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

Date of Report: Sept 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
[X] Status of accomplishments to date

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Pine Fire

B. Fire Number: CA-ANF-002407

C. State: California

D. County: Los Angeles

E. Region: 05

F. Forest: Angeles

G. District: Santa Clara/ Mojave

H. Date Fire Started: July 12, 2004

I. Date Fire Contained: July 21,2004

J. Suppression Cost: 14,000,000

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 9
2. Fireline seeded (miles): 0
3. Other (identify): Handline: 1

L. Watershed Number: 1809020601

M. Total Acres Burned: 17,510
NFS Acres(**3994**) Other Federal ( ) State ( ) Private (13,516)

N. Vegetation Types: On forest = Oak Woodland, Canyon live Oak, groves and scattered conifers – (Big Cone Douglas Fir and Jeffery Pine) Off forest= pinyon, yucca, buckwheat, annual grasses.

O. Dominant Soils: Oak Glenn Families- on top of Liebre Mtn 2-35% slopes – on north facing slopes (slopes 30-70 %) on some steep slopes Tollhouse Families exist.

P. Geologic Types: On Forest = Mesozic granitic rocks (granodiorite) (south side of San Andreas Fault Zone) Off Forest = Oligocene basalts and Quaternary Alluvium (north side of San Andreas Fault Zone)

Q. Miles of Stream Channels by Order or Class: Class 1= 11.3; Class 2= 0.67

R. Transportation System

Trails: 5 miles Roads: 7.1 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 2824 (low) 1470 (moderate) 0 (high)

B. Water-Repellent Soil (acres): 1,414

C. Soil Erosion Hazard Rating (acres):
0 (low) 788 (moderate) 3206 (high)

D. Erosion Potential: 38 tons/acre

E. Sediment Potential: 20,155 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 10

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

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

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 7.0

F. Design Flow, (cubic feet / second/ square mile): 17.

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

H. Adjusted Design Flow, (cfs per square mile): 39.4

PART V - SUMMARY OF ANALYSIS

Pre existing Conditions

The dominant feature within the burned area is a narrow straight valley, which is the San Andreas Fault Rift Zone (fault zone). The southern boundary of the fault zone, and in the Forest, is Liebre Mountain which is underlain by granitic basement. Rapid uplift along the fault has produced very steep slopes with some at the angle of repose. The basement is highly fractured due to tectonic movement. Within the fault zone valley are a number of small farms, ranches and the small village of Lake Hughes, all at the base of Liebre Mountain. To the north of the fault, and on private land, the hills are not nearly so high and they are in the rain shadow of Liebre Mountain.

Vegetation on Liebre Mountain is composed of manzanita, oaks and other brush species on the lower slopes. At mid slope there are groves of Big Cone Douglas Fir with Canyon Live Oak. On top of Liebre Mountain is a small grassland with Black Oaks and groves of Big Cone Douglas Fir and Jeffery Pine. Within the fault zone itself are a number of large oaks which are utillizing the shallow ground water. The north slope of Liebre Mountain is prime habitat for the California Spotted Owl. The last time the vegetation on the north side of Liebre Montain burned was over 80 to100 years ago. The fuel loading was very high before the fire. Vegetation cover on the low hills north of the fault zone is mainly brush, pinyon Pine and and annual grasses. Slightly further north on the alluvial plain are pastures and areas the grow small grains.

Historically, the area within the burned area was an important area for Native Americans habitation. Along the fault zone there are a number of small sag ponds and springs where ground water comes to the surface. The water in combination with the acorns from the oaks made this a prime area for Native Americans.

The Pacific Crest Trail (PCT) crosses Liebre Mountain. It descends off of Liebre Mountain and crosses the rift valley and then heads north across the the alluvial plains of the upper Mojave. That segment of the PCT off Forest land is located on an easement where it crosses private land. The Forest Service administers the easement and maintains the trail for a distance of approximately 6 miles north of the Forest.

Forest road 7N23 follows the crest of Liebre Mountain. This road is part of the cross Forest OHV route. The district has had problem at times with OHV users getting off the road and going cross country.

A. Describe Watershed Emergency:

The Pine Fire was believed to have been set by an arsonist on July 12, 2004 near the community of Three Points, which lies near the northwestern boundary of the Santa Clara/Mojave Ranger District, Angeles National Forest, County of Los Angeles. The fire was initially confined to private land at the base of the north slope of Liebre Mountain, but moved south and east onto the Forest within the first 12 hours after ignition. A joint command structure with Los Angeles County Fire was established to suppress the fire.

Vegetation within the lower elevations of the burned area (mostly private land) consisted of grassland and oak woodland. Whereas, vegetation on upper elevations (mostly national forest land) consisted of heavy chaparral dominated by scrub oak and manzanita, mixed conifer forest dominated by Big Cone Douglas Fir and Jeffery Pine, and oak woodland forest dominated by black oak on the top of Liebre Mountain. This diversity of vegetation types, older age classes (this area burned last approximately 80-100 years ago), and extreme weather conditions created burn patterns on National Forest land similar to what would be desired under prescribed fire conditions. For the most part, the fire resulted in a good understory burn within the mixed conifer and black oak community types. Chaparral communities burned under moderate to high intensity. However, burn severity appears to be light to moderate across the landscape in this vegetation type. Lower elevation grasslands off the National Forest burned under moderate to high intensity, but low severity. See enclosed Soils Report.

Several ranchetts, homes and associated infrastructure within the communities of Three Points and Lake Hughes were threatened by the fire. Mandatory evacuations were ordered for the community of Three Points, which was immediately in the path of the fire. Voluntary evacuations were recommended for the community of Lake Hughes, which is located approximately 12 miles from the burned area's eastern edge. Three homes and 12 outbuildings were destroyed. Four homes were also damaged.

A Burned Area Emergency Response (BAER) Leader was assigned to the incident on July 16, 2004 to conduct a preliminary assessment of the burned area and identify values at risk, determine what resources would be needed for the BAER team, and provide advice to the Incident Commander on burned area suppression rehabilitation needs. The BAER team was implemented on July 19, 2004. The burned area assessment was completed and presented to the Forest Supervisor and responsible District Ranger July 24, 2004.

Burned areas on National Forest land occur on moderate to steep slopes that have a high erosion potential. Whereas areas burned on private land, which generally begin at the toe of the north slope of Liebre Mountain, are low to moderately steep and have much less potential for erosion.

The soils on the lower north slope of Liebre Mountain received the highest burn intensities as did the scrub oak that was burned on the top of the mountain. Burn severities, however, were low to moderate. Soil at these locations were tested and determined to have moderate water repellency. All of the drainages on the north facing slopes are ephemeral and steep (30-70%) and will deliver sediment and water to the valley below during moderate to high intensity storm events. The greatest potential for loss of life and property will occur at the base of Liebre Mountain. Structures located within the 100 year floodplain of channels have the highest potential for damage.

National Forest Land

Roads and Trails: The Liebre-Sawmill Road (7N23) runs close to centerline on Liebre ridge for a distance of approximately 6.3 miles within the burned area. Although this road appears to be in fairly good condition, there are some concerns for public safety and ecosystem recovery/protection that need to be mitigated. It is recommended that the burned area accessible by 7N23 be closed to public access for a period of two years to protect the public from potentially hazardous situations, especially during inclement weather, prevent vehicles and OHV traffic from leaving the roadway and creating off-road trails on dozer lines and clearings, and provide sufficient time for disturbed areas to recover.

Access on this road will be controlled by installing three gates at strategic locations, including the intersection of 7N23 and Old Ridge Route, near the intersection of 7N23, 7N23A and 7N08, and near the intersection of 7N23 and 7N14. It is also recommended to install post and cable barriers at three locations to prevent OHV access on dozer lines and allow for site recovery.

In addition, there is a need to to install a 24” overside drain with adequate flume at two locations along 7N23 to protect the road prism from erosion due to increased runnoff during high intensity storm events. See enclosed Engineering Report.

Heritage Resources: A total of nine heritage resource sites and two artifact isolates were identified within the burned area and on National Forest land. A majority of these sites (8) were determined to have a low probability of being adversely impacted from deteriorated watershed conditions. There are no treatments recommended for these eight sites.

It is recommended that the Garden Gulch site (FS# 05015300041), which has a high potential for erosion damage, be treated. Treatments involve photographs and spatial mapping to document site information because the site’s physical components cannot be protected in any practical or effective degree. See enclosed Heritage Report.

Private Land

It was determined that structures within five areas have the possibility of being at risk from increased water and sediment flow. These are summarized below. See attached report on risks to local communities for a detailed discussion of structures at risk. No treatments to protect values at risk on private land within and downslope of the burned area and on Forest Service land is recommended.

Area 1: Area 1 is located along Pratt Creek. See attached map. There are several residences that may fall within the 100 year floodplain and are at the greatest risk. If the winter rains are gentle the soil will not likely experience any serious erosion. High intensity storms, however, will erode the soil and may produce a debris flow.

There are few measures that can be taken on the Forest to reduce this risk, all of which were determined to have limited success. These included the application of rice straw on bare slopes and seeding. Rice straw would likely be blown off steep slopes and accumulate in areas where it would not provide the protection needed. Seeding has been proven to be effective only under the most ideal conditions and generally only after the first winter. Naturally occuring ground cover vegetation should have recovered by this time, however, negating the need to seed.

We are recommending to the Natural Resource Conservation Service (NRCS) and Los Angeles County Department of Public Works (DPW) provide protection for the residences by constructing diverting structures upslope of the houses.

Area 2: This area is located approximately one half mile west of the Three Points junction on Pine Canyon Road. There ar at least two residences located within Area 2. See attached map. At least one structure is located within the floodplain. This residence has had drainage problems in the past. Damage to this structure is likely should moderate to high intensity storms prevail this winter. There are few measures that can be taken on the Forest to reduce this risk, all of which were determined to have limited success. See comments above in Area 1 discussion.

We are recommending to NRCS and DPW that a diverting structure (type yet to be determined) be placed upstream of the residence.

Area 3: There is one residence located in Area 3, which appears to be located within the floodplain. The entire watershed above this residence is on private land. There are indications that in the past water has entered the side yards of the residence. Previous attempts have been made to divert water around the house. There is a high likelihood that moderate to high intensity winter storms would result in sediment flows into this structure.

There are no specific recommendations to alleviate this potential threat. We will recommend to NRCS and DPW that they assess the situation and develop treatments that may prevent damage to the residence.

Area 4: There is a gatehouse and garage located in this area. See attached map. Sheet flow is likely to occur at this location. The entire watershed above this residence is on private land.

We are recommending to NRCS and DPW that a small berm be constructed on the south side of these structures and driveway to divert possible sheet flows into an area where there are no values at risk.

Area 5: Area 5 is located along Oakgrove Creek. The area in question was not accessible due to locked gates and fencing, so it was not possible to determine what values are at risk. However, there is a possibility that increased sediment loading within the channel could cause the creek to move out of the channel and damage any structures within the immediate area.

We are recommending the NRCS and DPW attempt to gain access to the subject property to complete an evaluation of values at risk and recommend appropriate treatments.

B. Emergency Treatment Objectives:

Emergency treatment objectives for the Pine Fire are based on the burned area analysis, local resource "corporate" knowledge, and the following goals for emergency rehabilition 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

Objectives:

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

- The loss of soil productivity (ability of the soil to support plant cover) from soil erosion processes (sheeting, rilling and gullying).
- Damage to watershed recovery rate from potential OHV activities.
- Damage to physical investments within and directly downstream from the burned area.
  - Forest Service Road 7N23 (Liebre Mountain Road) and the Pacific Crest Trail.
  - Los Angeles County Infrastructure (Oakdale Canyon Road).
  - Private homes and ranches.

2. Work in cooperation with local responsible agencies and landowners to reduce the possible hazards to downstream values at risk, both public and private, from increased flows and sedimentation.

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

Land **NA** % Channel **NA** % Roads **100** % Other **100** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	100
Channel			
Roads	70	80	90
Other	70	80	90

E. Cost of No-Action (Including Loss): **$2,144,500**

F. Cost of Selected Alternative (Including Loss**): $215,564**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Bill Brown

Email: wjbrown @fs.fed.us Phone: 626-574-5258 FAX: 626-574-5233

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:

Heritage Resources: A total of nine heritage resource sites and two artifact isolates were identified within the burned area and within National Forest land. A majority of these sites (8) were determined to have a low probability of being adversely impacted from deteriorated watershed conditions. There are no treatments recommended for these eight sites.

It is recommended that the Garden Gulch site (FS# 05015300041), which has a high potential for erosion damage, be treated. Treatments involve photographs and spatial mapping to document site information because the site's physical components cannot be protected in any practical or effective degree.

Interim May 20, 2005:
Heritage Sites: The long duration and the intensity of the rains during the winter of 2004-05 were above what was expected and planned for in the original BAER request. Two archeological sites (FS#05015300139 and FS#05015300140) within the burned area were damaged when a large gully formed and went through both sites. The gully is about 3-4 feet wide and over 3 feet deep. The vegetative recovery above the sites has been slower than expected. Runoff next winter will result in further erosion and natural collapse of the gully sidewalls which will further damage these historical/archeological sites.

To prevent further erosion the following measures are proposed. Twelve (12) hogwire-silt fence gully plugs will be installed. Crews will also cut down some nearby burned vegetation and pack the gully with branches. Next winter the branches in the gully will slow water movement and the plugs are expected to capture sediment and help fill the gully. The gully is expected to be full of sediment by spring of 2006. Normally rock gully plugs work best, but local rock cannot be used because much of the local rock is part of the archeological site. As a result wire-silt fence gully plugs are being proposed. During installation of the gully plugs the crews will be closely supervised and an archeologist will be on site.

Additional Land Treatments: The Pacific Crest Trail (PCT) traverses a large portion of the burned area. Runoff from the burned area during the intense winter rains formed a large gully which crosses the PCT. The PCT will be repaired using ERFO funds but the large gully on both sides of the PCT needs to be stabilized to prevent additional damage to PCT next winter after it has been repaired. Ten (10) hogwire-silt fence gully plugs will be installed in the gully to prevent further erosion. Crews will also down some nearby burned vegetation and pack the gully with dead branches to slow water movement and speed the filling of the gully with sediment.

The above treatments to protect both the historical sites and the PCT is expected to cost $16,200. Reprogrammed funds from the Roads and Trail treatments will provide $3,000 (See below). We are still in need of $13,200 to repair the two gullies.

Final Sept. 28, 2005
The original cost estimates were made on the assumption that we would need an outside work crew to install the gully plugs. The cost included an estimate for two chain saw operators. We were able to use a FS fire crews since the fire danger has been generally low this year. The fire crews also completed the work in less time than expected. As a result the district was able to install the gully plugs as a cost of $9,272. Heritage resource monitoring was present when the gully plugs were installed at an allocated cost of $1,500. Total cost of installing the gully plugs $10,772.

Channel Treatments:

No channel treatments are recommended.

Roads and Trail Treatments:

Forest Service Road 7N23: It is recommended that the burned area accessable by 7N23 be closed to public access for a period of two years to protect the public from potentially hazardous situations, especially during inclement weather, to prevent vehicles and OHV traffic from leaving the roadway and creating off-road trails on dozer lines and clearings, and provide sufficient time for disturbed areas to recover.

Access on this road will be controlled by installing three gates at strategic locations, including the intersection of 7N23 and Old Ridge Route, near the intersection of 7N23, 7N23A and 7N08, and near the intersection of

7N23 and 7N14. It is also recommended to install post and cable barriers at three locations to prevent OHV access on dozer lines and allow for site recovery.

In addition, there is a need to to install a 24" overside drain with adequate flume at two locations along 7N23 to protect the road prism from erosion due to increased runnoff during high intensity storm event.

Interim May 20, 2005:
All of the needed gates along with post and cable side fences and over side drains were installed by the end of November. Over the winter several of the post and cables were pulled out next to the gates allowed some ATVs getting into the closed area. The pulled out post and cable were then replaced with cable and steel pipe set in concrete. At the present time all vehicles are being kept out of the closed area except for motorcycles. Dirt bike motorcyclist will cut and clear brush to get around a gate and wing fences. Some damage is occurring from motorcyclists but total damage has been greatly reduced from what would have occurred if all vehicles could enter.

Cost of installing all of the gates, wing fences and over side drains totaled $32,703. The original approved amount to due all the road treatments was $36,000. We would like to reprogram $3,000 to help pay for the gully plugs requested above.

Final Sept. 28, 2005
A review of the financial records for the installation of the gates showed that it actually cost the Forest Service $ 29,738 to install the gates, drains and post and cable. This is a savings of $6,262 from what was originally estimated to install the gates.

Structures:

Structure treatment recommendations will be coordinated with NRCS and DPW. There are no specific struture treatments on National Forest Land.

I. **Monitoring/Evaluation 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.)

Exotic Plants

A fuel break approximately 10.5 miles long and 40 feet wide was constructed across Liebre Mountain on its western, southern and eastern flanks within the Pine Fire burned area. Local, federal, and state bulldozers worked this fire for 6-7 days from initial attack through suppression rehabilitation efforts. An equipment washing station not established prior to initial attack and there is concern that yellow star thistle and possibly other exotic weeds may have been brought into the area by initial attach equipment. Yellow star thistle is not known to occur on Liebre Ridge. Introduction of this and other exotic weeds would create a serious management problem and be detrimental to the ecology of the area.

The best chance of controlling weed infestations is to detect and implement treatment actions as quickly as possible. We are requesting funds to send two observers out once a month starting in early spring and continuing through mid July of 2005 to evaluate weed infestations on recently exposed fuelbreaks. Observers (probably botanists) will drive/walk along the fuelbreak and identify and map any infestations of exotic weeds they detect. If practicable, they will remove these plants by pulling and/or grubbing using hand tools. All plants that are uprooted will be bagged and hauled to an appropriate disposal site. Should large infestations be detected, a weed abatement plan will be developed, and an interim report

requesting funds to implement the plan will be sent to the regional office. Information specific to this request is as follows:

Survey Dates: March 15-16, April 14-15, May 16-17, June 13-14 and July 14-15, 2005

Personnel:

Two surveyors (GS11 and GS9 botanists) for 10 days each survey time =		$4,000
Report time for surveyors for 2 days =		400
Vehicle mileage=		700
Coordination time for a GS11=		500
	Total =	$5,600

Final Sept. 28, 2005
Do to the heavy rains, flooding, road washouts and landslides on the Forest a very high workload was placed on the Forest Botanist. The Forest did not have a second botanist on forest available within the needed time periods to do the required surveys. As a result none of the botanical monitoring was done.

Heritage Resources

Monitoring is proposed at four heritage resource sites to assess the effectiveness of proposed no-action prescriptions at those sites. Due to the fragile nature of heritage resource values, it is imperative that other measures be implemented immediately, should the no-action treatments not achieve the desired results. Monitoring will be required at the following sites:

1. FS# 05015300138 – Hatch BRM Site
2. FS#05015300139 – Pine Canyon Pottery Site
3. FS# 05015300140 – Pine Canyon BRM Site
4. CA-LAn-1137 – Cow Springs Canyon Road Site

GS-9 Archeologist X 6 days =	$1,290
Coordination with State =	400
Vehicle Mileage = 225 miles X .36 X 5 trips =	405
Mis. Supplies:	105
Total =	$2,200.

Interim May 20, 2005:
The heritage surveys disclosed that a gully had formed on sites FS#05015300139 and FS#05015300140. The original BAER request was formulated around a 10 year rain fall event. The 50+ year rainfall event we had in February on a nearly barren slope caused the development of the 3-4 foot wide and 3 foot deep gully. Vegetation regrowth has been slower than expected probably due to the long fire return interval in this area. The requested funds are to stabilize this gully and another gully.

Final Sept. 28, 2005
Heritage monitoring continued through the rainy season and into the spring. Monitoring determined a need for gully plugs to protect the current heritage resources from further damage. Heritage monitoring was also needed during the installation of the gully plugs. The archeologists spent a total of $3,564. Part of this amount can be considered part of implementation. As a result $1,500 was split out for implementation on the first line under land treatments of the spread sheet and the other $2,064 was allocated for monitoring.

Closure Effectiveness Monitoring

To assure that OHV use is restricted within the closure area, it is recommended that the area be patrolled weekly for the first year of the closure (August 2004 thru August 2005. The person conducting the patrol will be responsible for checking all gates leading into the closure area, making observations on unauthorized OHV activity and reporting back to the District Ranger and Forest BAER Coordinator.

Cost shown below are for a GS-7 patrol person for 52 days (2 days per pay period).

FS-7 = 144/day X 52 days =	$4,488
Mileage = 52 days X 100 miles X .36/mile =	1,872
Total =	$6,360

Final Sept. 28, 2005

Closure monitoring started in the fall and ended after the heavy October rains. After the gates were installed and when the roads became rutted after the first heavy rains, monitoring the closure became very difficult. The area was essentially closed to our monitor in a 4 x 4. A total of $566 was spent on salary and mileage for closure monitoring. The only people that are getting into the closed area are motorcycle riders.

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

Line Items	Units	Cost	Units	SULT $	SPENT		units	$	Units	$	$
A. Land Treatments											
Cultural Resources	ea	4200	1	$4,200	1,500			$0		$0	$4,200
Repair Gullies		13200	1	$13,200	9,272			$0			$13,200
(3,000 from reprogram)				$0				$0		$0	$0
(of Roads and Trails $)				$0				$0		$0	$0
Subtotal Land Treatments				$17,400	$10,772			$0		$0	$17,400
B. Channel Treatments											
				$0				$0		$0	$0
				$0				$0		$0	$0
				$0				$0		$0	$0
				$0				$0		$0	$0
Subtotal Channel Treat.				$0				$0		$0	$0
C. Road and Trails											
				$0				$0		$0	$0
Gates	ea	8000	3	$24,000	24,738			$0		$0	$24,000
Post and Cable	feet	40	100	$4,000	1,500			$0		$0	$4,000
Oversize Drain	ea	4000	2	$8,000	3,500			$0		$0	$8,000
Subtotal Road & Trails				$36,000	$29,738			$0		$0	$36,000
D. Structures											
				$0				$0		$0	$0
				$0				$0		$0	$0
				$0				$0		$0	$0
				$0				$0		$0	$0
Subtotal Structures				$0				$0		$0	$0
E. BAER Evaluation											
Team Leader	days	350	8	$2,800	2,800			$0		$0	$2,800
Team	days	350	20	$7,000	7,000			$0		$0	$7,000
F. Monitoring	job	4800	3	$14,400	2,631			$0		$0	$14,400
Arc,Exotic, Closure											
G. Totals				**$77,600**	**$52,941**			**$0**		**$0**	**$77,600**

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date