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

Date of Report: October 4, 2004

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: **Padua**

B. Fire Number: **CA-ANF-004490**

C. State: **California**

D. County: **Los Angeles and San Bernardino**

E. Region: **Pacific Southwest**

F. Forest: **Angeles**

G. District: **San Gabriel River**

H. Date Fire Started: **October 21, 2003 1420**

I. Date Fire Contained: **November 2, 2003 1800**

J. Suppression Cost: **$ 1,200,000.00 (as of containment date),**

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): **.25 equipment lines on NFS lands, handlines unknown**
2. Fire line seeded (miles): **0**
3. Other (identify): **Roads within and on the perimeter of the fire were graded.**

L. Watershed Number: **1807010333, 1807010106**

M. Total Acres Burned: **10,446** NFS Acres (**4,904**) Other Federal (0**)** State (0) Private/County (**5,542**)

N. Vegetation Types: **Mixed Chaparral, Scrub Oak, Canyon Live Oak, Big Cone Douglas-Fir, Mixed Conifer – Pine, and Riparian.**

O. Dominant Soils**: Chilao Family, Typic Xerochrepts, Caperton-Trigo Family, Olete Family and Tollhouse Family, and Riverwash**.

P. Geologic Types: **Alluvium deposits, gneisses or other metamorphic rocks, and plutonic rocks, mainly of granitic to quartz dioritic composition**.

Q. Miles of Stream Channels by Order: **Order 1(10.4) Order 2(1.2) Order 3(4.2)**

R. Transportation System

Trails: **0** miles Roads: **Forest System (8.6), County/State (5.35), Other (1.5)** miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1888__ (low) 2563_ (moderate) **177** (high) **281**_ (unburn**)**

B. Water-Repellent Soil (acres): **176**

C. Soil Erosion Hazard Rating (acres):
368 (low) **525** (moderate) **4016** (high)

D. Erosion Potential: **117** tons/acre

E. Sediment Potential: **7,488** cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): **4**

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

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

D. Design Storm Duration, (hours): **2**

E. Design Storm Magnitude, (inches): **2.13**

F. Design Flow, (cubic feet / second/ square mile): **52**

G. Estimated Reduction in Infiltration, (percent): **51**

H. Adjusted Design Flow, (cfs per square mile): **101**

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

On October 21, 2003 at 1420, the Grand Prix Fire was started under suspicious circumstances and is suspected to be arson. On October 26th, the Grand Prix Fire, under the management of California Interagency Incident Management Team 2 (CIIMT 2), moved rapidly from east to west and crossed into Los Angeles County and the Angeles National Forest, in an area located above the cities of Claremont and east of La Verne. A Type 1 Incident Management Team was ordered to manage the west side of the fire. This portion of the fire extended west from the Angeles National Forest boundary and was named the Padua Fire.

On October 27, 2003 at 1930, California Interagency Incident Management Team 4 (CIIMT 4) and the Los Angeles County Fire Department assumed unified command of the Padua Fire, transitioning from CIIMT2 during the day. At the time of transition, the size of the fire was estimated to be 8,000 acres, 15% containment, with 499 personnel assigned to the fire. Due to more accurate mapping, the final acreage was determined to be 10,446 acres. Cost to date totaled $1,200,000.00.

A Burned Emergency Area Team Leader was assigned to the incident on October 30, 2003 at 1430, and the initial inventory was completed and the values at risk identified in conjunction with the Forest Supervisor and District Ranger. Members of the BAER Team were ordered between October 30 and November 3, 2003.

The Padua Fire burned in soils that occur on steep slopes and have a potential for high to very high erosion hazards. The Fire could increase the high erosion hazard through the formation of water repellent soil layers at the surface or just slightly below the surface. Many active faults, including the Sierra Madre Fault, dissect or are adjacent to the burn area, and with the lack of vegetation on burned slopes, there is an increased risk of seismically triggered landslides. Accelerated sheet and rill erosion will occur due to the lack of canopy, ground cover and water repellency of soils. Increased sediment delivery to the stream channels will result in degraded water quality and loss of channel capacity. Runoff will increase due to loss of infiltration capacity.

The Padua Fire burned mainly in the San Antonio Canyon, consuming 5,448 acres of the 17,093 acres of the watershed located north of the Forest administrative boundary or 31.9%. Most of the west portion of the fire area on Forestlands burned last year in the Williams Fire but burned last in the 1975 Village Fire. The northeast portion of the Padua Fire last burned in 1980 in the Thunder Fire. The southeast portion basically has not burned in the last thirty years. Small fires have occurred throughout the burn area in the last thirty years.

Values at Risk Emergency -

The Padua Fire burned in an area that is directly above numerous cities and communities. A complex of reservoirs and debris basins are located within and adjacent to the burn area, and are designed to serve as storage facilities for debris that could result from fires, earthquakes, or flooding.

Water from San Antonio Canyon flows into San Antonio Dam and spreading grounds to recharge the aquifer that serves as a domestic water source for Pomona Valley, Walnut Valley, and the eastern portion of the San Gabriel Valley.

The Forest Service has an administrative site located within the burn area – the Lower San Antonio Fire Station. It consists of a residence, engine office, and garage, along with the supporting infrastructure. It is estimated that the replacement value of the compound is $615,000.00.

Utility infrastructures exist within the Padua Fire that are of extreme importance to the Los Angeles urban area. The fire burned over the SCE hydroelectric power plant system in San Antonio Canyon and at least two power plants are within the burn. All can be considered susceptible to sediment movement, water flow, and landslides.

The Padua Fire burned mainly within San Antonio Canyon, which is rich in heritage resources centering on the historic period of the Angeles National Forest [historic graves, travelways, mines, aqueducts, flumes, and State Historic Landmarks (San Antonio Light and Power Company, Pomona Power Plant)]. The Padua Fire burned down the historic garage of Ontario Power Plant #1 that is part of the Pomona Power Plant system. Nine recorded heritage resource sites are recorded inside the burn perimeter within the administrative boundary of the Angeles National Forest. There is the possibility that unknown heritage resources could exist in areas at risk for sediment and water flow. Therefore, any area at risk for sediment and water flow has the potential for damaging the integrity of heritage resources resulting in the loss of important information.

The fire consumed a total of 10,446 acres mainly consisting of Mixed and other Chaparral (3,836 acres), Big Cone Douglas Fir (634 acres), Canyon Live Oak (383 acres), Scrub Oak (489 acres), and Mixed Conifer – Pine (119 acres) communities. Six sensitive plant species occur in the general area of the Fire, and the Fire burned within modeled habitat for Nevin's Barberry, Three-leaf Brodiaea, Braunton's Milkvetch, and Slender-horned Spineflower.

Mt. Baldy Road basically bisects the Padua Fire (with over 4 miles within the burn area). The vegetation has burned on the canyon sides. It is a paved two-lane road that serves as a major route for a large number of travelers. It is the access for one community of over 900 individuals (Mt. Baldy Village) located just north of the Padua Fire. This access also serves as the main travel route for recreationists whose destination is the community, the Visitor Center and hiking trails, and the Mt. Baldy Ski Resort, one of the main ski areas in Los Angeles County. The threat of soil movement and loss of water control, all originating on Forest Service system lands, poses a severe threat to the road and the users of the road. Traffic associated with the

community and Ski Area can be at risk due to unsafe road conditions. The closure of the road can economically impact the community and Ski Area through loss of tourist dollars. There are numerous inholdings with County and utility infrastructure, also affected by sediment flow and water movement on Forest System lands.

There are two bridges on Mountain-Shinn Road that are susceptible to impact through debris and sediment flows from the deteriorated watersheds located upstream from the bridges. The Stoddard watershed, which is located upstream from the lower bridge, was totally burned. The other bridge, Shinn Bridge, is to be removed and rebuilt next April at a contract cost of $ 1,600,000.00.

There are Forest Access roads located within the burn area that are used by a variety of forest users, permittees, and Forest Administrative staff. Loss of water control and inadequate drainage to handle the expected increase in flow could was out portions of these roads and prevent access to portions of the Forest. Inadequate drainage will result in increased sediment transport due to accelerated rilling, gullying, and slumping of road travelway surface and road fills. This can result in increase sediment deposition in the channels and drainages, accelerating the capacity loss of downstream and off-Forest flood control structures.

Approximately 2.75 miles of external Forest boundary and 5.5 miles of inholding boundaries were burned over by the Padua Fire. Approximately 4 miles of the Los Angeles-San Bernardino County line exist within the Padua Fire on the Angeles National Forest. It is estimated that over 25 corner monuments and controlling monuments were burned over 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.

B. Emergency Treatment Objectives:

The base analysis used for the formulation of Emergency Treatment Objectives for the Padua Fire was the review of Emergency Treatment Objectives developed for BAER analyses for previous wildfires in the general area, local resource “corporate” knowledge, a preliminary assessment of the Padua Fire burn area, and the following goals for emergency rehabilitation of watersheds following wildfires:

1. Loss of Soil Productivity
2. Deterioration of Water Quality
3. Loss of Water Control
4. Threats to Human Life and Property

(All treatment measures within occupied and key habitat for TEPS species must be consistent with the conditions of the SCCS Settlement, the appropriate species recovery plans (if existing), and conform to the guidelines presently listed in the Forest Plan Revision).

* Identify and reduce, through the development of treatment measures, to the extent possible:

- The closure of Mt. Baldy Road
- The loss of soil productivity (ability of the soil to support plant cover) from soil erosion processes (sheet, rill, and gully)
- Damage to habitat for sensitive species (including but not limited to Big Horn Sheep).
- Damage to heritage resource sites.
- Damage to physical investments within the burn area:
  - Lower San Antonio Administrative Complex
  - SCE Infrastructure
  - LACo Dept. of Public Works Infrastructure
  - Private Inholdings
- The loss of downstream property values south of the Forest Boundary
- Impact to off-Forest municipal water supply.

* 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.

* Recommend measures to insure Forest User safety during events of increased flow and sedimentation.

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

Land **80** % Channel **80** % Roads **80** % Other **70** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	95	100
Channel	80	95	100
Roads	80	95	100
Other	70	100	100

E. Cost of No-Action (Including Loss): **$2,685,000.00**

F. Cost of Selected Alternative (Including Loss): **$ 557,890.00**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: **William J. Brown**

Email: **wjbrown@fs.fed.us** Phone: **626.574.5258** FAX: **626.574.5280**

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.)

The treatment specifications that follow will be detailed in the Implementation Plan that will be developed upon funding approval for this Initial Request. The Plan will be provided to the Regional Office for review prior to any treatment implementation. The Forest Service will do all treatments unless otherwise noted. All costs are based on treatment being done by the Forest Service.

Land Treatments:

Natural Vegetative Recovery – This cost-free treatment consists of on-site vegetative material to sprout or germinate to reduce the emergency conditions over most of the burned area. This has been a successful treatment for past fires in Chaparral vegetation zones. The steepness of the majority of the burn area on National Forest System lands prohibits the installation of economic and efficient treatment measures so this is the default treatment in those areas.

Lower San Antonio Station - A small, steep watershed draining into the San Antonio behind the Lower Antonio Station totally burn. A diversion berm exists behind the station but needs to be reinforced and supplemented to protect the station through the upcoming damaging events.

(Interim Jan 9, 2004) The diversion berm behind the fire station was cleaned out and reinforced in early December. This berm captured a debris flow saving the fire station from damage. The Christmas Day storm filled a good portion of the volume behind the diversion berm with debris. To renew the capture capacity of the channel and reinforce the berm we had a contractor clean out the channel and put the material on the berm at a cost of $5,000. We expect we will need to do this at least two more times this winter. In this request we are asking for the $ 5,000 that has already been spent and an addition $10,000 to cover two more clean outs for a total of $15,000.

(Final Oct. 4 2004) The diversion berm behind the fire station captured debris from the Dec. 25 storm saving the fire station from damage. The diversion berm was cleaned out in very late Dec. and early Jan. we expected to clean it out two more time through the storm season. The two additional cleanouts was not required saving about $10,000 from what was requested.

Dumps/Landfills – A series of small dumps/landfills were documented due to the vegetation removal. The absence of vegetation will facilitate an increase in water and sediment flow into the channel that may carry these items (mostly household waste material) into the stream channel, impacting the water quality, which may affect the downstream domestic water supply. These areas will be collected following hazard material protocol.

(Final Oct 4, 2004) Hazardous material was cleaned up. Originally it was estimated that $24,900 would be needed to clean up through three sites. A total of $29,250 has been paid. One bill still remains for $1,130 still outstanding as of the August activity report. The last bill was to transport and dispose of drums and cylinders that had unknown substances in them. Total Hazardous material cost will be $30,380. We went over the estimated cost by $5,480.

Hazard Tree Removal – A grove of burned eucalyptus trees are along one of the County Roads and the trees pose a hazard to the public and employees using the road as well as the recreationists who hike in the area. Treatment is to drop the trees in place, falling them in a manner that will promote soil stability and armoring the slope bank where necessary to minimize erosion of the terrace on which the grove is located.

(Final Oct 4. 2004) All the trees were cut down and limbed in late November of 2003.

Heritage Resource Values – There are three sites that treatment measures are proposed for as a result of the Padua Fire. Recordation is proposed to protect and preserve the information present on Heritage Resource Site FS#05-01-52-050 and FS#05-01-52-115. The recordation treatment represents the least obtrusive treatment as well as the most efficient and fiscally beneficial in terms of the value at risk. Finally, FS #05-01-52-42 (Lower San Antonio Ranger Station) will be protected within other treatments identified in this report. Additional information is available in the project Heritage Report.

SCE Road Slopes Treatment – This treatment is designed to slow or prevent soil from reaching Mt. Baldy Road (County), which would create hazardous conditions on the roadway and contribute to its repeated closures. It will utilize silt fencing on a gentle slope above a major intersection of the Mt. Baldy Road.) (Nov 12, interim)

(Final Oct. 4, 2004) The silt fencing was installed before the first December storm. Most of the silt fencing successfully held back soil washed in from over land flow.

Channel Treatments:

Lower San Antonio Station - A small, steep watershed draining into the San Antonio behind the Lower Antonio Station totally burn. A small channel between the slope and the diversion berm needs to be cleaned out to allow for additional storage of material coming off the slopes.

SCE Road Slopes Treatment – This treatment is designed to slow or prevent soil from reaching Mt. Baldy Road (County), which would create hazardous conditions on the roadway and contribute to its repeated closures. It will utilize straw bale check dams for a small order one drainage that drains directly onto Mt. Baldy Road. (Nov 12, 2003 interim)

(Final Oct. 4, 2004) Straw bale check dams were installed before the first storm. Four check dams held back debris the water bypassed a fifth.

Roads and Trails

Forest Service System and Other Roads – A field inventory of the roads within the burn area on the Forest indicate two roads that would be affected by the deteriorated watershed: Barrett Stoddard Truck Trail (FS #2N04) and the Gravel Pit Road. The burn will increase runoff that may result in the washout of portions of the roadbed. The use of the road is of a low level so the appropriate treatment would be to keep the current gates locked and post warning signs about the condition of the road. The Gravel Pit Road would erode directly onto Mt. Baldy Road and contribute to potential closures of that road. It also provides for access to a Southern California Edison (SCE) Power plant. Treatment proposals include retaining walls and drains but the information should be provided to SCE as the road is probably under permit. Any soil on Mt. Baldy Road would be able to be handled by the current planned LACDPW road-clearing program.

Mt. Baldy Road – The Los Angeles County Department of Public Works (LACDPW) is currently inventorying their culverts and other drainage/retention structures to see if they are operational for the anticipated results of sediment, water, and debris flow associated with the deteriorated watershed. The data accumulated thus far in the BAER assessment will be made available to the Department. Mt. Baldy Road is a primary access route to Mt. Baldy Village and the Mt. Baldy Ski Area. It is expected that the burned steep slopes above the Road will continue to deposit material on the road resulting in temporary closures. The LACDPW has programmed $250,000.00 to make daily runs to remove rocks and landslides from the Mt. Baldy Road during the winter months. Any closure will result in economic loss that is based on loss of productivity due to the extended driving time by commuters, residents, recreationists, and other travelers having to take detours. Reactivating the early warning system, developed in association with the Williams Fire BAER, to advise travelers and residents of impending emergency conditions that may pose a threat to life and property will be a focus of the Executive Committee.

Structures:

Trash Rack – Install trash rack in Stoddard Canyon Creek upstream of the bridge on Mountain Avenue to prevent debris and woody material from damaging or destroying the bridge resulting in losing the road or at a minimum, having it temporarily closed.

(Interim Jan 9, 2004) The trash rack was completed in early December. A moderate sized Christmas day storm dumped several inches on the watershed producing a debris flow. The trash rack captured floating wood, rock and sand, which completely filled the area up stream of the trash rack. To restore the capacity of the trash rack we had a contractor clean it out the following week at a cost of $19,000. We are expecting more higher intensity storms this winter

as result we will be cleaning out the trash rack several more times. In this request we are asking for the $19,000 that has already been spent and an addition $38,000 to cover two more clean outs for a total of $57,000.

(Final Oct. 4, 2004) The trash rack captured debris in the Christmas day storm and possibly saved the county road bridge. The trash rack was cleaned out and debris deposited nearby in very late Dec. and early Jan. We expected to clean it out the trash rack two more time through the storm season. The two additional cleanouts was not required saving a total $38,000.

Other:

Padua Executive BAER Committee – An interagency, inter-governmental action group composed of Federal, Congressional, Board of Supervisors, City, and County representatives and groups designed to promote information and resource sharing to address any and all anticipated threats to values located on and off-Forest. The Committee will take the Forest Service BAER assessment report and determine what risks are still present after the Forest addresses the immediate threat to the values at risk the Forest identified. They then will develop treatment measures to address those risks. This committee approach was very successful in last year's BAER program for the Williams Fire that burned immediately to the west of the Padua Fire. The reactivation of warning systems that would be linked to roadway electronic information signs falls under the charter of this committee.

Archaeological Surveys – Surveys of treatment measures to comply with Section 106 of the National Historic Preservation Act of 1966, as amended.

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.)

A Monitoring Plan will be submitted within 45 days of the final approval of this Initial Request. At this time, funding is requested for the Plan formulation as well as some initial monitoring of the effectiveness of some of the treatment measures (including the no action treatment) for those values whose threats are occurring prior to the first event that will pose a risk.

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											
Natural Recovery				$0				$0		$0	$0
Lower San Station	ft	8.5	500	$4,250				$0			$4,250
Dump Removal	site	8300	3	$24,900							$24,900
Hazard Trees	pj	16,000	1	$16,000							$16,000
Heritage - Recordation	ea	1,120	2	$2,240							$2,240
SCE Road Slope Trmt		***2500***	***1***	***$2,500***							***$2,500***
Subtotal Land Treatments				$49,890				$0		$0	$49,890
B. Channel Treatments											
Station Channel Cleanout		1000	10	$10,000				$0		$0	$10,000
SCE Road Slope Trmt		***3500***	***1***	***$3,500***							***$3,500***
Station-berm cleanout				$15,000							
Subtotal Channel Treat.				$28,500				$0		$0	$13,500
C. Road and Trails											
Warning Signs	ea	30	50	$1,500				$0		$0	$1,500
LACDPW Road Patrol	ea		0	$0				$0	1	$250,000	$250,000
Subtotal Road & Trails				$1,500				$0		$250,000	$251,500
D. Structures											
Trash Rack	ft	550	50	$27,500				$0		$0	$27,500
Clean trash rack				$57,000				$0		$0	$57,000
Subtotal Structures				$84,500				$0		$0	$84,500
E. Other											
Executive Committee	day	400	5	$2,000				$0		$0	$2,000
Arch Treatmt Surveys	day	250	3	$750						$0	$750
Subtotal Other				$2,750				$0		$0	$2,750
F. BAER Evaluation											
Team Leader				$3,000				$0		$0	$3,000
Team				$16,000							$16,000
Consultants (1)				$2,800				$0		$0	$2,800
Per Diem				$3,000							$3,000
Implementation TL				$2,450							$2,450
Subtotal Team				$27,250				$0		$0	$27,250
G. Monitoring				$3,000				$0		$0	$3,000
H. Totals				**$197,390**				**$0**		**$250,000**	**$432,390**

PART VII - APPROVALS

1. /s/ Sherry Rollman for Jody Noiron _____
   Forest Supervisor (signature) Date

2. _____ _____
   Regional Forester (signature) Date