegetative recovery.
- Post additional signs to increase public awareness of rules for OHV use.
- Use gates and fences where appropriate to restrict access to sensitive areas.

Noxious Weeds –

- Detect and stop the establishment or spread of noxious weeds within the burn area, especially in TEPCS species habitat.

Interagency Cooperation-

- Work in cooperation with Federal, State, and local responsible agencies and landowners to reduce the possible hazards to downstream values at risk, both public and private, from increased flows and sedimentation. Utilize Public Involvement Tools to facilitate interaction.

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

Land **na** % Channel **95** % Roads **95** % Other **95** %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): **$400,000,** potential loss of life, road prism, establishment of noxious weeds, establishment of illegal OHV trails, loss of heritage resources.

F. Cost of Selected Alternative (Including Loss): **$229,650**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Jeff TenPas, Central California Zone Soil Scientist, Asst. Team Leader: Mike McIntyre, ANF Heritage Resources Program Manager

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H. **Treatment Narrative:**

Land Treatments:

Heritage Resource Values –

Heritage Resource Patrols of proposed Aliso-Arrastre Special Interest Area– This treatment will center on monthly field patrols for one year (12 total patrols) by a member of the Forest Heritage Resource staff. A summary report on the condition of the heritage resources in terms of occurrences of vandalism or increased visitor use will be prepared after each patrol, and a detailed summary report prepared at the end of the year. Coordination with the Off-Highway Vehicle Patrol will occur to minimize redundancy and emphasize efficiency through cooperation. Purpose of treatment to protect archaeological sites that are extremely vunerable to vandalism and severe damage from visitor use from the decreased vegetation and increased site visibility. Patrols accomplished; some damage noticed from OHV activity, addressed through notification to Off-Highway Patrol.

Dry Canyon Earth Ovens - FS #05-01-55-00117 Two remnant earth oven features (one of which is 1900 years old) need protection. BAER Team Hydrologists suggested a channel treatment of gabions located above and below the site would protect the area at an estimated cost of $30,000.00. This cost would greatly exceed the expected benefit. Therefore, it is proposed to protect the at-risk archaeological deposits from their creek embankment locations through removal. Purpose of the treatment is to conserve archaeological materials that are high risk of destruction or severe damage from the expected increase in flooding. Accomplished with funds contributed from Forest Heritage budget. Overage should have been adjusted to Forest Heritage Funds.

Motorized Recreation –

Off-Highway Vehicle Patrol – To prevent an increase of unauthorized off-highway vehicle use of the burned areas, Forest employees will be used to patrol on a daily basis the burn area. The purpose of this patrol is to work with adjacent land owners to restrict access from their lands by off-highway vehicle recreationalists, make educational contacts with unauthorized users within the burned areas, and if necessary, provide enforcement capabilities to the contacts. The purpose of this treatment is to educate the local public and minimize the use of the area for unauthorized. Patrols were implemented.

Area Closure – This treatment will be used in conjunction of the Off-Highway Vehicle Patrol and will consist of fencing key access areas by motorized recreationalists to prevent resource damage and damage to the watershed regeneration rate. One gate will be installed. Signage will be used in areas where fencing is not utilized. Areas were closed and fencing needed to be improved due to removal by Forest users. Off-highway vehicle use noted in closed areas. Fencing supplies possibly charged to another account or included in contract for roads and trails treatment.

Hazmat –

Hazardous Waste at Milepost 2.62 Aliso Cyn Rd. – Remove hazardous material (i.e., paint cans, asbestos, freon) to prevent the degradation of water quality and threat to public safety. Accomplished.

Shooting Range – Use a hand crew and equipment to remove approximately eight cubic yards of material (shooting debris and trash accumulation) to prevent the off-site movement of hazardous substances or pollutants, including lead. Accomplished.

Invasive Plants –

Invasive Plant Patrol – Patrol to detect and protect against the establishment of noxious weeds within the burn areas. Forest Biology and Botany Specialists will patrol the burn areas two days a month for five months (March-July 2005). The patrol will focus on those vectors by which invasive plants can be introduced (fuel breaks, Forest Roads, rehabbed dozer lines, previous occurrences of noxious weeds) to identify and map any infestations of noxious weeds, and if possible, remove them by hand and dispose of them according to protocol. Patrol not implemented.

Channel Treatments:

Chavez House Pit - CA-Lan-902 – Protect a portion of an important Native Californian village site (that includes a house pit feature) at extremely high risk of being washed away from its Aliso Creek terrace location. Stabilize the stream bank with filtration cloth and armor with rip-rap. Accomplished but some charges that should have been charged to Forest Heritage Funds were incorrectly charged to BAER (project was funded jointly) and was discovered too late for accounting adjustment.

Channel Clearing - Unnamed Road on the Aliso Canyon Detour. Clear 1000 ft of channel of large woody debris. Fell fire-killed trees and remove. Remove other channel debris. Accomplished.

Roads and Trail Treatments:

Whitney Canyon Road 3N17 –

Three locations are in need of a 24" overside drain with a total of 50 feet of flume to protect the road prism and avoid erosion due to an increase in runoff that will affect the integrity of the road. This includes construction of an intercepting dip and 20 foot lead-off ditch. Failure of landing-mat retaining walls and an overside drain has caused slope failure and a complete deterioration of the road embankment at one location. To prevent the complete failure of the road, the construction of a Hilfiker retaining wall (40 feet in length and 16 feet high) is proposed. Completed including repair of storm damage.

Forest Service Road 4N32 –

One location is in need of an overside drain, 10 feet of flume, and approximately 10 cubic yards of excavation and fill to prevent erosion to the road prism due to an increase in runoff. Completed.

Edison Powerline Road –

One location is in need of an overside drain, 10 feet of flume, and approximately 10 cubic yards of excavation and fill to prevent erosion to the road prism due to an increase in runoff. Completed.

Structures: None proposed.

Other:

Agency Coordination –

The greatest threats to life and property as identified by the BAER Assessment Team occur off the forest. This treatment is designed to provide Forest Service coordination with other agencies to ensure that FS identified threats are communicated to the responsible agencies. A coordinating group will meet to share information and access to resources. Accomplished and very effective.

Boundary Management – Not proposed for BAER funding.

There are over 90 potentially damaged or destroyed survey markers/monuments that could cause a lack of a marked boundary. The ambiguous boundary could result in the encroachment onto the Forest of activities and developments associated with a highly urbanized area could impede the natural recovery of the deteriorated watershed. The treatment proposes to reestablish the boundary lines in the fire to standard, and protect the corners located within the fire area.

H. **Monitoring Narrative:**

No monitoring is proposed.

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

Edison Powerline Road	job	5,100	1	$5,100	/					$5,100
Little Rock Warning Signs	ea	400	1	$400	0					$400
Subtotal Road & Trails				$136,600	$89,308		$0		$342,200	$478,800
D. Structures										
Subtotal Structures				$0	0		$0		$0	$0
E. Other										
Treatmnt Surveys (Arch)	ea	2,000	1	$2,000	4633		$0		$0	$2,000
Treatmnt Surveys (ESA)	ea	2,000	1	$2,000	0		$0		$0	$2,000
Agency Coordination	mtg	725	8	$5,800	2965				$0	$5,800
Subtotal Other				$9,800	$7,598		$0		$0	$9,800
F. BAER Evaluation										
Assessment Team	tm	46,100	1	$46,100	45294		$0		$0	$46,100
Noxious Weed Assessment	da	560	10	$5,600	0					$5,600
Implemtation TL	day	720	5	$3,600	2700		$0		$0	$3,600
				$0						
				$0						
				$0						
G. Monitoring				$0			$0		$0	$0
H. Totals				**$308,550**	**$193,936**		**$0**		**$342,200**	**$663,710**

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date