

Date of Report: January 31, 2006

**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: Plunge FireB. Fire Number: CABDF00964C. State: CAD. County: San BernardinoE. Region: 5F. Forest: San Bernardino National ForestG. District: Front Country Ranger DistrictH. Date Fire Started: 01/23/2006I. Date Fire Contained: 01/26/2006

J. Suppression Cost:

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 2.6 miles of dozer lines, 5.8 miles of hand line  
2. Fireline seeded (miles): None  
3. Other (identify): None

L. Watershed Number: 1807020304M. Total Acres Burned: 477 acres

NFS Acres(477)    Other Federal (0)    State (0)    Private (0)

N. Vegetation Types: Agriculture (Wastewater Treatment Ponds)-2.6 acres (0.5%), Alluvial Fan Sage Scrub-1.6 acres (0.33%), Annual Grass/Forbs-40.0 acres (8.4%), Bigcone Douglas-Fir-38.4 acres(8.4%), Buckwheat (White Sage)-2.8 acres (0.6%), Canyon Live Oak-9.7 acres(2.0%), Ceanothus Mixed Chaparral-80.2 acres(16.8%), Coulter Pine-15.5 acres(3.3%), Knobcone Pine-11.7 acres(2.4%), Lower Montane Mixed Chaparral-202.7 acres(42.5%), Manzanita Chaparral-23.7 acres(5.0%), Mixed Riparian Hardwood-3.8 acres(0.8%), Mixed Soft Scrub Chaparral-14.9 acres(3.1%), Scrub Oak-13.9 acres(2.9%), Urban

Developed(Part of 1N09)-3.4 acres(0.7%), Water-0.2 acres(0.05%), White Alder-11.7 acres(2.5%). Taken from r5 RSL refined Cal Veg. data.

O. Dominant Soils: ToDF – Ruch family – Typic Xerorthents association, 2 to 50 percent slopes, DnF – Trigo family - Lithic Xerorthents, warm, 30 to 50 percent slopes, DnG - Trigo family - Lithic Xerorthents, warm, 50 to 75 percent slopes, CmF - Osito-Modesto families association, 30 to 50 percent slopes, FLG - Springdale family- Lithic Xerorthents association, dry, 50 to 75 percent slopes.

P. Geologic Types: Granodiorite of Angelas Oaks-132.8 acres(27.8%), Monzogranite of City Creek-121.7 acres(25.5%), Monzogranite of Manzanita Springs-45.5 acres(9.6%), Old alluvial fan deposits, Unit 2-99.2 acres(20.8%), Very young wash deposits-3.7 acres(0.8%), Young alluvial fan deposits, Unit 1-4.2 acres(0.9%), Young alluvial fan deposits, Unit 2-33.2 acres(7.0%), Young alluvial fan deposits, Unit 3-31.2 acres(6.5%), Young alluvial fan deposits, Unit 4-5.2 acres(1.1%).

Q. Miles of Stream Channels by Order or Class: Perennial – 1.3 miles, Intermittent – 2.5 miles

R. Transportation System

Trails: 1.2 miles      Roads: 2.9 miles

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

A. Burn Severity (acres): 171(36%) (low) 291 (61) (moderate) 15 (3%) (high)

B. Water-Repellent Soil (acres): None

C. Soil Erosion Hazard Rating (acres):  
     (low) 223 (moderate) 254 (high)

D. Erosion Potential: 3.8 tons/acre

E. Sediment Potential: R,C,&S analysis cubic yards / square mile

|          | Fires  | normal<br>annual<br>erosion<br>rate<br>(cu.yd./<br>sq.mi.) | 1 year<br>post<br>burn<br>annual<br>erosion<br>rate | Per-<br>cent of<br>normal<br>unburn<br>-ed | 2 year<br>post<br>burn<br>annual<br>erosion<br>rate | Per-<br>cent of<br>normal<br>unburn<br>-ed | 3 year<br>post<br>burn<br>annual<br>erosion<br>rate | Per-<br>cent of<br>normal<br>unburn<br>-ed |
|----------|--------|--|---|--|---|--|---|--|
| Erosion: | GP/Old | 3,640  | 10,753  | 295%                                       | 8,300   | 228%                                       | 6,585   | 181%                                       |
|          | All    |  | 12,258  | 337%                                       | 8,791   | 242%                                       | 6,888   | 189%                                       |

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

A. Estimated Vegetative Recovery Period, (years): 2-3 years

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

C. Equivalent Design Recurrence Interval, (years): 2 – year storm

D. Design Storm Duration, (hours): 6 hours

E. Design Storm Magnitude, (inches): 2.0 inches

F. Design Flow, (cubic feet / second/ square mile): Using Rowe et al. Method

| For Plunge Creek                 |                                   |
|----------------------------------|-----------------------------------|
| equal or exceeded peak discharge | normal peak discharge (cfs/sq mi) |
| Q 2                              | 53.4                              |
| Q 10                             | 118                               |
| Q 25                             | 160                               |

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

H. Adjusted Design Flow, (cfs per square mile): Using Rowe et al. Method

For Plunge Creek (cumulative effects)

| Peak discharge : equal or exceeded peak discharge | normal peak discharge (cfs/sq mi) | 1 year post burn peak discharge | Per-cent of normal unburn -ed | 2 year post burn peak discharge | Per-cent of normal unburn -ed | 3 year post burn peak discharge | Per-cent of normal unburn -ed |
|---|-----------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|
| Q 2   | 53.4                              | 68.4                            | 128%                          | 65.6                            | 123%                          | 63.4                            | 119%                          |
| Q 10  | 118                               | 144.9                           | 123%                          | 140.5                           | 119%                          | 136.8                           | 116%                          |
| Q 25  | 160                               | 193.8                           | 121%                          | 189.1                           | 118%                          | 184.2                           | 115%                          |

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

A. Describe Watershed Emergency: The Plunge fire burned a total of 477 acres which is 4.3% of the total watershed, 100% of the fire burned on San Bernardino NF lands. The Plunge Fire also reburned part of the area burned in 2003 during the Grand Prix/Old fire complex. The City of Highland is greater than 2 miles from the fire boundary, and the riparian corridors are intact. Elevations within the burned area range from approximately 3000 up to 4000 feet. The Plunge Creek Watershed comprises approximately 11,158 acres. Vegetation within the area has changed due to frequent fires and the invasion of noxious and invasive plants including grasses. The burned area watersheds have steep slopes over 60% with rock and rock outcrop dominating the landscape. Large boulders are present on the gentler slopes. The Plunge Fire area encompasses sections of Fredalba sub-watershed Creek and tributaries as well as Plunge Creek and tributaries. Forest Service system road 1N09 allows access to much of the fire area. The Plunge Creek watershed, below the Plunge Fire, was a part of the Grand Prix/Old Fire complex of November 2003. The fire burned through the area rapidly carried by Santa Ana Winds.

The soil burn severity is predominately low to moderate (3% high) with a mosaic of unburned vegetation within the fire perimeter. Slopes range from 0 to greater than 60% throughout the burn area. 64% of the soils have slopes less than 45%, and 81% of the soils have slopes less than 60% in the area. Water repellency was tested and no reduction in infiltration was detected. A moist layer of soil was present throughout the watershed at approximately 2 inches below the soil depth.

Flow modelling indicates that the Fredalba Creek watershed could experience greater than double the annual

erosion rate during the first year following the fire and that Plunge Creek in the area of the fire could generate a 40% increase in the erosion rate averaged across the entire watershed, indicating the localized increase is much greater. The Grand Prix/Old Fire complex of 2003 is modeled to have an increased percent of normal unburned erosion rate of 295%. The cumulative effects from the Plunge Fire and the Grand Prix/Old Fire complex on the Plunge Creek watershed is modelled to have an increased unburned erosion rate of 337% for the first year following the Plunge Fire (Part III, Section E).

Due to a combination of factors such as - slope, soil burn severity, expected watershed response, intact riparian corridors, vegetative mosaic, the BAER Assessment Team determined that the Plunge watershed should not respond significantly different than prefire conditions. However, it is anticipated that there is potential for some concentrated, localized impacts as a result of the Plunge Fire. The following table summarizes the potential values at risk and BAER Assessment Team evaluations :

| VALUES  | EMERGENCY DETERMINATION  |
|---|--|
| <b>Human Life and Safety</b>  |  |
| - Safety of Forest Visitors   | No emergency exists as a result of the Plunge Fire.  |
| - Downstream Communities (City of Highland)                               | No emergency exists as a result of the Plunge Fire.  |
| - Hazardous Material (Lead/Illegal Drug Paraphernalia)                    | No emergency exists as a result of the Plunge Fire.  |
| <b>Property</b>   |  |
| - Forest Road 1N09 (drain structures)                                     | Emergency exists based on size of culverts and potential for plugging at two locations along Forest Road 1N09. Both culverts are functioning in current condition, however with anticipated localized watershed response could be compromised and cause increased road damage and sediment loading downstream.   |
| Forest Trail 2W04   | No emergency exists as a result of the Plunge Fire.  |
| Downstream Communities (City of Highland)                                 | No emergency exists as a result of the Plunge Fire.  |
| <b>Water Quality</b>  |  |
| - East Valley Water Districts Open Canal                                  | No emergency exists as a result of the Plunge Fire.  |
| <b>Aquatic/Riparian Wildlife</b>  |  |
| - Speckled Dace (Plunge Creek, only occurrence known on San Bernardino's) | Expect localized deterioration of water quality within the fire area however no emergency exists as a result of the Plunge Fire.   |
| - Mountain yellow-legged frog suitable habitat                            | Expect short-term degrading of suitable habitat w/n fire area, however no emergency exists at watershed level as a result of the Plunge Fire.  |
| - Willow flycatcher/Bell's Vireo modelled habitat                         | No emergency exists as a result of the Plunge Fire.  |
| <b>Ecosystem Structure and Function</b>                                   |  |
| - Native vegetation recovery  | Emergency exists based on knowledge of noxious weeds in area and slope of terrain denuded of vegetation by fire. Based on the soil scientists report indirect effects from the combination of the fire and increased access will inhibit natural vegetative recovery. Typical impacts in the past have included new user trails, hill climbs, soil compaction, and significant sediment from gully formation. Based on this the potential does exist for adverse impacts to soil productivity and sediment production if access to the area is not controlled. |
| <b>Heritage Resources</b>   |  |
| - Heritage Sites  | No emergency exists as a result of the Plunge Fire.  |

B. Emergency Treatment Objectives: To alleviate the emergency to Forest Road 1N09 the BAER Assessment Team recommends constructing a sediment basin upslope from a 12 inch culvert, and cleaning out the approach to a second culvert. The team also recommends storm inspection/response monitoring of effectiveness and proper functioning of treatment measures during the first year post fire. The objective would be to reduce the risk of culverts plugging and topping during a localized event which could cause severe damage to Forest road 1N09 and increased sediment loads downstream.

Photo 1: 12 inch culvert at Forest Road 1N09.

To alleviate the emergency to native vegetation recovery the team also recommends the installation of one berm along 1N09 to deter off-highway cross country travel across an open flat that was denuded during the Plunge Fire. Rather than installation of fencing or other barriers the BAER Assessment Team recommends OHV regulation/monitoring patrols to reduce impacts to the rate of vegetative recovery in areas that are likely to have increased off-highway cross country travel due to denuded landscape, and moderate slopes. If areas of concern develop then the monitor would remediate on site with slashing of native vegetative material to reduce potential increased erosion within the fire area. The district will also install post-fire education/information signs at the entrance to Forest Road 1N09.

Photo 2: Denuded slope in flat above Plunge Creek.

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

Land \_\_\_ % Channel \_\_\_ % Roads 90 % Other \_\_\_ %

D. Probability of Treatment Success

|         | Years after Treatment |     |     |
|---------|-----------------------|-----|-----|
|         | 1                     | 3   | 5   |
| Land    | 90%                   | N/A | N/A |
|         |                       |     |     |
|         |                       |     |     |
| Channel | N/A                   | N/A | N/A |
|         |                       |     |     |
|         |                       |     |     |
| Roads   | 90%                   | N/A | N/A |
|         |                       |     |     |
| Other   | N/A                   | N/A | N/A |
|         |                       |     |     |

E. Cost of No-Action (Including Loss):

F. Cost of Selected Alternative (Including Loss): N/A

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 type="checkbox"/> Ecology             | <input checked="" type="checkbox"/> Botany | <input checked="" type="checkbox"/> Archaeology | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Fisheries | <input type="checkbox"/> Research            | <input type="checkbox"/> Landscape Arch    | <input checked="" type="checkbox"/> GIS         |                          |

Team Leader: Marc Stamer

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Core Team

Hydrologist: Rob Taylor

Soil Scientist: Carolyn Napper

Soil Scientist Trainee: Joe Johnson

Wildlife Biologist: Kathie Meyer

Wildlife Biologist Trainee: Kim Boss

Botanist: Melody Lardner

GIS: Tracy Tennant

Extended Team

Archaeologist: Uyen Doan

Engineering: Frank Baccera

Fisheries: Gar Abbas

Recreation: Bob Poole

H. **Treatment Narrative:**

Land Treatments:

- Native Vegetation Recovery
  - Construct berm along Forest Road 1N09 with excavator to deter off highway vehicle travel across flat denuded of vegetation during Plunge Fire.
  - OHV Regulation/Monitoring Patrols are recommended to prevent unauthorized entry into non-barrier sites in the fire area through FS presence, to make contact with users, and to repair vandalism. Patrols would be funded for 1 day per payperiod for 1 year after the fire and could

also conduct the post-storm inspections/response described below.

Channel Treatments: N/A

Roads and Trail Treatments:

- Forest Road 1N09 (drain structures)
  - 12 inch culvert - Build sediment basin with excavator upslope of culvert to catch material that may plug culvert during localized storm event. Utilize post storm inspections/responses to keep sediment basin functioning during first year post fire. If needed after storm event, utilize backhoe to clean out sediment basin to maintain functionality.
  - Plunge Creek culvert – Use excavator to clean out approach to culvert removing post-fire debris that may plug culvert opening during a localized storm event. Utilize post storm inspections/responses to keep culvert approach functioning during first year post fire. If needed after storm event, utilize backhoe to clean out culvert approach to maintain functionality.
  - Planned for

Structures: N/A

## **I. Monitoring Narrative:**

**Noxious weeds detection survey:** Noxious weed infestations are very likely to increase dramatically following a fire due to an increase in available areas for germination, and the likely introduction of noxious weeds from heavy equipment and personnel, who may arrive from areas outside of the Forest. Areas of highest concern are along dozer lines, along the Forest system roads, along hand lines, and in the riparian areas, since these are the most likely areas where noxious weed seeds may be introduced and then distributed. The riparian area of Plunge Creek is a sensitive area as it is modeled habitat for threatened and endangered wildlife species (mountain yellow-legged frog, southwestern willow flycatcher and least Bell's vireo), downstream suitable habitat for arroyo toad, mountain yellow-legged frog, and least Bell's vireo and occupied spackled dace habitat (last known occupied habitat in the San Bernardino Mtns.), sensitive wildlife species that could be at high risk of detrimental effects from noxious weed introductions. Sensitive plant occurrences are also known and potential in and around the burn area. A detailed plan is attached. The total cost of monitoring for noxious weeds will be \$3906 for the first year after the fire. We request authority to spend \$3906 the first year, and if a noxious weed infestation is found, we will submit an interim report requesting funding to eradicate this population. The weed detection survey plan is attached.

[illegible]

## **PART VII - APPROVALS**

1. /s/ Max Copenhagen 2/1/06  
Deputy Forest Supervisor (signature) Date
2. \_\_\_\_\_  
Regional Forester (signature) Date



## **NOXIOUS WEED DETECTION SURVEY PLAN**

### **a) Background:**

Reducing the introduction and spread of non-native invasive species has been identified as a Forest Service Strategic Goal for 2003-2008. Exotic grasses are known from within the burn area and tocalote is a weed known to be very abundant in adjacent areas. Spanish broom is known from the highway above this burn area and just to the west on Forest road 1N09 and is known to invade riparian areas and become the dominant species. Numerous other invasive species are known in nearby burn areas and this burn occurred in a vacant grazing allotment. Plant vectors also occur (Highway 330, Forest road 1N09, wind, animals, etc.) and seed could have been transported throughout the burned area on suppression equipment. Fire is known to enhance the establishment of all of the weeds present as weeds are aggressive at invading newly disturbed open areas.

The riparian areas would be especially sensitive to weed invasions as there is modeled habitat for threatened and endangered species (mountain yellow-legged frog and southwest willow flycatcher) within the fire area and modeled and/or suitable habitat for threatened and endangered species downstream of the burn area (least Bell's vireo, arroyo toad, mountain yellow-legged frog, Santa Ana sucker, and slender-horned spineflower). There is also a downstream occurrence of the sensitive speckled dace and it is the last known occupied occurrence of this species in the San Bernardino Mountains. In addition, at the lower reached of Plunge Creek near the Santa Ana River is occupied habitat for threatened and endangered species such as slender-horned spineflower and Santa Ana River wooly star. Numerous sensitive wildlife species occur in the general area. One sensitive plant (*Calochortus plummerae*) is known from the area. Sensitive plant surveys have not been completed in this area in recent years, but several sensitive plants have high potential to occur in this area.

**Table 1. Invasive non-native plants and noxious weeds that pose the greatest threats to Southern California Forest Ecosystems present or having the potential to occur within the Plunge Fire**

| <b>Scientific Name</b>                              | <b>Common Name</b>       | <b>CalEPP<br/>C pest<br/>listing*</b> | <b>CDFA<br/>pest<br/>rating**</b> | <b>Known<br/>to<br/>Occur<br/>Nearby</b> |
|---|--------------------------|---------------------------------------|-----------------------------------|--|
| <b>List A – 1 &amp; 2: Most Invasive</b>            |                          |                                       |                                   |  |
| <i>Arundo donax</i>                                 | Giant reed, arundo       | A-1                                   |                                   | X  |
| <i>Bromus tectorum</i>                              | Cheat grass              | A-1                                   |                                   | X  |
| <i>Foeniculum vulgare</i>                           | Wild fennel              | A-1                                   |                                   | X  |
| <i>Tamarix</i> spp.                                 | Tamarisk, salt cedar     | A-1                                   |                                   | X  |
| <i>Ailanthus altissima</i>                          | Tree of Heaven           | A-2                                   |                                   | X  |
| <b>List B: Lesser Invasive</b>                      |                          |                                       |                                   |  |
| <i>Brassica nigra</i>                               | Black mustard            | B                                     |                                   | X  |
| <i>Centaurea melitensis</i>                         | Tocalote                 | B                                     |                                   | X  |
| <i>Cirsium</i> spp.                                 | (Canada or Bull) Thistle | B                                     | B                                 | X  |
| <i>Spartium junceum</i>                             | Spanish broom            | B                                     |                                   | X  |
| <b>Annual Grasses That Pose Significant Threats</b> |                          |                                       |                                   |  |
| <i>Avena barbata</i>                                | Slender wild oat         |                                       |                                   | X  |
| <i>Avena fatua</i>                                  | Wild oat                 |                                       |                                   | X  |
| <i>Bromus diandrus</i>                              | Ripgut brome             |                                       |                                   | X  |

*\* California Exotic Pest Plan Council (CEPPC) List Categories*

List A: Most Invasive Wildland Pest Plants; documented as aggressive invaders that displace natives and disrupt natural habitats. Includes two sub-lists; List A-1: Widespread pests that are invasive in more than 3 Jepson regions, and List A-2: Regional pests invasive in 3 or fewer Jepson regions.

List B: Wildland Pest Plants of Lesser Invasiveness; invasive pest plants that spread less rapidly and cause a lesser degree of habitat disruption; may be widespread or regional.

Red Alert: Pest plants with potential to spread explosively; infestation currently small or localized. If found, alert Cal EPPC, County Agricultural Commissioner or California Department of Food and Agriculture.

Need More Information: Plants for which current information does not adequately describe nature of threat to wildlands, distribution or invasiveness. Further information is requested from knowledgeable observers.

Annual Grasses: A preliminary list of annual grasses, abundant and widespread in California, that pose significant threats to wildlands. Information is requested to support further definition of this category in next list edition.

Considered but Not Listed: Plants that, after review of status, do not appear to pose a significant threat to wildlands

**\*\* California Dept. of Food and Agriculture Pest Ratings**

All weeds on California's 130 plus noxious weed list have a rating. The overall rating system is NOT based on how bad a weed is—all weeds are considered "bad"—but rather on overall distribution throughout the state. Ratings and formal definitions by the CDFA are:

A=rated weeds are normally limited in distribution throughout the state. Eradication, containment, rejection or other holding action at the state-county level. Quarantine interceptions to be rejected or threat at any point in the state.

B=rated weeds are more widespread. Eradication, containment, control or other holding action at the discretion of the commissioner. State endorsed holding action and eradication only when found in a nursery.

C=rated weeds are generally widespread throughout the state. Action to retard spread outside of nurseries at the discretion of the commissioner. Reject only when found in a crop seed for planting or at the discretion of the commissioner.

Q=rated species are treated as temporary "A" weeds. Denoting action outside nurseries at the state-county level pending determination of permanent rating.

D=rated weeds are organisms considered to be of little or no economic importance. No action. Anything not rated as "A", "B", "C", or "Q" is given a "D" rating.

**b) Management concerns**: Are noxious weed invasions interfering with habitat recovery and ecosystem health within the burned area and associated dozer and hand lines? In particular are noxious weeds interfering with the recovery of habitat especially in the riparian areas?

**c) Objectives**: To determine if the fire and associated ground disturbing activities associated with dozer and hand line construction has promoted the establishment and spread of noxious weeds to the extent that eradication efforts are necessary.

**d) Parameters**: Noxious weed presence, density and persistence.

**e) Locations**: Riparian areas, roads, dozer lines and hand lines.

**f) Weed Detection Survey Design and Methodology**: Surveys would begin in 2006 during the flowering periods for weeds known to occur within or near the burned areas that may be difficult to detect otherwise. Because of differences in flowering times for all the potential species, two visits

may be required during the growing season. Completion of surveys of riparian areas and areas adjacent to riparian areas would be the first priority, but it is important to survey dozer lines, hand lines and roads accessing the burned areas as well as species from these areas could easily move into riparian areas and are areas of man-made disturbances that have the higher threat new infestations. Surveys of the general habitats in the burned area would be the lowest priority. Any locations of weeds would be mapped. Surveys would be completed using the NRIS protocol available at the national web site: <http://fsweb.ftcol.wo.fs.fed.us/frs/rangelands/index.shtml>. Results would be entered into the NRIS database.

**g) Reporting:** A Weed Detection Survey Report would be submitted to Regional BAER coordinator and to the Front Country District Ranger. If weed introduction and spread has increased due to effects of the Plunge Incident, an Interim BAER report would be completed to request eradication funding. Reporting costs are included in figures below.

**h) Costs: Weed Detection Surveys for 1 year = \$3,906.**

Weed detections surveys to determine whether ground-disturbing actions related to the Plunge Incident and the fire itself have resulted in the expansion of noxious weeds is requested for the first year. Estimated costs are based on the assumption that two visits would be necessary because of differences in flowering times for these species. If timing is such that all of the target species are detectable in one visit, the actual costs would be lower than displayed below.

**FY 2006**

|   |               |
|---|---------------|
| GS-12 botanist (\$391/day x 1 day)        | = \$ 391.00   |
| 2-GS-9 botanists (\$235/day x 7 days)     | = \$ 3,290.00 |
| Vehicle mileage (500 miles @ 0.45/mile)   | = \$ 225.00   |
| <hr/>                                     |               |
| TOTAL for weed detection surveys for FY06 | = \$ 3,906.00 |

**i) Personnel:** Internal staff will be used for surveys.

**j) Responsible staff:** Melody Lardner, Forest Botanist

**k) Follow-up actions:** Design and implement follow-up treatments as needed. Plan for integrated weed management and NEPA analysis if necessary using non-BAER funding.