

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

- 1. Funding request for estimated emergency stabilization funds
- 2. Accomplishment Report
- 3. No Treatment Recommendation

B. Type of Action

- 1. Initial Request (Best estimate of funds needed to complete eligible stabilization 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: Morris
- B. Fire Number: CA-ANF-003616
- C. State: California
- D. County: Los Angeles
- E. Region: Pacific
- F. Forest: Angeles
- G. District: San Gabriel River
- H. Fire Incident Job Code: P5E5TW
- I. Date Fire Started: August 25, 2009
- J. Date Fire Contained: September 3, 2009
- K. Suppression Cost: \$6,000,000 (estimate thru 09/02/2009)
- L. Fire Suppression Damages Repaired with Suppression Funds
 - 1. Fireline waterbarred (miles): 11 (9.4 miles – dozer line; 1.6 miles – hand line)
 - 2. Fireline seeded (miles): none
 - 3. Other (identify): NA
- M. Watershed Number: 6th Field HU 180701060302 – San Gabriel Canyon
- N. Total Acres Burned:
 - NFS (1,974)
 - Other (194)
- O. Vegetation Types: coastal sage scrub, chamise chaparral, mixed chaparral, and coast live oak/sycamore riparian forest.
- P. Dominant Soils: The dominant soils include the Caperton, Trigo, and Vista series. The Caperton and Trigo soils are characterized by: shallow depth (not greater than 20 inches), very steep slopes, loam

soil texture, rocky surface and hydrologic group D (high runoff potential). The primary difference between Caperton and Trigo is rock composition. The Vista soil series is very similar to the Trigo and Caperton soils except soil depth can be as deep as 60 inches. The Vista soils also tend to be on flatter ridges. There are minor amounts of mixed alluvium in drainages and adjacent to Morris Reservoir.

Q. Geologic Types: The burned area is located in the Transverse Province, on the southern flanks of the San Gabriel mountain range. The San Gabriel Mountains are an east-west range bounded by the San Andreas and San Gabriel faults. Primary rock types are Precambrian and Cretaceous gneisses and granodiorite granitics, which produce toppling rockfall failures.

R. Miles of Stream Channels by Order:

- Order 5 1.6 miles (San Gabriel River)
- Order 2 2.6 miles (Islip Canyon – 1.7 miles; Garcia Canyon – 0.9 miles)
- Order 1 3.8 miles (unnamed tributaries)

S. Transportation System

- Trails: none
- Roads: 3.9 miles
 - Highway 39 (CalTrans) – 1.6 miles
 - Glendora Mountain Road (LA County) – 2.3 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 546 low (15%) 1,315 moderate (58%) 45 high (2%) 326 unburned (15%)

B. Water-Repellent Soil (acres): 1,112 (631 pre-fire)

C. Soil Erosion Hazard Rating (acres):
134 (low) 0 (moderate) 2,098 (high)

D. Erosion Potential: 20,821 tons per acre (average for first 2 years)

E. Sediment Potential: 35,940 cubic yards / square mile (based on ERMIT, 2 year event)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 7 years (low/moderate severity) to 14 years (high severity)

B. Design Chance of Success (percent): 80

C. Equivalent Design Recurrence Interval (years): 2

D. Design Storm Duration (hours): 6

E. Design Storm Magnitude (inches): 2.67

F. Design Flow (cubic feet / second / square mile): see Table 1

G. Estimated Reduction in Infiltration (percent): 21

H. Adjusted Design Flow (cfs per square mile): see Table 1

Table 1. Comparison of Pre- and Post-Fire Peak Flows.

Watershed	Area (acres)	Pre-Fire Peak Flow (cfs/mi²)	Post-Fire Peak Flow (cfs/mi²)
Islip Canyon	682	27	91
Unnamed #1	184	7	24
Unnamed #2	273	11	36
Unnamed #3	288	11	38
Unnamed #4	86	3	11
Unnamed #5	122	5	16
Garcia Canyon	373	13	43

Based on 2 year recurrence interval of a 6 hour storm, yielding 2.67 inches of rainfall.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Background

Morris Fire was reported at 4:27 pm on August 25, 2009, burning on land administered by the San Gabriel River Ranger District, Angeles National Forest. The fire started at the northwest end of the Morris Reservoir in San Gabriel Canyon, about 5 miles north of the community of Azusa. Initially, steep terrain, rolling debris, and intense fire behavior made fireline construction difficult. After three days of active burning, a perimeter fireline was mostly complete and mop-up and patrol operations began. Red flag conditions and potential for long range spotting from nearby fires delayed containment. When contained, the fire burned 2,168 acres (1,974 acres of National Forest System [NFS] land and 194 acres of land under other ownership). The cause of the fire is still under investigation.

The burned area is dissected by the San Gabriel River, with the western one-half of the fire contained within the Islip Canyon drainage, below the San Gabriel Number 1 Dam and adjacent to Morris Reservoir. The eastern one-half of the burned area is confined to four first order drainages that flow into the river below the San Gabriel Dam and above Morris Reservoir. The fire burned on steep slopes that have inherently high soil erosion hazards. The fire effects are expected to increase the high erosion hazard due to loss of vegetation canopy, effective ground cover, and formation of water repellent soil layers at varying depths. The burned, steep drainages have the ability to generate sudden releases of storm runoff at high velocities. The ensuing runoff from storm events can also erode and mobilize sediments stored at the base of the slopes and in channel bottoms, leading to major deposition of sediment along the lower reaches and possibly into Morris Reservoir.

The major plant communities within the fire area are coastal sage scrub, chamise chaparral, mixed chaparral, and coast live oak/sycamore riparian forest. The following Forest Service Sensitive plants or their habitats are within or in close proximity to the burned area: Plummer's mariposa lily (suitable habitat, no documented occurrences); San Gabriel Mountains dudleya (suitable habitat, occurrence at the central-northern edge of fire); and Robinson's pepper-grass (suitable habitat, occurrence at western edge of fire).

Invasive weed species that are known to occur within the fire perimeter include: Wild oats, ripgut brome, cheatgrass, tocalote, shortpod mustard, tree tobacco, Smilo grass, fountain grass, black locust, Spanish broom and saltcedar. In addition, tree of heaven, giant reed, pampas grass, castor bean, Russian thistle, and Washington palm occur within a five mile radius of the fire and along direct access routes to the burn area.

There are no federally threatened or endangered wildlife species within the fire perimeter. There are seven Forest Service sensitive species known or likely to occur within the Morris Fire perimeter: arroyo chub, southwestern pond turtle, two-striped garter snake, San Bernardino Mountain kingsnake, coastal rosy boa, California legless lizard and San Diego horned lizard. The burned area includes habitat for a wide variety of resident and migratory birds. Common wildlife species that utilize vegetation communities similar to those occurring within the burned area include western fence lizard, western whiptail, common kingsnake, western rattlesnake, black-tailed jackrabbit, deer mouse, mule deer, bobcat and coyote.

There are two important travel routes within the burned area. State Highway 39 is a primary route that provides access to major recreation areas in North Fork San Gabriel River drainage. The Glendora Mountain Road is a popular loop route that accesses the upper San Gabriel River and the Mount Baldy areas. The fire destroyed or damaged power transmission poles, cutting off electricity to the San Gabriel Dam. Diesel generators are temporarily providing electricity to power dam operations.

A Burned Area Emergency Response (BAER) Team was assigned to the incident on August 30, at which time a preliminary inventory of values at risk were identified. The Forest Service contacted the Los Angeles County Department of Public Works and CalTrans to coordinate resolution of concerns with potential threats to travel routes and flood control assets.

Human Life and Safety

Highway 39 crosses burned drainages at two primary locations (MP 21.04, MP 21.56) and two other locations that are at risk from increased water flows, sediment, and mud/debris flows. Increased flows and entrained debris can plug culverts, with mud and debris covering or damaging the road. These events potentially threaten human lives and safety of people traveling the route.

Both Highway 39 and the Glendora Mountain Road are located below steep, burned slopes. There is a high potential for rock and debris to fall on to the routes. There is a threat to human life and safety should falling rock or debris hit a vehicle traveling either route. There is the threat to human life and safety should an accident result from vehicle damage or a vehicle operator having to take evasive actions to avoid debris that has landed on the road.

Property

Travel Routes:

The burned watersheds are likely to show the effects of fire via increased overland water flow, runoff, erosion, sediment, and debris transport. This creates a concern for roads, culverts, bridges, guard rails, and channels located within the drainage paths of the burned watersheds. Culverts and roadside ditches may be plugged with debris, and subsequently roads overtopped or the road prism damaged by erosion.

Flood Control Reservoirs:

The entire fire was within the hydrologic catchment for Morris Reservoir, posing the threat of increased sedimentation and potential reduction in the reservoir storage capacity. The soils and hydrologic analysis indicate the erosion and subsequent sedimentation could be up to 4 times their natural rates. The potential increase accounts for the sediment originating from burned hillslopes and does not include mobilizing stored sediments that have naturally accumulated in the drainage bottoms.

No hillslope or land treatments are recommended for mitigating this potential threat. The analysis revealed most of the burned area is on land with slope gradients that are 50 percent or greater. Research monitoring has concluded effectiveness of hillslope treatments is reduced by as much as 50 percent on 40 to 60 percent slopes, and generally not effective on slopes greater than 60 percent.

Important Natural and Cultural Resources

Cultural Resources:

Background research of archaeological site and survey records revealed one historical site within the Area of Potential Effect (APE) and no prehistoric sites. Vegetation on the southern side of the site burned while vegetation on the northern side is still present. There was very little to no vegetation directly on the site prior to the fire. The results of burned area assessment conclude no potential fire-related effects to this resource, direct or indirect, or from recommended rehabilitation treatments.

Ecosystem Stability/Soil Productivity:

Accelerated slope instability: Nearly 85 percent of the area within the fire perimeter burned with either light or moderate soil burn severity (validated BARC mapping). Post-fire surveys indicate that over 95 percent of the vegetation cover was consumed during the fire. On average, there is up to 50 percent effective soil cover, consisting mostly of surficial gravels. There is high potential of increased mass-wasting, slope failure, and surface erosion. Localized erosion rates could be more than four times natural erosion rates with average rainfall events. Surface water-repellency (hydrophobicity) is naturally occurring but is exacerbated, at varying degrees, with fire. Hydrophobicity strongly impairs the ability of water to infiltrate soil, thereby increasing runoff potential and erosive energy.

Except in mechanically disturbed areas, a biological surface crust protects the soils from the effects of wind erosion from major Santa Ana wind events. Without the crust, wind erosion could possibly be a greater threat to soil productivity than water erosion.

There is an ample seed bank in the surface soil horizons and live roots are abundant. Rapid vegetative growth is expected after the first soil wetting rains. However, most of the green-up will likely consist of non-native grasses. Although these grasses offer short term erosion mitigation, they out compete native shrubs, have less soil cover value than native shrubs, and are decadent when the first storms arrive. If non-native grasses establish and displace the native shrub communities, long term soil productivity is threatened with increased long-term erosion risk.

Threatened, Endangered, and Sensitive Species:

Based on field survey data and fire ecology references, there is no emergency situation for TES plants species from effects of the wildfire. All of these species would have already bloomed this season and released their seed into the seedbank pre-fire. Seeds are more tolerant of heat on the ground than on the stem, leading to enhanced germination success and species recovery. These species are also not threatened by eminent extirpation throughout their ranges.

Based on field survey data and fire ecology references, there is no emergency situation for TES wildlife species from effects of the wildfire. Southwestern pond turtles may be most affected by the Morris Fire since both aquatic and terrestrial habitat has potential for impacts. However, these impacts are expected to be short term. No Forest Service sensitive species are expected to be extirpated from the burn perimeter.

Vegetation Recovery: Post-fire threats to vegetative recovery exist from the introduction and spread of post-fire noxious weed and invasive plants species. The unknowing introduction and dispersal of non-native, invasive or noxious plants into areas disturbed by fire suppression and burned areas

lacking effective ground cover or seed banks has the potential to establish large and persistent infestations. In addition, it is highly likely that existing weed infestations will increase in the burned area due to their opportunistic growth and reproduction traits and reduced competition with natives. Proliferation of existing weed populations can impact the structure and habitat function of native plant communities, contributing to type conversion and overall reduction in the density and distribution of native plants. It is expected that most native vegetation would recover if weed invasions are minimized.

Water Quality: Peak flow increases are estimated to be over 200 percent for Islip Canyon. Increased peak flows from the flood source areas will also be bulked by ash, debris and other floatable and transportable material within the channel areas. There is a high probability that post-fire flows from the first runoff producing rain events will see a high concentration of ash discharged from the burn area downstream to the Morris Reservoir. The potential for adverse water quality effects, post-fire flooding and sediment yield is very high. Sediment yields from these watersheds could increase greatly with the next major storm(s) until vegetation in the burned watersheds recovers.

B. Emergency Treatment Objectives:

- Decrease the potential for loss of human life and impaired safety from untreatable threats by communicating/informing users of the travel routes that hazards exist in the burned area (falling rock and debris, potential mud and debris flows).
- Reduce the risk of failure to sections of Highway 39 that may impact human lives and safety.
- Increase the potential for native vegetation recovery by minimizing introduction, establishment, and spread of invasive plant and noxious weed species.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land 80% Channel NA% Roads/Trails NA% Protection/Safety 90%

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	80	80
Channel	NA	NA	NA
Roads/Trails	80	80	80
Protection/Safety	90	90	90

E. Cost of No-Action (Including Loss): \$230,000 (road drainage replacement cost)

F. Cost of Selected Alternative (Including Loss): \$23,000

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

Team Leader: Terry Hardy, Soils Scientist - Boise and Sawtooth National Forests, Region 4

Team Members:

Paul Gregory, Hydrologist, Angeles NF
Eric Nicita, Soils Scientist, Eldorado NF
Leslie Welch, Wildlife Biologist, Angeles NF
Janet Nickerman, Botanist, Angeles NF
Eric Martindale, Engineer, Angeles NF
Joanna Huckabee, Archeologist, Angeles NF

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:

Noxious Weed Detection Surveys

Weed detection surveys to determine whether ground disturbing activities related to the Morris Wildfire Incident and the fire itself have resulted in the expansion of noxious weeds is requested for the first year. Surveys will begin in 2010 during the flowering periods of weed species. Because of differences in flowering times for all potential species, two visits may be required during the growing season. Completion of surveys in riparian areas, dozer lines, and known invasive and sensitive plant populations would be the first priority. The second priority for surveys would be along roads, fire control lines, and staging areas. Surveys of the general habitats in the burned area would be the lowest priority. Detailed weed detection survey guidelines are attached in Appendix A.

Estimated costs are based on the assumption that two visits would be necessary because of the differences in flowering times. If the initial survey occurs at a time when all the target species are detectable in one visit, the actual costs would be lower than displayed below.

Channel Treatments: none

Roads and Trail Treatments:

Road Storm Patrols

The purpose of this treatment is to evaluate the condition of roads for motorized access and to identify the need to implement additional maintenance and/or repairs to road drainage structures and road surfaces. The intent of the treatment is to provide safe, uninterrupted public access and ensure integrity of the road prism.

The patrols should first focus on the segments of Highway 39 that are within the Islip and unnamed drainages where the culverts are located. This route has a high traffic volume and primary access to private lands and popular recreation sites, there is an elevated probability that storm events could trap and/or injure travelers. Personnel will survey the roads after high-intensity precipitation events for a period of one year after the fire. The survey will inspect ditch erosion and culvert inlet basins for capacity to accommodate expected increases from future runoff and debris flow events. The cost estimate requests funding for eight (8) surveys, which includes time for preparing documentation and reporting results.

The existing condition of the culvert inlet basins and roadside relief ditches is not related to fire effects. Routine maintenance of these road drainage features to accommodate runoff and sediment should be completed on a routine schedule by the agency/department having maintenance responsibilities of the route.

If a survey identifies a high level of maintenance is needed to restore functionality of the drainage structures, an Interim 2500-8 BAER Report will be submitted to request the appropriate funding.

Protection / Safety Treatments:

Warning Signs - Burned Area Hazards

This treatment is to install signs that communicate the existing hazards associated with the burned area to travelers entering the burned area. Signs will contain language describing potential hazards (i.e. falling rocks and debris, flash floods, and mud/debris flows).

The warning signs will be installed at four roadside locations where Highway 39 and the Glendora Mountain Road enter the fire perimeter. All signs will be placed facing the direction of travel entering the burned area. Refer to the Morris Fire BAER map for specific locations.

Recommended specifications for burned area warning signs:

Dimensions: 4 feet by 4 feet minimum.

Sign Material: 0.08 inch aluminum, sheeted in high intensity orange with black letters.

Letter Dimensions: **ENTERING BURNED AREA** lettering a minimum of 5 inches in height; all remaining lettering a minimum of 3.5 inches in height.

Sign Posts: 4 inch by 4 inch treated square post.

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.)

See Appendix A for the Noxious Weed Detection Survey Plan.

Part VI – Emergency Stabilization Treatments and Source of Funds

Interim #

Line Items	Units	Unit Cost	NFS Lands			Other Lands			All
			# of Units	BAER \$	Other \$	# of Units	Fed \$	# of Units	Non Fed \$
A. Land Treatments									
Noxious Weed Detectio	each								
<i>Insert new items above this line!</i>									
<i>Subtotal Land Treatments</i>									
B. Channel Treatments									
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Government Estimated Cost Figures Withheld Per Part 6.1 Federal Acquisition Regulations to promote open and fair competition in </div>									
<i>Insert new items above this line!</i>									
<i>Subtotal Channel Treat.</i>									
C. Road and Trails									
Road Storm Patrols	each								
<i>Insert new items above this line!</i>									
<i>Subtotal Road & Trails</i>									
D. Protection/Safety									
Hazard Warning Signs	each								
<i>Insert new items above this line!</i>									
<i>Subtotal Structures</i>									
E. BAER Evaluation									
Initial Assessment									
<i>Insert new items above this line!</i>									
<i>Subtotal Evaluation</i>									
F. Monitoring									
<i>Insert new items above this line!</i>									
<i>Subtotal Monitoring</i>									
G. Totals									
Previously approved									
Total for this request									

PART VII - APPROVALS

1. /s/ Jody Noiron
Forest Supervisor (signature)

9/8/09
Date

2. /s/ James M. Peña (for)
Regional Forester (signature)

9/11/09
Date

APPENDIX A - MAPS

Figure A-1. Morris BAER Burn Severity and Treatment Map.

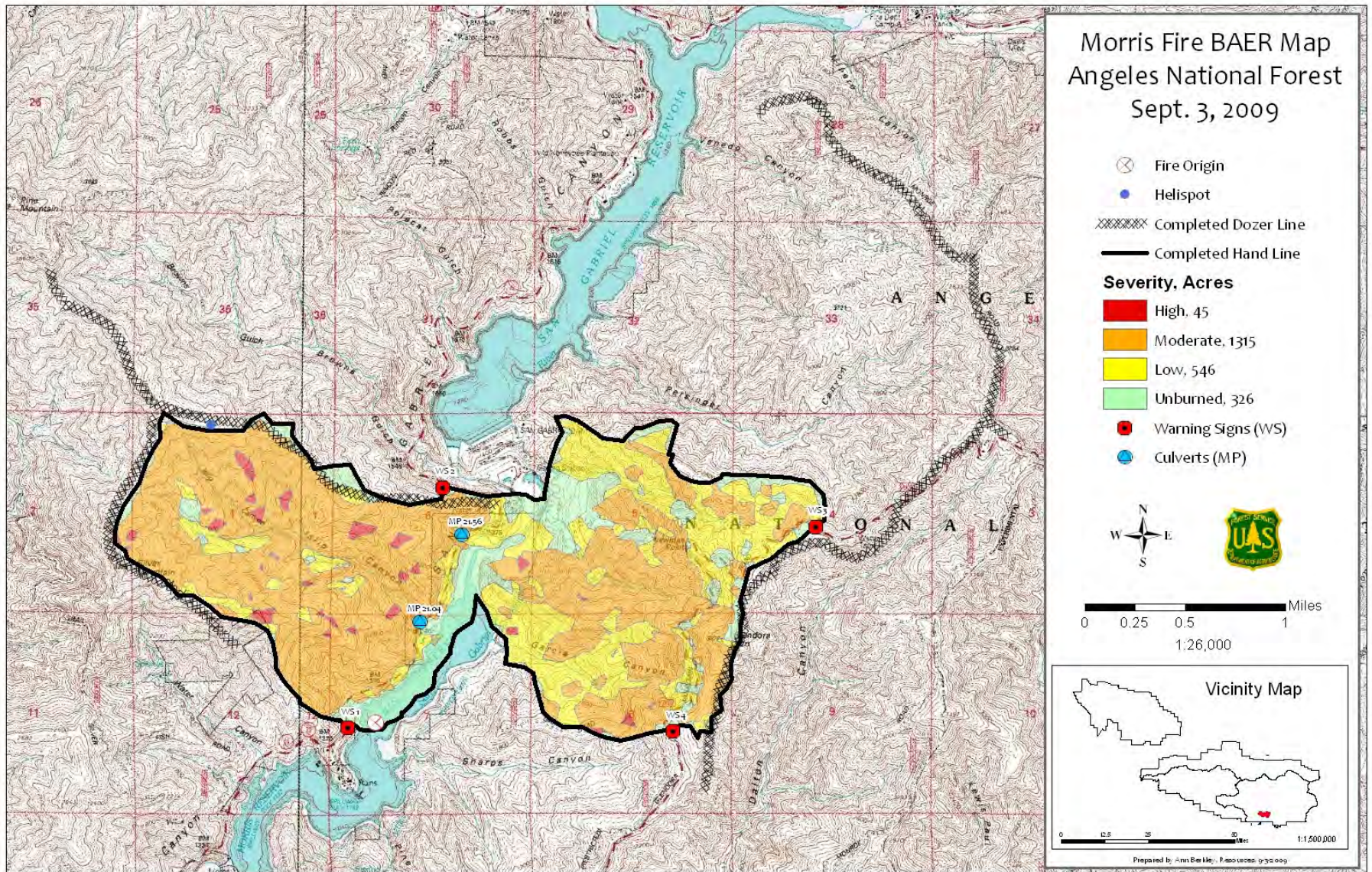
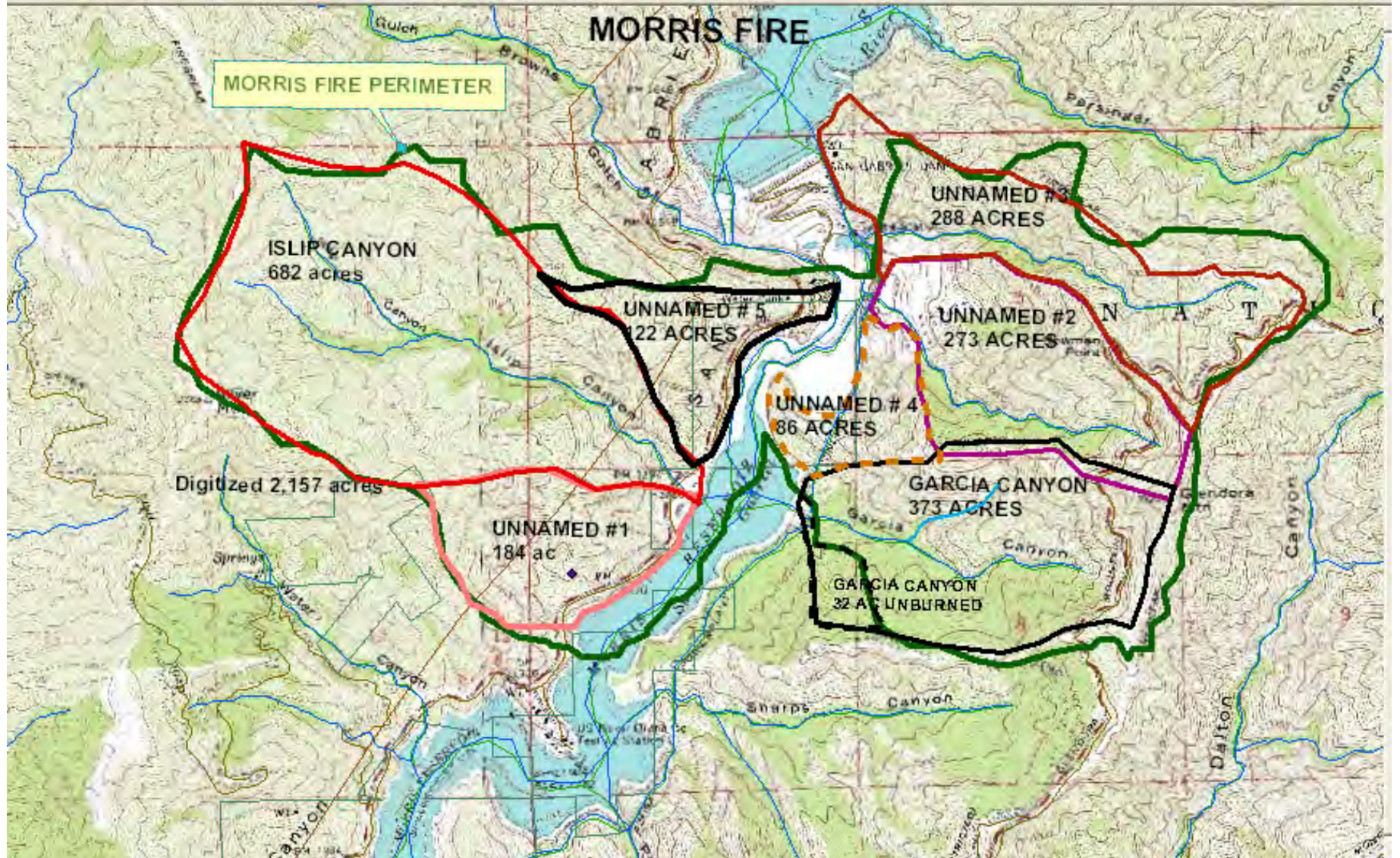


Figure A-2. Morris BAER - Delineation of Flood Source Areas for Hydrologic Analysis.



APPENDIX B

NOXIOUS WEED DETECTION SURVEY PLAN

Fire Name: Morris Fire Month/Year: September 2009

Author: Janet Nickerman

Author Duty Station: Angeles National Forest

A. Background

Forest Service policy mandates the Forest to minimize the establishment of non-native invasive species to prevent unacceptable degradation of the burned area. It is necessary to conduct noxious weed detection surveys to evaluate the potential for spread from both existing populations and from the activities associated with fire suppression. Therefore, noxious and invasive weed detection surveys are proposed for the first year following the fires to verify the suspected infestations and determine the fires' potential impact on weed populations within the burned area. Wild oats (*Avena* spp.), ripgut brome (*Bromus diandrus*), cheatgrass (*Bromus tectorum*), tocalote (*Centaurea melitensis*), shortpod mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), Smilo grass (*Piptatherum miliaceum*), black locust (*Robinia pseudoacacia*), and Spanish broom (*Spartium junceum*) are known to occur within the burn area on Forest Service land. In addition, tree of heaven (*Ailanthus altissima*), giant reed (*Arundo donax*), yellow star thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), fountain grass (*Pennisetum* spp.), castor bean (*Ricinus communis*), Russian thistle (*Salsola* spp.), Peruvian pepper tree (*Schinus molle*), saltcedar (*Tamarix ramosissima*), and Mexican fan palm (*Washingtonia robusta*) occur within a five mile radius of the burn and along direct access routes to the burn. Several plant vectors such as Forest roads, trails, high winds, and drainages occur within the fire area. A weed washing station was utilized but only to wash some of the equipment as is was demobilized. None of the equipment was washed before it entered Forest Service land. As a result, seed could have been transported into the burn on suppression vehicles and equipment that arrived on the fire before the washing station was established. Fire is known to enhance the establishment of all weed species present. See the Botany Technical Specialist Report and Appendix A of this report for more information about specific weed population attributes and locations in the Morris Fire.

B. Management Concerns

Noxious weed invasions interfere with habitat recovery and ecosystem health within burned areas and fire suppression sites. In particular, noxious weeds hinder the recovery of habitat, especially in arid and riparian ecosystems, by aggressive colonization and reduction of water quality and quantity.

C. Objectives

To determine if the fire and associated ground disturbing activities have promoted the establishment and spread of noxious weeds to the extent that eradication efforts are necessary. Early detection dramatically increases the likelihood of successful treatment. If weeds are detected, a supplemental request for BAER funds will be made for eradication.

D. Parameters

Noxious weed presence, location, density, population size, and persistence.

E. Locations

In and along roads, trails, dozer lines, hand lines, drop points, safety zones, riparian areas, and adjacent to known sensitive and invasive plant populations.

F. Weed Detection Survey Design and Methodology

Surveys will begin in 2010 during the flowering periods of weed species. Because of differences in flowering times for all potential species, two visits may be required during the growing season. Completion of surveys in roads, dozer lines, staging areas, safety zones, and known invasive and sensitive plant populations will be the first priority. The second survey priorities will be along riparian areas, hand lines, and drop points. Surveys of the general habitats in the burned area will be the lowest priority. All locations of weed species will be mapped, using the Angeles NF, "Invasive Weeds" list.

Surveying will include documentation and hand pulling new weed occurrences at the time of inspection. New weed occurrences will be pulled to root depth, placed in sealed plastic bags, and properly disposed.

Documentation of new infestations will include:

- Mapping perimeter of new infestations
- Filling out Weed Element Occurrence Form (Appendix B)
- Treatment method
- Dates of treatment
- Incorporating data into local GIS spatial database
- Entering data into National Resource Information System (NRIS) database
- Entering data into FACTS database
- Evaluating success of treatment in subsequent inspections

G. Reporting

A Weed Detection Survey Report will be submitted to the regional BAER coordinator and Los Angeles River District Ranger. If weed introduction and spread has occurred, an interim BAER report will be completed to request eradication funding. Reporting costs are included in figures below.

H. Costs: Weed Detection Surveys for One Year

Weed detection surveys to determine whether ground disturbing activities related to the Morris Fire 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 the differences in flowering times. If timing is such that all the target species are detectable in one visit, the actual costs would be lower than displayed below.

I. Follow-up Actions

Design and implement follow-up treatments as needed. Plan for integrated weed management and NEPA analysis using non-BAER funding.

Weed Occurrence Form

Region 5 Forest: Angeles District: _____

Species: _____ Date: _____ ID confidence _____ % ID Auth: Hickman et al., 1993

Project	Current land use:
Surveyor	Current/potential threats:
Directions to site:	Other biota: _____ None
	Existing EO? Yes No # _____
	Entire extent of pop mapped? Y N
	Photographer
Site descrip:	Repository
	Vouch spec # _____ Repository
	Look-alike species: _____ None
	Research needs
(circle) Point Polygon Line	
GPS Unit: XT GeoEx3 lpaq1 lpaq2 Mag # _____ Thales Other	Conserv/Mngt concerns
GPS Staff ID:	# _____ individuals, genets est, precise
Unique ID #: # _____ pts/poly4EO	Vigor? vfeeble feeble normal vigor exvrg N/A Method:
Northing: _____ Easting: _____	(circle) Disease Predation Herbivory None
Elevation (feet):	Explain
Quad name:	Distribution/Density: prominent common scattered patchy rare
T-R-S: T _____ R _____ S _____ ¼ of ¼ of	Gross (Total) area: _____ est, precise Infested (Weed cover only) area :
Slope Min. _____% Max _____%	Cover: Sp. _____% Grd _____%
Aspect (°):	
Substrate:	Phenology method: est, count
Soil text: sand, loam, silt, clay, other	% seedlings _____ % leaf _____ % bud _____
Moisture regime: mesic xeric hydric	% flwr _____ %immat frt _____ % mature frt _____
Soil moisture: dry moist saturated inundated seasonal seepage other	% dispersing seed _____ % senescent _____
Horz dist. to H2O _____ vert. _____	Treated before: Y N
Light expos: full sun part shade full shade	Method of treatment:
Veg series:	Fr suc: Exlt Gd Marg Pr Unkn Fair None
Ass. tree/shrubs:	Germ suc: Exlt Gd Marg Pr Unkn Fair None
Canopy: _____% Shrub: _____% Forb: _____%	Repro: Exlt Gd Marg Pr Unkn Fair None
Assoc plants (include other non-natives):	Dispersal: Exlt Gd Marg Pr Unkn Fair None
	Estab: Exlt Gd Marg Pr Unkn Fair None
	Veg suc: Exlt Gd Marg Pr Unkn Fair None
	Fl suc: Exlt Gd Marg Pr Unkn Fair None
Disturbance:	General observations
	Condition: Exlt Gd Marg Pr Unkn Fair None
	Quality: Exlt Gd Marg Pr Unkn Fair None
	Defense: Exlt Gd Marg Pr Unkn Fair None
	Rank: Exlt Gd Marg Pr Unkn Fair None
	Viability: Exlt Gd Marg Pr Unkn Fair None